

US TP SRM TEMESCAL, LLC

111 N. POST ST. STE. 200
Spokane, WA 99201
509-455-5477
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February 4, 2016

Mr. Mark Detterman
Alameda County Environmental Health
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502-6577

RECEIVED

By Alameda County Environmental Health 10:16 am, Feb 17, 2016

Re: **Revised Soil Profiling and Site Assessment Report**
4901, 4915, 4919, 4921, 4939, and 4945 Broadway;
Parcel No. 013-1136-008-04 (no address);
311 and 313 51st Street;
4974, 4970, 4966 and 4964 Desmond Street;
Oakland, California

Dear Mr. Detterman:

US TP SRM Temescal, LLC, has retained Pangea Environmental Services, Inc. (Pangea) for environmental consulting matters at the project referenced above. Pangea is submitting the attached report on our behalf.

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

Sincerely,



Trevor Ashenbrener
US TP SRM Temescal, LLC



February 4, 2016

Mr. Trevor Ashenbrener
US TP SRM Temescal, LLC
101 North Post, Suite 200
Seattle, WA 99201

Re: Revised Soil Profiling and Site Assessment Report

4901, 4915, 4919, 4921, 4939, and 4945 Broadway;
Parcel No. 013-1136-008-04 (no address);
311 and 313 51st Street;
4974, 4970, 4966 and 4964 Desmond Street;
Oakland, California

Dear Mr. Ashenbrener:

Pangea Environmental Services, Inc. (Pangea) prepared this *Revised Soil Profiling and Site Assessment Report* for the subject site. ***Per agency direction, this SMP was revised to incorporate additional soil and groundwater sampling conducted in January 2016 near the former dry cleaning facility.*** This report represents implementation of the Soil and Groundwater Management Plan (SMP) for the subject site. The SMP was designed to help safeguard human health and safety with respect to potential petroleum hydrocarbons and lead present in soil and/or groundwater during planned site improvement. The SMP incorporated comments from Alameda County Environmental Health (ACEH), who is providing oversight via a Voluntary Remediation Action Agreement. The site background, site assessment procedures, site assessment results, and conclusions and recommendations are described below.

SITE BACKGROUND

The subject site is comprised of numerous parcels located along Broadway Avenue and 51st Street within a mixed commercial and residential area of Oakland, California. The site has four dilapidated buildings that are currently vacant. One of these buildings (4901 Broadway) was formerly occupied by a dry cleaner. Former structures have been demolished in other areas of the site. Some of the paved areas are leased to a car dealership to be used for overflow parking

A mixed commercial and residential development is planned for the subject site located at the western intersection area of Broadway and 51 Street and bounded by Desmond Street to the west and 49th Street to the south. Development plans include the excavation and removal of approximately 38,000 cubic yards of soil from the site. The excavation will extend approximately 5 ft deep in the western area, 10 ft deep in the southern area, and 20 ft deep in the northeastern area.

According to subsurface investigation data, lead and petroleum hydrocarbon impact has been identified in site soil and/or groundwater in select locations in excess of select conservative environmental screening levels (ESLs) established by the Regional Water Quality Control Board - San Francisco Bay Region. Site conditions are documented in a *Phase II Environmental Site Assessment Report* (Phase II ESA) by ERS Corporation dated May 3, 2013. The Phase II ESA reported a lead concentration of 550 mg/kg in soil boring SB-10 at 2.5 ft depth. This lead concentration exceeds the ESL of 80 mg/kg for residential site use and 320 mg/kg for commercial site use. The reported lead concentrations may be due to fill material used at the site or due to naturally occurring metals in site soil. The Phase II ESA also reported total petroleum hydrocarbons as motor oil (TPHmo) in soil at 2.5 ft depth (220mg/kg) in boring SB-10. This TPHmo concentration in soil exceeds the ESL of 100 mg/kg for residential site use (a ceiling value based on odor/nuisance), but is below the 500 mg/kg for commercial site use. Note that the reported TPHmo of 220 mg/kg is well below the ESL protective

PANGEA Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612 Telephone 510.836.3700 www.pangeaenv.com

of human health direct contact to TPHmo-impacted soil of 1,000 and 10,000 mg/kg for residential and commercial site use, respectively. A TPHmo concentration of 330 ug/L was reported for a groundwater sample from nearby boring SB-7. This TPHmo concentration in groundwater exceeds the ESL of 100 ug/L for residential and commercial site use, but state and local agencies generally do not require corrective action for such low TPHmo concentrations. Low lead and TPHmo concentrations were detected at 5 and 10 ft depth in boring SB-10 and no significant impact was detected in surrounding borings, suggesting the lateral and vertical extent of lead-impacted material is limited in extent.

During drilling for the Phase II ESA, bedrock was encountered in the upper 10 feet in the northern portion of the site and refusal prevented collection of groundwater samples. Groundwater samples were collected from the samples collected in the southern portion of the site, when sufficient groundwater was encountered. Groundwater samples was collected from an approximate depth of 15 feet.

SITE ASSESSMENT – JANUARY 2016

This is the revised portion of the soil profiling and site assessment report.

Site Assessment Procedures – January 2016

On January 27, 2016, Pangea advanced four soil borings using hand auger techniques to address ACEH requirements emailed January 26 and 27, 2016. Borings PB-1 through PB-4 were installed within the cavity of the former basement of the former dry cleaning facility at 4901 Broadway. Soil and groundwater sampling was performed to assess conditions up to 8 ft depth beneath the planned future foundation, since two prior attempted borings could not be completed in this pit area due to the steep slope for the drilling equipment. The grade of the former basement cavity is the approximate elevation of the planned foundation.

The January 2016 assessment work scope included the following:

- Advancing four borings to 8 ft depth below the future foundation depth to provide good coverage of the former dry cleaner site.
- Collecting soil samples from approximately 1, 3, 5 and 8 ft depth from each boring.
- Constructing temporary wells in each borehole and collecting a grab groundwater water sample from each boring the following day.
- Analyzing each sample for TPHg/d/mo with silica gel cleanup for TPHd/mo analysis (to evaluate possible TPH Stoddard solvent use) and HVOCs by EPA Method 8010. (The Method 8010 reporting limit for PCE is 0.005 mg/kg and well below the residential ESL of 0.55 mg/kg).

Water had collected in the center of the former basement cavity prior to the sampling. The four borings were completed within the cavity but beyond the boundary of the water. The collected water is presumably due to run off across the unpaved site from recent winter storms. The contractor completed dewatering of the cavity by the morning of the temporary well sampling on January 28, 2016. The morning after temporary well installation, the depth to water measured inside the wells was near (about 1 ft below) the surface of the excavation cavity.

To help provide representative groundwater samples, Pangea constructed temporary wells in each borehole. Borings PB-1, PB-2 and PB-4 were completed to approximately 7 ft depth below the planned foundation until refusal with the hand augering equipment. Boring PB-3 was completed successfully to the extent of the available equipment (8 ft depth). The temporary groundwater monitoring wells were constructed of 1-inch diameter PVC piping in the 3.5-inch diameter boreholes. The wells consist of a 5 foot section of slotted screen with blank carrier pipe to the surface. Wells were set at the bottom of the borehole and manually held in the

center of the borehole while a sand pack of #2/12 sand was constructed around the well screen from the bottom of the hole to the top of the screened section. The well was then completed using hydrated ¼” bentonite crumbles to fill the borehole to the surface. Grab groundwater samples were collected by following Pangea’s standard operating procedures for groundwater sampling using a new pin bailer for each well. No purging was conducted prior to temporary well sampling.

Site Assessment Results – January 2016

Soil and/or groundwater samples were analyzed for TPHg/d/mo, BTEX and chlorinated VOCs (EPA Method 8010 list). Soil and/or groundwater analytical results are summarized on Tables 1 and 3. The laboratory analytical reports are included in Appendix F.

All new soil and groundwater analytical results from this assessment were well below the final environmental screening levels (ESLs), other than TPHd and TPHmo in soil from boring PB-4 and in groundwater. The maximum TPHd and TPHmo concentrations detected in soil were 110 mg/kg and 490 mg/kg, respectively, in soil sample PB-4-5’. The maximum TPHd and TPHmo concentrations detected in groundwater was 5,200 ug/L and 27,000 ug/L (PB-4), while TPHd and TPHmo in groundwater in the three other PB borings were <300 ug/L. Based on agency correspondence regarding analytical results, Pangea subsequently requested full list EPA Method 8260 reporting for key samples from boring PB-4: soil sample PB-4-5’ and the PB-4 water. The EPA Method 8260 full list analyses confirmed that no naphthalene or other VOCs were present in soil or groundwater above ESLs (the only detected VOCs were low concentrations of acetone (13 ug/L) and tert-butyl alcohol (5 ug/L).

Chromatograms for soil and groundwater from boring PB-4, included in Appendix F, indicate two distinct patterns. The laboratory notes that oil range hydrocarbons are significant and that the TPHd-range impact may resemble ‘kerosene, kerosene-range or jet fuel’. During laboratory correspondence, the laboratory indicated the TPHd-range hydrocarbons (first pattern on the chromatogram) could represent Stoddard solvent.

No VOCs were detected in site soil or groundwater that would represent a significant vapor intrusion risk from a historic release of chlorinated dry cleaner compounds into the site subsurface. The non-volatile nature of TPHd and TPHmo-range compounds suggests that these compounds would not represent a significant vapor intrusion risk to future site occupants.

Site Figures and Cross Section – January 2016

Per ACEH request for illustration of site data in plan and cross-section view, Pangea prepared four new site figures. Figures 3 and 4 present all available data and isoconcentration contours for TPHmo in soil and groundwater, respectively. Figure 5 presents the areas with planned environmental oversight during excavation and anticipated compliance sampling locations. Figure 6 is a cross section of the planned excavation extent with key groundwater analytical data and boring/soil sampling locations. Figure 6 also shows the planned future development.

SITE ASSESSMENT PROCEDURES – NOVEMBER 2015

Soil assessment procedures for sampling in November 2015 are described herein.

Pre-Drilling Activities

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

Drilling Procedures

On November 19, 2015, Pangea retained Confluence Environmental (Confluence) of Sacramento, California, to advance select deeper borings using direct-push sampling techniques and shallower borings using hand auger techniques. The eleven borings conducted using direct-push techniques included B-2, B-3, B-5 through B-7, B-9 through B-12, B-14, and B-15. Soil and groundwater sampling was performed at locations shown on Figure 2. Boring refusal depths at select locations are also shown on Figure 2. A groundwater sample was collected for laboratory analysis from boring B-12 using temporary PVC casing. Completed borings were tremie-grouted from the bottom of the hole to the surface.

The completed sampling program and sampling depths are summarized on Table A. As shown on Table A, one soil profiling sample planned from 8 ft depth was substituted by a 3 ft depth sample due to refusal at four prior locations for boring B-3 (S10-8'). One boring (B-13) was not completed due to limited access to the excavated former basement location. Boring B-12 was moved to the western edge of the former basement area. Groundwater sampling was performed from boring B-12, the only boring that encountered water. Due to field observations at 6' depth at boring B-15, a soil sample was collected analyzed per below. Field activities were conducted in general accordance with the Standard Operating Procedures (SOPs) provided in Appendix C.

Confluence conducted the associated soil and groundwater sampling using a direct push rig equipped with dual tube sampling equipment. Dual-tube direct-push drilling methods employ an outer tube to help avoid cross contamination within the inner sampling tube. This drilling method allows collection of continuously cored soil samples. All borings were first hand augered to approximately five feet below grade surface (bgs) to avoid damaging any unmarked subsurface utilities.

Select soil and water samples were collected from each boring in accordance with Pangea's Standard Field Procedures for Soil Borings (Appendix C). Soil samples were collected for laboratory analysis in acetate liners, and capped with Teflon tape and plastic end caps. To sample first-encountered groundwater in boring B-12, the inner drilling rods were removed, temporary PVC piping and well screen was installed within the boring, and the outer drill rods were then removed. The grab groundwater sample was collected with a disposable bailer and was then decanted into the appropriate laboratory supplied containers. The boring permit is included in Appendix A. Boring logs are included in Appendix B. All samples were shipped under chain of custody to Sunstar Laboratories, Inc., of Lake Forest, California, a California-certified laboratory.

The drilling was observed in the field by Pangea staff 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 hydrocarbons and volatile organic compounds included visual and olfactory observations.

Soil Export Profiling

For soil profiling for planned soil export for redevelopment, Pangea collected insitu soil samples at 12 locations (locations S1 through S12). One sample was collected from each location per soil profiling protocol, with sample analysis depth ranging from approximately 0.5 to 16 ft depth across the site. These sample locations evaluate the planned excavation extending approximately 5 ft deep in the western area, 10 ft deep in the southern area, and 20 ft deep in the northeastern area.

These 12 samples were submitted for laboratory testing for the following:

- Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8260B;
- Total petroleum hydrocarbons as diesel (TPHd) & motor oil (TPHmo) by EPA Method 8015Cm;
- Volatile organic compounds (VOCs) by EPA Method 8260B;
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270D;
- PCBs by EPA Method 8082;
- CAM-17 Metals by EPA Method 6010/200.7;
- Organochloride pesticides by EPA Method 8081A, and
- Asbestos by EPA Method 600 with CARB 435 and 0.25% target sensitivity.

For location S12-0.5' a duplicate sample was collected later due to insufficient soil volume for all requested analyses. For select locations with total lead above 50 mg/kg, STLC and/or TCLP testing was conducted to help characterize soil for offsite disposal.

Site Assessment per County Requirements

Per Alameda County requirements, soil sampling was conducted at three locations (borings B-9, B-10 and B-11) to delineate lead and hydrocarbon impact previously identified at at 2.5 ft depth at prior boring SB-10. Borings B-11, B-12, B-17 and B-18 also helped characterize soil near the former dry cleaner facility at 4901 Broadway. Two borings (B-1 and B-2) were completed in the townhome area, with boring B-2 sampling soil outside the proposed basement area. Select soil samples (boring B-2 at 6' and boring B-17 at 4') were analyzed for:

- Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8260B;
- Total petroleum hydrocarbons as diesel (TPHd) & motor oil (TPHmo) by EPA Method 8015Cm;
- Volatile organic compounds (VOCs) by EPA Method 8260B;
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270D;
- PCBs by EPA Method 8082;
- CAM-17 Metals by EPA Method 6010/200.7;
- Organochloride pesticides by EPA Method 8081A, and
- Asbestos by EPA Method 600 with CARB 435 and 0.25% target sensitivity.

Remaining soil samples were analyzed for:

- Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8260B;
- Total petroleum hydrocarbons as diesel (TPHd) and motor oil (TPHmo) by EPA Method 8015Cm;
- Volatile organic compounds (VOCs) by EPA Method 8260B; and
- Lead by EPA Method 6010/200.7.

Due to black clayey sand found in boring B15, a soil sample from 6' depth was collected analyzed for TPH, VOCs, SVOCs, and PCBs.

The one grab groundwater sample (boring B-12) was analyzed for:

- Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8260B;
- Total petroleum hydrocarbons as diesel (TPHd) and motor oil (TPHmo) by EPA Method 8015Cm;
- Volatile organic compounds (VOCs) by EPA Method 8260B; and
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270D;
- PCBs by EPA Method 8082; and
- Organochloride pesticides by EPA Method 8081A.

Waste Management and Disposal

Soil cuttings was stored onsite in Department of Transportation (DOT)-approved 55-gallon drums. The drums and their contents are held onsite pending transportation to an appropriate disposal/recycling facility.

SITE ASSESSMENT RESULTS – NOVEMBER 2015

Physical Observations

Drilling refusal was observed at several locations at varying depths. Most notable was the shallow refusal (about 1 to 3' depth) at five locations for boring B-3 where shown on Figure 2. Boring refusal at B-3 is presumably related to rocky conditions at that location.

Groundwater was only encountered in boring B-12 to 24' depth. Groundwater was not encountered in boring B-11 to 30' depth, or in boring B-6 to 22' depth.

Gray soil was observed at 1' depth at location S9 (boring B-4) where soil analytical results reported lead STLC concentrations exceeding non-RCRA hazardous waste classification criteria. Other site soil was primarily brown.

Soil and Groundwater Analytical Results

Soil analytical results are summarized on Table 1. Soil analytical results for SVOCs are shown on Table 2.

Soil Export Profiling

The laboratory analytical reports for soil profiling tests of the 12 sample locations are included in Appendix D. As shown on Tables 1 and 2, all soil analytical data is below final Environmental Screening Levels (ESLs) established for residential and/or commercial site use by the San Francisco Regional Water Quality Control Board, except for arsenic concentration of 5.4 mg/kg at location S12-0.5'. This arsenic concentration likely represents background soil conditions. The following limited organic impact was detected in soil that is scheduled for overexcavation during development: 0.04 mg/kg PCBs at 2' depth at S11 (boring B-2), and low concentrations of SVOCs (<0.062 mg/kg) at 0.5' in S12 (boring B-1). Each of these results are for shallow soil beneath imported rock covering the parking area near the construction trailer. The PCB and SVOC concentrations are well below the final ESLs for residential site use. Detected metal concentrations likely represent background levels from naturally occurring metals, except for perhaps lead at location S9-1'. The lead STLC concentration of 5.2 mg/L at S9-1' exceeds the non-RCRA hazardous waste classification criteria of 5.0 mg/L. Other lead STLC and TCLP analyses were below hazardous waste classification criteria.

Site Assessment for County

The laboratory analytical reports for County-required assessment from November 2015 are included in Appendix E. As shown on Tables 1 and 2, all soil analytical data is below final Environmental Screening Levels (ESLs). Detected metal concentrations likely represent background levels from naturally occurring metals. Other than metals, the only reported concentration was 49 mg/kg TPH as motor oil in sample from boring B-17 at 4' depth, within the sloped wall along the southern property boundary.

The one grab groundwater sample was analyzed for TPH, VOCs, SVOCs, PCBs and organochloride pesticides. No analytes were detected in grab groundwater. The laboratory analytical report is included in Appendix E.

CONCLUSIONS & RECOMMENDATIONS

This section was revised.

Based on the above information, Pangea offers the following conclusions and recommendations:

- Soil and/or groundwater samples were analyzed for TPH, VOCs, SVOCs, PCBs, pesticides, metals, and asbestos. All soil and groundwater analytical results from this assessment were well below conservative environmental screening levels (ESLs), other than TPHd and TPHmo in soil in boring PB-4 and in groundwater in new PB borings, and one arsenic concentration (5.4 mg/kg) described above that likely represents background soil conditions. The TPHd and TPHmo-range impact may represent Stoddard solvent from the former dry cleaning operations and other oil-range impact. TPHmo impact in soil and groundwater is summarized on Figures 3 and 4, respectively.
- No VOCs were detected in site soil or groundwater that would represent a significant vapor intrusion risk from a historic release of chlorinated dry cleaner compounds into the site subsurface. The non-volatile nature of TPHd and TPHmo-range compounds suggests that these compounds would not represent a significant vapor intrusion risk to future site occupants.
- No further investigation is recommended at this time other than ongoing implementation of the approved Soil and Groundwater Management Plan (SMP) and Addendum during site redevelopment. The SMP Addendum specifies that site environmental manager/consultant will be onsite to observe excavation of known or suspect impact (including shallow TPHmo impact at SB-10, suspect gray material at 1 ft depth in boring B-4, and the suspect black clayey sand at 6 ft depth in boring B-15). Confirmation soil samples will be collected beneath these locations, and within any lateral sidewalls near the location or in the closest final excavation sidewall. In addition, the site environmental manager/consultant will be onsite to observe excavation of the known TPHd/TPHmo range impact at location PB-4, which is below the planned future foundation.
- The environmental oversight excavation extent and depth for known or suspect impact is shown on Figure 5. This oversight was required by ACEH. Planned soil confirmation sampling is also shown on Figure 5. Figure 6 presents the planned excavation in cross section with respect to the planned development.

Pangea trusts this information satisfies your requirements. If additional information is required, please feel free to contact me at (510) 435-8664.

Sincerely,

Pangea Environmental Services, Inc.



Bob Clark-Riddell, P.E.
Principal Engineer

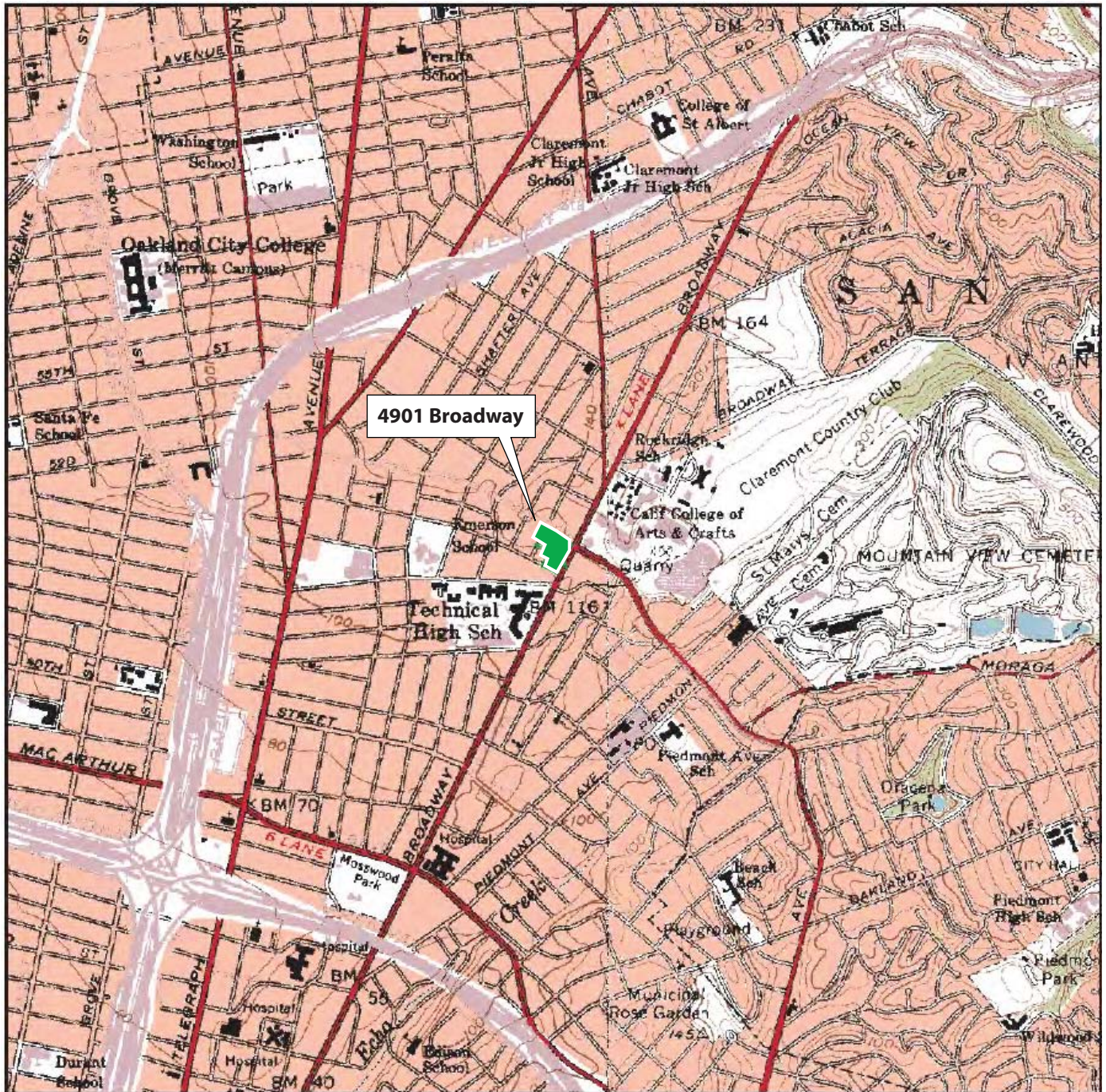


ATTACHMENTS

Figure 1 – Site Vicinity Map
Figure 2 – Boring Locations
Figure 3 – TPHmo Concentrations in Soil
Figure 4 – TPHmo Concentrations in Groundwater
Figure 5 – Environmental Oversight Locations and Compliance Sampling Locations
Figure 6 – Cross Section of Planned Excavation

Table A – Sampling and Analysis Program
Table 1 – Soil Analytical Data
Table 2 – Soil Analytical Data: SVOCs
Table 3 – Groundwater Analytical Data

Appendix A – Boring Permit
Appendix B – Boring Logs
Appendix C – Standard Operating Procedures
Appendix D – Laboratory Analytical Reports: Export Profiling
Appendix E – Laboratory Analytical Reports: County Assessment, November 2015
Appendix F – Laboratory Analytical Reports: County Assessment, January 2016



Source Map: ERS

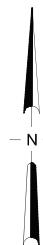
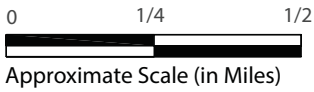


Figure
1

4901 Broadway
Oakland, California

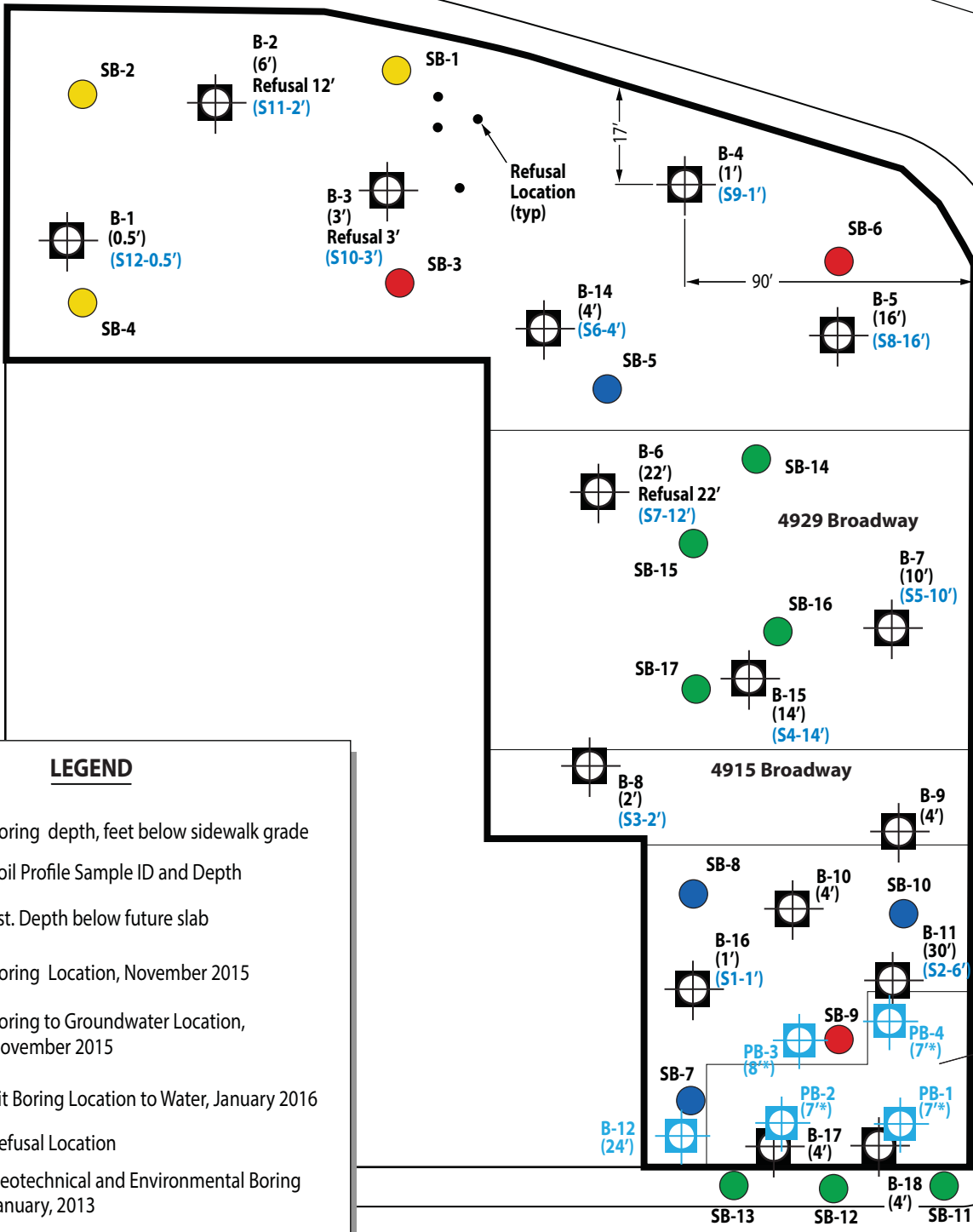


Site Vicinity Map

51st Street

Desmond Street

Broadway



LEGEND

- (16')
 - (S1-1')
 - (7'*)
 - B-1
 - B-11
 - PB-1
 -
 - SB-3
 - SB-1
 - SB-8
 - SB-13
- Boring depth, feet below sidewalk grade
 - Soil Profile Sample ID and Depth
 - Est. Depth below future slab
 - Boring Location, November 2015
 - Boring to Groundwater Location, November 2015
 - Pit Boring Location to Water, January 2016
 - Refusal Location
 - Geotechnical and Environmental Boring January, 2013
 - Geotechnical Boring January, 2013
 - Environmental Boring January, 2013
 - Environmental Boring April, 2013

Source Map: ERS

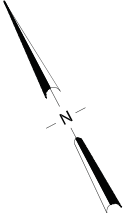
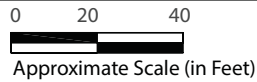


Figure 2

51st Street

Desmond Street

Broadway

49th Street

LEGEND

- (16')
 - (S1-1')
 - (7'*)
 - B-1
 - B-11
 - PB-1
 -
 - SB-3
 - SB-1
 - SB-8
 - SB-13
 - TP-1
 - GW
 - 220
 - 100
 - *
- Boring depth, feet below sidewalk grade
- Soil Profile Sample ID and Depth
- Est. Depth below future slab
- Boring Location, November 2015
- Boring to Groundwater Location, November 2015
- Pit Boring Location to Water, January 2016
- Refusal Location
- Geotechnical and Environmental Boring January, 2013
- Geotechnical Boring January, 2013
- Environmental Boring January, 2013
- Environmental Boring April, 2013
- Compliance Sample Location
- Approximate Groundwater Flow Direction
- TPHmo concentration in milligrams per kilogram (mg/Kg), **bold** concentrations exceed final ESL (100 mg/Kg). (3'*) asterisk denotes depth below future slab.
- TPHmo isoconcentration; dashed where inferred; queried where uncertain
- Future slab about 10' below street grade

Source Map: ERS

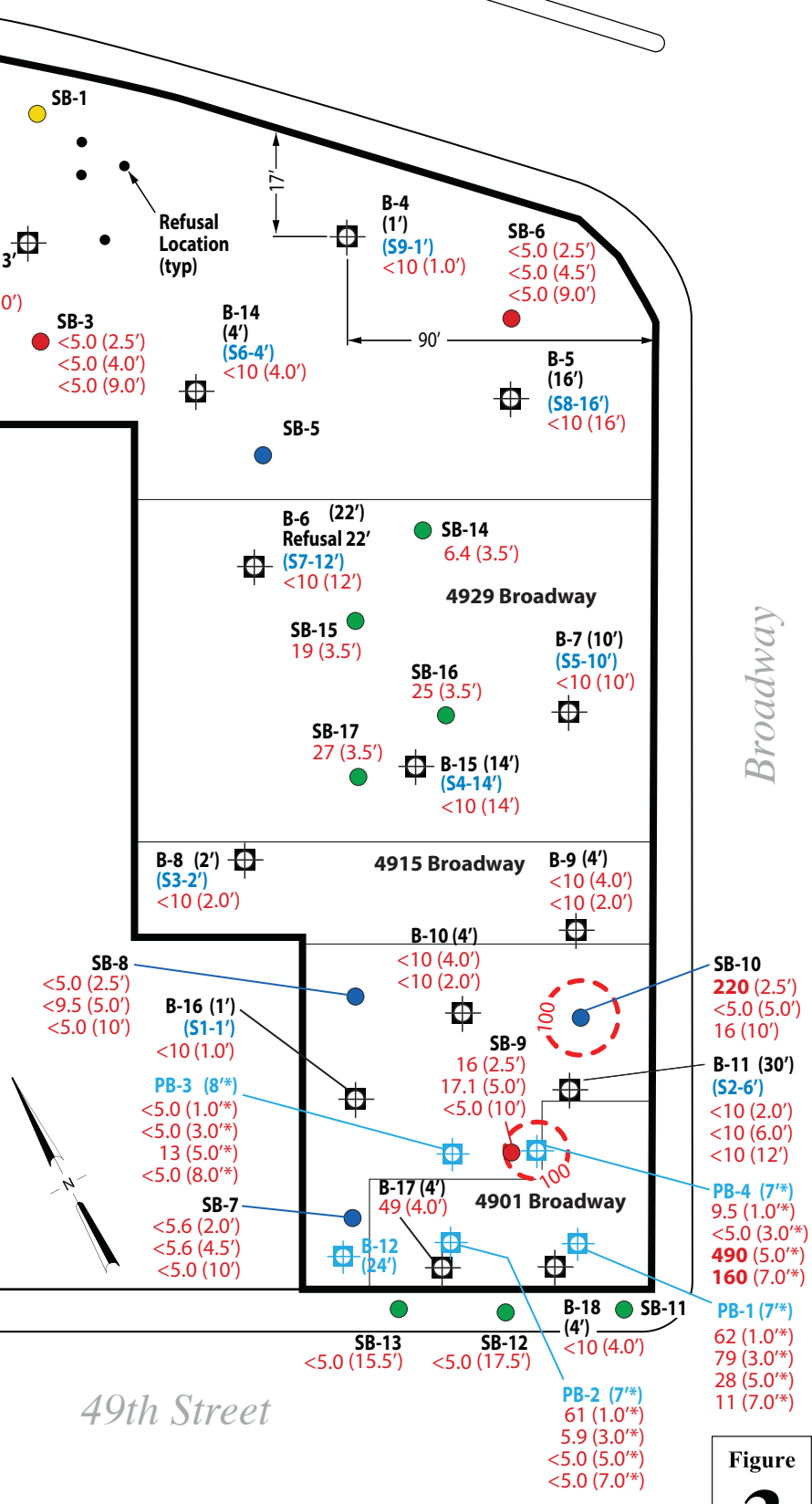
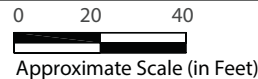



Figure 3

51st Street

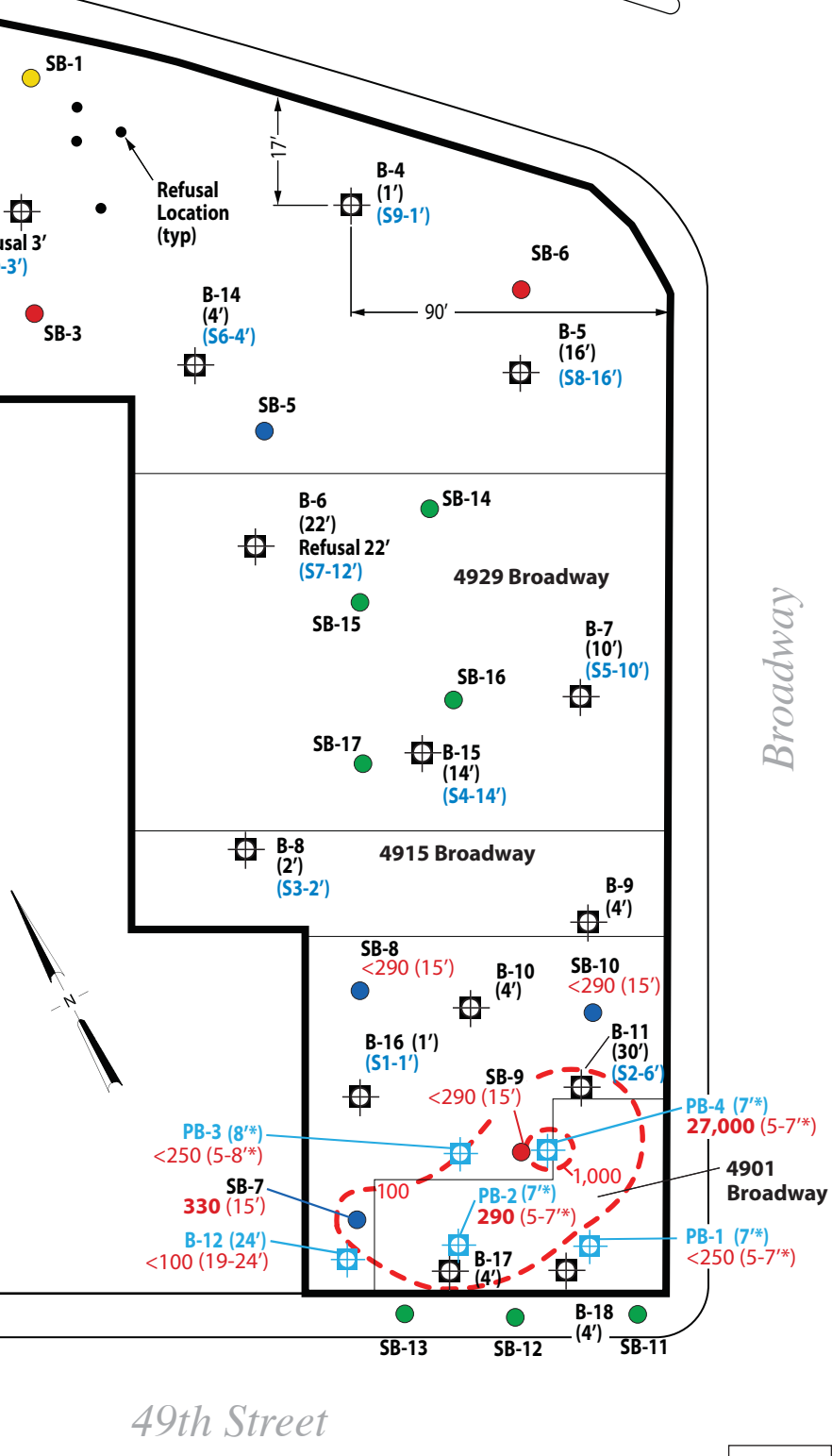
Desmond Street

Broadway

LEGEND

- (16')
 - (S1-1')
 - (7'*)
 - B-1
 - B-11
 - PB-1
 -
 - SB-3
 - SB-1
 - SB-8
 - SB-13
 - 
 - <50
 - 100-
 - *
- Boring depth, feet below sidewalk grade
 - Soil Profile Sample ID and Depth
 - Est. Depth below future slab
 - Boring Location, November 2015
 - Boring to Groundwater Location, November 2015
 - Pit Boring Location to Water, January 2016
 - Refusal Location
 - Geotechnical and Environmental Boring January, 2013
 - Geotechnical Boring January, 2013
 - Environmental Boring January, 2013
 - Environmental Boring April, 2013
 - Approximate Groundwater Flow Direction
 - TPHmo concentration in micrograms per liter (µg/L), **bold** concentrations exceed final ESL (100 µg/L)
 - TPHmo isoconcentration contour; dashed where inferred; queried where uncertain
 - Future slab about 10' below street grade

Source Map: ERS



Figure

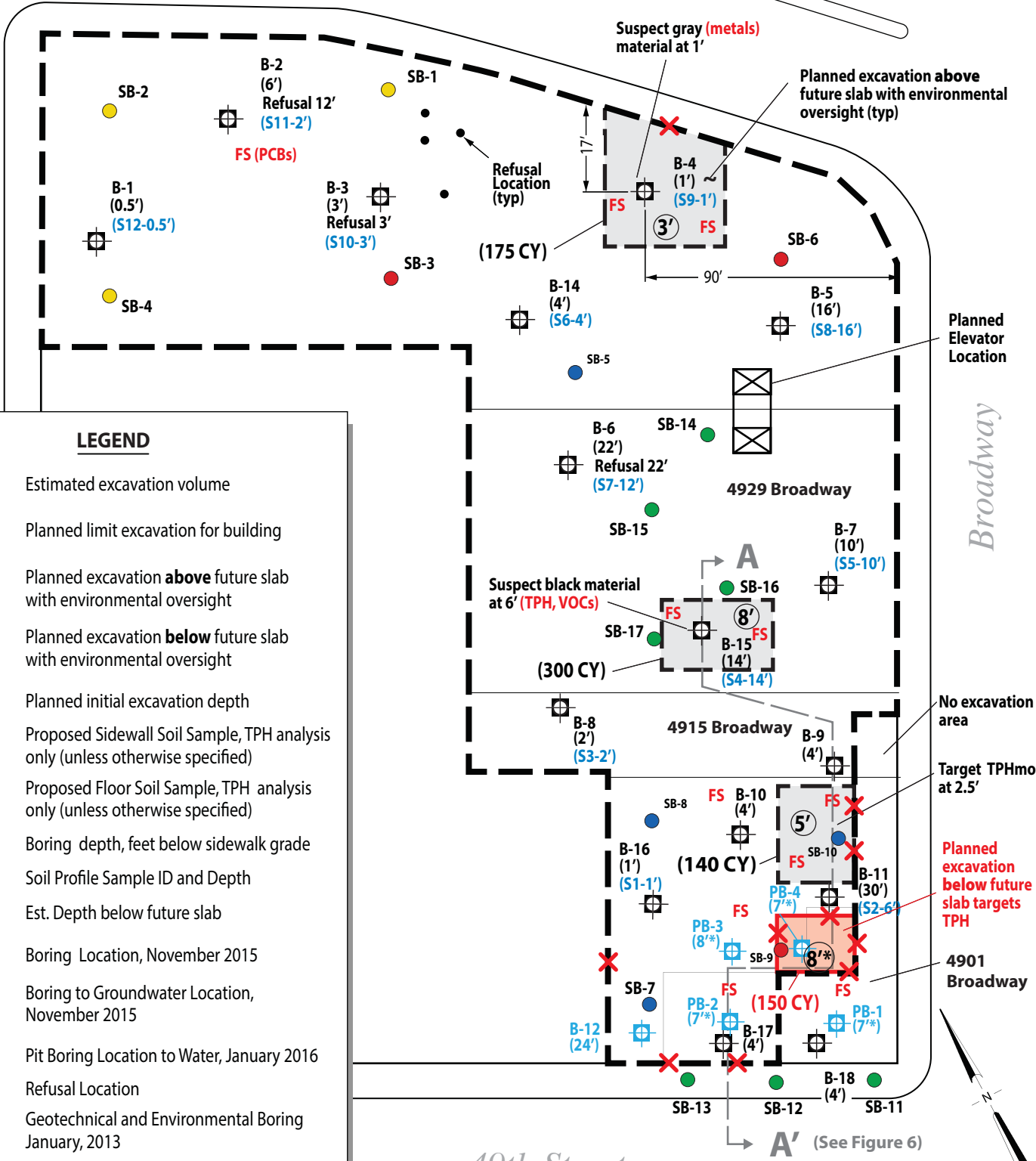
4

51st Street

Desmond Street

Suspect gray (metals) material at 1'

Planned excavation above future slab with environmental oversight (typ)



LEGEND

(175 CY) Estimated excavation volume

Planned limit excavation for building

Planned excavation **above** future slab with environmental oversight

Planned excavation **below** future slab with environmental oversight

3' Planned initial excavation depth

X Proposed Sidewall Soil Sample, TPH analysis only (unless otherwise specified)

FS Proposed Floor Soil Sample, TPH analysis only (unless otherwise specified)

(16') Boring depth, feet below sidewalk grade

(S1-1') Soil Profile Sample ID and Depth

(7'*) Est. Depth below future slab

B-1 Boring Location, November 2015

B-11 Boring to Groundwater Location, November 2015

PB-1 Pit Boring Location to Water, January 2016

• Refusal Location

SB-3 Geotechnical and Environmental Boring January, 2013

SB-1 Geotechnical Boring January, 2013

SB-8 Environmental Boring January, 2013

SB-13 Environmental Boring April, 2013

Source Map: ERS

0 20 40



Approximate Scale (in Feet)

Planned Elevator Location

Broadway

No excavation area

Target TPHmo at 2.5'

Planned excavation below future slab targets TPH

4901 Broadway









49th Street

A' (See Figure 6)

Figure

5

LEGEND

-  TPHmo in Soil > ESL (100 mg/kg)
-  TPHmo in Groundwater/Perch Water > ESL (100 µg/L)
-  Planned Soil Compliance Sample
-  Shallow TPHmo Excavation
-  Deeper TPHmo Excavation
-  SB-10 Boring Identification
-  Soil Sample Location
-  Groundwater Sampling Depth (µg/L)

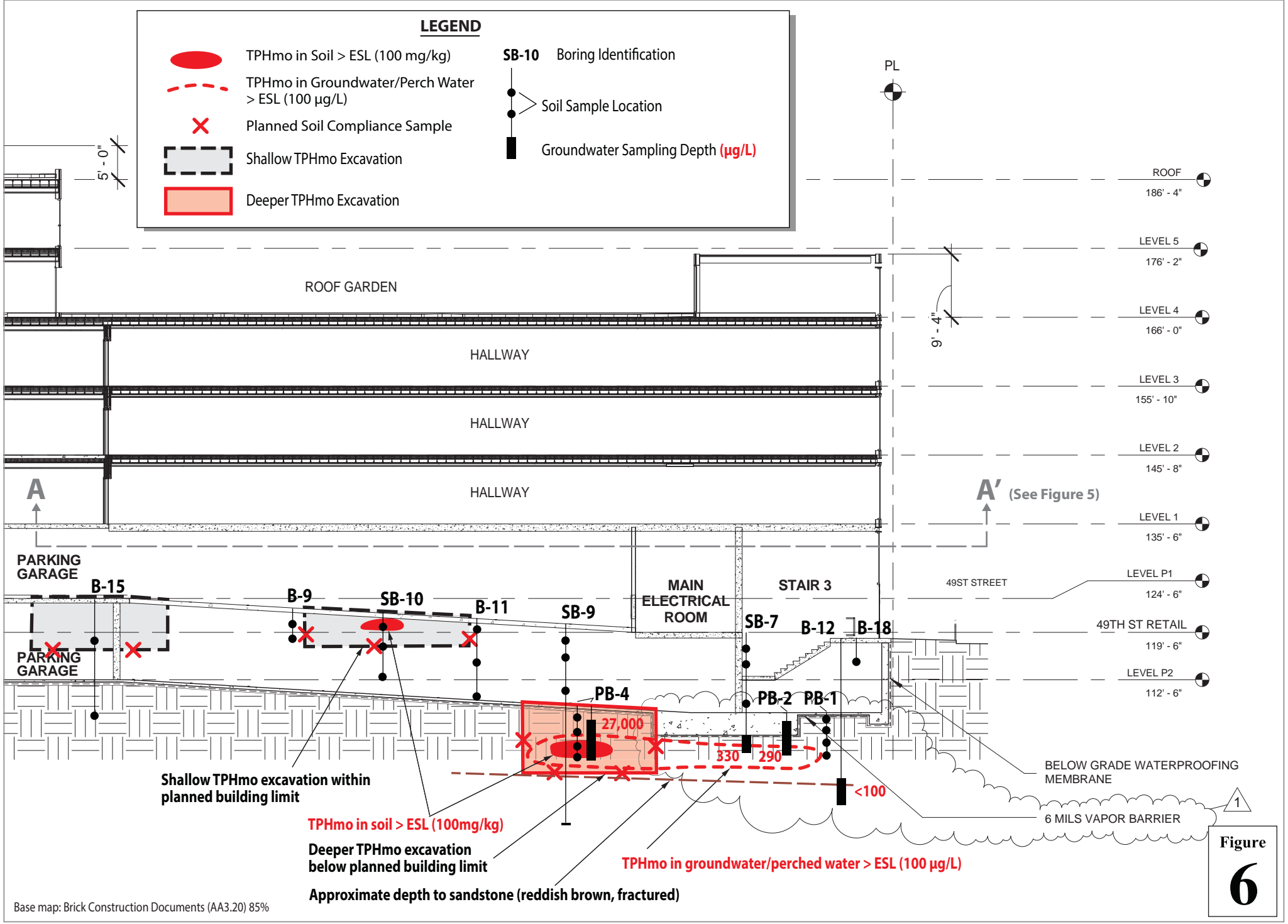


Figure 6

Base map: Brick Construction Documents (AA3.20) 85%

4901 Broadway
Oakland, California



Cross Section of
Planned Excavation

Pangea

Table 1. Soil Analytical Data - 4901 Broadway, Oakland, California

Boring/ Sample ID	Date Sampled	Sample Depth (ft bgs)	THHg	THPd	THHmo	VOCs	SVOCs	PCBs	OC Pesticides	Asbestos	Arsenic	Barium	Beryllium	Chromium (TTL/C)	Cobalt	Copper	Lead (TTL/C)	Lead (STL/C)	Lead (TCLD ⁺)	Mercury	Nickel	Vanadium	Zinc	Other Metals	Notes	
			mg/kg																							
Residential final ESL for shallow soil:			100	100	100	varies	varies	0.22	varies	NA	0.39	750	12	1,000	23	230	80	NA	NA	6.7	150	200	600	Varies		
Residential human health ESL for shallow soil:			770	240	10,000	varies	varies	0.22	varies	NA	0.39	15,000	160	NV	23	3,100	80	NA	NA	6.7	1,500	390	23,000	Varies		
Commercial ESL for shallow soil:			500	110	500	varies	varies	0.74	varies	NA	1.6	1,500	12	2,500	80	230	320	NA	NA	10	150	200	600	Varies		
Export Profiling - November 2015																										
S1-1' (B16)	11/19/2015	1.0	<10	<10	<10	<0.010	1.0	<0.010	<0.20	ND	<5.0	160	<1.0	32	8.1	10	7.8	--	--	<0.10	46	22	33	ND		
S2-6' (B11)	11/19/2015	6.0	<10	<10	<10	<0.010	1.0	<0.010	<0.20	ND	<5.0	340	<1.0	38	15	14	8.6	--	--	0.10	45	28	40	ND		
S3-2' (B8)	11/19/2015	2.0	<10	<10	<10	<0.010	1.0	<0.010	<0.20	ND	<5.0	210	<1.0	19	11	7.6	10	--	--	0.10	59	27	20	ND		
S4-14' (B15)	11/19/2015	14	<10	<10	<10	<0.010	1.0	<0.010	<0.20	ND	<5.0	60	<1.0	10	7.3	4.0	7.6	--	--	0.11	10	14	11	ND		
S5-10' (B7)	11/19/2015	10	<10	<10	<10	<0.010	1.0	<0.010	<0.20	ND	<5.0	180	<1.0	19	6.3	7.5	8.8	--	--	0.10	15	13	20	ND		
S6-4' (B14)	11/19/2015	4.0	<10	<10	<10	<0.010	1.0	<0.010	<0.20	ND	<5.0	90	<1.0	14	5.2	5.3	7.9	--	--	0.33	21	10	15	ND		
S7-12' (B6)	11/19/2015	12	<10	<10	<10	<0.010	1.0	<0.010	<0.20	ND	<5.0	63	<1.0	13	3.4	3.8	7.9	--	--	0.15	20	26	13	ND		
S8-16' (B5)	11/19/2015	16	<10	<10	<10	<0.010	1.0	<0.010	<0.20	ND	<5.0	32	<1.0	3.5	<2.0	1.7	6.7	--	--	0.13	8.0	<5.0	4.1	ND		
S9-1' (B4)	11/19/2015	1.0	<10	<10	<10	<0.010	1.0	<0.010	<0.20	ND	<5.0	220	<1.0	10	5.5	27	150	5.2	b	0.73	12	9.5	10	ND	STLC above non-RCRA haz waste	
S10-3' (B3)	11/19/2015	3.0	<10	<10	<10	<0.010	1.0	<0.010	<0.20	ND	<5.0	73	<1.0	2.3	3.8	2.1	7.8	--	--	0.75	4.7	<5.0	<1.0	ND	Refusal at 4 locations. No 8' sample.	
S11-2' (B2)	11/19/2015	2.0	<10	<10	<10	<0.010	1.0	0.04	<0.20	ND	<5.0	120	<1.0	18	4.0	11	<3.0	--	--	0.10	16	20	20	ND	See note a	
S12-0.5' (B1)	11/19/2015	0.5	<10	<10	<10	<0.010	--	--	--	ND	5.4	200	<1.0	12	6.0	15	87	b	--	0.26	14	12	12	ND	Insufficient soil for all analyses.	
S12-0.5' (B1)(2)	11/25/2015	0.5	--	--	--	--	Table 2	<0.010	<0.20	--	--	--	--	--	--	--	110	3.4	<0.20	--	--	--	--	--	Second sample due to insufficient soil.	
Soil Characterization for County - November 2015																										
B2-6'	11/19/2015	6.0	<10	<10	<10	<0.010	<1.0	<0.010	<0.20	ND	<5.0	52.0	<1.0	8.4	3.3	3.1	<3.0	--	--	0.15	7.3	12.0	9.3	ND		
B6-18'	11/19/2015	18	<10	<10	<10	<0.010	--	--	--	--	--	--	--	--	--	--	<3.0	--	--	--	--	--	--	--		
B9-2'	11/19/2015	2.0	<10	<10	<10	--	--	--	--	--	--	--	--	--	--	--	13	--	--	--	--	--	--	--		
B9-4'	11/19/2015	4.0	<10	<10	<10	--	--	--	--	--	--	--	--	--	--	--	40	--	--	--	--	--	--	--		
B10-2'	11/19/2015	2.0	<10	<10	<10	--	--	--	--	--	--	--	--	--	--	--	29	--	--	--	--	--	--	--		
B10-4'	11/19/2015	4.0	<10	<10	<10	--	--	--	--	--	--	--	--	--	--	--	11	--	--	--	--	--	--	--		
B11-2'	11/19/2015	2.0	<10	<10	<10	--	--	--	--	--	--	--	--	--	--	--	27	--	--	--	--	--	--	--		
B11-6'	11/19/2015	6.0	<10	<10	<10	<0.010	--	--	--	--	--	--	--	--	--	--	<3.0	--	--	--	--	--	--	--		
B11-12'	11/19/2015	12	<10	<10	<10	<0.010	--	--	--	--	--	--	--	--	--	--	<3.0	--	--	--	--	--	--	--		
B12-12'	11/19/2015	12	<10	<10	<10	<0.010	--	--	--	--	--	--	--	--	--	--	<3.0	--	--	--	--	--	--	--		
B15-6'	11/19/2015	6.0	<10	<10	<10	<0.010	<1.0	<0.010	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
B17-4'	11/20/2015	4.0	<10	<10	49	<0.010	<1.0	<0.010	<0.20	ND	<5.0	150	<1.0	16	6.6	26	210	2.9	<0.10	0.28	27	13	17	ND	Different chain of custody	
B18-4'	11/20/2015	4.0	<10	<10	<10	<0.010	--	--	--	--	--	--	--	--	--	--	13	--	--	--	--	--	--	--		
Soil Characterization for County near Former Dry Cleaner - January 2016																										
PB-1-1'	1/27/2016	1.0**	<1.0	4.2	62	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-1-3'	1/27/2016	3.0**	<1.0	3.2	79	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-1-5'	1/27/2016	5.0**	<1.0	2.0	28	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-1-7'	1/27/2016	7.0**	<1.0	<1.0	11	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-2-1'	1/27/2016	1.0**	<1.0	3.6	61	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-2-3'	1/27/2016	3.0**	<1.0	<1.0	5.9	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-2-5'	1/27/2016	5.0**	<1.0	<1.0	<5.0	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-2-7'	1/27/2016	7.0**	<1.0	<1.0	<5.0	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-3-1'	1/27/2016	1.0**	<1.0	<1.0	<5.0	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-3-3'	1/27/2016	3.0**	<1.0	<1.0	<5.0	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-3-5'	1/27/2016	5.0**	<1.0	1.0	13	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-3-8'	1/27/2016	8.0**	<1.0	<1.0	<5.0	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-4-1'	1/27/2016	1.0**	<1.0	<1.0	9.5	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-4-3'	1/27/2016	3.0**	<1.0	<1.0	<5.0	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-4-5'	1/27/2016	5.0**	20	110	490	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	
PB-4-7'	1/27/2016	7.0**	20	35	160	<0.005 ^{HL}	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit at former dry cleaner	

Pangea

Table 1. Soil Analytical Data - 4901 Broadway, Oakland, California

Boring/ Sample ID	Date Sampled	Sample Depth (ft bgs)	TPH _g	TPH _d	TPH _m	VOCs	SVOCs	PCBs	OC Pesticides	Asbestos	Arsenic	Barium	Beryllium	Chromium (TTL/C)	Cobalt	Copper	Lead (TTL/C)	Lead (STL/C*)	Lead (TCLP*)	Mercury	Nickel	Vanadium	Zinc	Other Metals	Notes
			mg/kg																						
Residential final ESL for shallow soil:			100	100	100	varies	varies	0.22	varies	NA	0.39	750	12	1,000	23	230	80	NA	NA	6.7	150	200	600	Varies	
Residential human health ESL for shallow soil:			770	240	10,000	varies	varies	0.22	varies	NA	0.39	15,000	160	NV	23	3,100	80	NA	NA	6.7	1,500	390	23,000	Varies	
Commercial ESL for shallow soil:			500	110	500	varies	varies	0.74	varies	NA	1.6	1,500	12	2,500	80	230	320	NA	NA	10	150	200	600	Varies	

Soil Characterization from Prior Assessment - January 2013

SB-3	1/14/2013	2.5'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	2.2	--	--	8.7	--	--	--	--	--	--	--	--	--	--	--
SB-3	1/14/2013	4.0'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	1.8	--	--	40	--	--	--	--	--	--	--	--	--	--	--
SB-3	1/14/2013	9.0'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	1.6	--	--	78	--	--	--	--	--	--	--	--	--	--	--
SB-5	1/14/2013	2.5'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	2.0	--	--	7.8	--	--	--	--	--	--	--	--	--	--	--
SB-5	1/14/2013	5.0'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	1.8	--	--	13	--	--	--	--	--	--	--	--	--	--	--
SB-5	1/14/2013	10'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	3.2	--	--	41	--	--	--	--	--	--	--	--	--	--	--
SB-6	1/14/2013	2.5'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	2.3	--	--	16	--	--	--	--	--	--	--	--	--	--	--
SB-6	1/14/2013	4.5'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	2.4	--	--	20	--	--	--	--	--	--	--	--	--	--	--
SB-6	1/14/2013	9.0'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	3.2	--	--	31	--	--	--	--	--	--	--	--	--	--	--
SB-7	1/14/2013	2.0'	<1.1	1.5	5.6	<0.05	--	--	--	--	3.7	--	--	41	--	--	--	--	--	--	--	--	--	--	--
SB-7	1/14/2013	4.5'	<1.1	1.8	5.6	<0.05	--	--	--	--	2.8	--	--	64	--	--	--	--	--	--	--	--	--	--	--
SB-7	1/14/2013	10'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	3.5	--	--	41	--	--	--	--	--	--	--	--	--	--	--
SB-8	1/14/2013	2.5'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	2.8	--	--	53	--	--	--	--	--	--	--	--	--	--	--
SB-8	1/14/2013	5.0'	<1.1	1.4	9.5	<0.05	--	--	--	--	1.9	--	--	23	--	--	--	--	--	--	--	--	--	--	--
SB-8	1/14/2013	10'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	3.4	--	--	33	--	--	--	--	--	--	--	--	--	--	--
SB-9	1/14/2013	2.5'	<1.1	1.4	16.0	<0.05	--	--	--	--	2.6	--	--	29	--	--	--	--	--	--	--	--	--	--	--
SB-9	1/14/2013	5.0'	<1.1	1.2	17.1	<0.05	--	--	--	--	4.4	--	--	35	--	--	--	--	--	--	--	--	--	--	--
SB-9	1/14/2013	10'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	2.8	--	--	45	--	--	--	--	--	--	--	--	--	--	--
SB-10	1/14/2013	2.5'	<1.1	21	220	<0.05	--	--	--	--	6.0	--	--	39	--	--	--	--	--	--	--	--	--	--	--
SB-10	1/14/2013	5.0'	<1.1	<1.0	<5.0	<0.05	--	--	--	--	2.6	--	--	41	--	--	--	--	--	--	--	--	--	--	--
SB-10	1/14/2013	10'	<1.1	1.4	16	<0.05	--	--	--	--	3.5	--	--	48	--	--	--	--	--	--	--	--	--	--	--
SB-12	4/15/2013	17.5'	<1.1	1.8	<5.0	<0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB-13	4/15/2013	15.5'	<1.1	1.2	<5.0	<0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SB-14	4/15/2013	3.5'	<1.1	1.1	6.4	<0.05	--	--	--	--	2.5	--	--	17	--	--	9.2	--	--	--	--	--	--	--	--
SB-15	4/15/2013	3.5'	<1.1	38.0	19.0	<0.05	--	--	--	--	2.1	--	--	33	--	--	18	--	--	--	--	--	--	--	--
SB-16	4/15/2013	3.5'	<1.1	8.7	25.0	<0.05	--	--	--	--	3	--	--	32	--	--	26	--	--	--	--	--	--	--	--
SB-17	4/15/2013	3.5'	<1.1	8.4	27.0	<0.05	--	--	--	--	3.2	--	--	43	--	--	14	--	--	--	--	--	--	--	--

Notes and Abbreviations:

TPH (g, d, and m) - Total Petroleum Hydrocarbons (as gasoline, diesel, and motor oil) by EPA Method 8015C. Silica gel cleanup on 1/27/16 analyses for TPHd and TPHmo.

VOCs = Volatile Organic Compounds by EPA Method 8260B; January 2016 analysis included BTEX analyses by Method 8021 (sample PB-4-5' reported full 8260 list).

H = VOCs by EPA Method 8260B (reported Method 8010 list for chlorinated VOCs).

SVOCs = Semivolatile Organic Compounds by EPA Method 8270C

PCB = Polychlorinated Biphenyls by EPA Method 8082

OC Pesticides = Organochloride Pesticides by EPA Method 8081A

Asbestos = Asbestos by EPA Method 600 with CARB 435 and 0.25% Target Sensitivity

Metals by EPA Method 6010B.

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.

Bold = Non-metal concentration detected above method reporting limits. Lead and/or chromium above 50 mg/kg also bold.

Italic = Concentration in bold italics exceeds residential ESLs. Arsenic may represent background conditions.

Exceeds = Exceeds hazardous waste screening criteria.

-- = Not analyzed

STLC = Solubility Threshold Level Concentration. TCLP = Toxic Characteristic Leaching Potential

* = STLC and TCLP analytical results reported in milligrams per liter (mg/L). <5 mg/L STLC and TCLP lead is non-hazardous.

** = Approximate depth below planned foundation. Sample collected in pit within cavity of former basement of dry cleaning facility.

ESL established by the SFBRWQCB, Interim Final - February 2005 and amended in December 2013.

a = PCB aroclor 1254 (0.04 mg/kg).

b = Insufficient sample volume to perform this extraction/analysis.

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Table 2. Soil Analytical Data: Sem-Volatile Organic Compounds - 4901 Broadway, Oakland, California

Boring/ Sample ID	Date Sampled	Sample Depth (ft bgs)	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Chrysene	Fluoranthene	Indeno (1,2,3-cd) pyrene	Phenanthrene	Pyrene	Other	Notes
			mg/kg										
Residential final ESL for shallow soil:			0.38	0.038	0.38	27	3.8	40	0.38	11	85	varies	
Residential human health ESL for shallow soil:			0.38	0.038	0.38	No Value	3.8	2,300	0.38	No Value	3,400	varies	
Commercial final ESL for shallow soil:			1.3	0.13	1.3	27	13	40	1.30	11	85	varies	
S12-0.5'(B1)(2)	11/25/2015	0.5	0.021	0.031	0.033	0.032	0.037	0.056	0.022	0.053	0.062	ND	

Notes and Abbreviations:

SVOCs = Semivolatile Organic Compounds by EPA Method 8270C

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.

Bold = Concentration above residential ESLs

--- = Not analyzed

ESL established by the SFBRWQCB, Interim Final - February 2005 and amended in December 2013.

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Table 3. Groundwater Analytical Data - 4901 Broadway, Oakland, California

	CPD (TPH)	DRO (TPH)	MRO (TPH/m)	Benzene	Toluene	Other VOCs	SVOCs	PCBs	Pesticides	Acetone	Chromium	Cadmium	Copper	Lead	Mercury	Molybdenum	Nickel	Silver	Vanadium	Zinc	Other Metals	Cyanide	PTT	Notes	
Final ESL for groundwater, non-dw:	500	640	640	27	130	varies	varies	varies	varies	1,000	180	3.0	3.1	2.5	0.025	240	8.2	0.19	19	81	varies	1	N/A		
Final ESL for groundwater, dw:	100	100	100	1.0	40	varies	varies	varies	varies	1,000	50	3.0	3.1	2.5	0.025	78	8.2	0.19	19	81	varies	1	N/A		
	µg/L																								
Sample ID	Date Sampled	Sample Depth (ft - ft)																							
2013 Phase II Assessment																									
SB-7	1/14/2013	15	<50	75	330	<0.5	<0.5	<10	--	--	--	<5.0	<5.0	--	<5.0	--	--	--	--	--	--	--	--	--	
SB-8	1/14/2013	15	<50	<49	<290	<0.5	<0.5	<10	--	--	--	<5.0	<5.0	--	<5.0	--	--	--	--	--	--	--	--	--	
SB-9	1/14/2013	15	<50	<49	<290	<0.5	<0.5	<10	--	--	--	<5.0	<5.0	--	<5.0	--	--	--	--	--	--	--	--	--	
SB-10	1/14/2013	15	<50	<49	<290	<0.5	<0.5	<10	--	--	--	<5.0	<5.0	--	<5.0	--	--	--	--	--	--	--	--	--	
2015 Assessment																									
B12-W	11/20/2015	19-24	<50	<50	<100	<0.5	<0.5	<1.0	<50	<2.0	20	--	--	--	--	--	--	--	--	--	--	--	--	--	
2016 Assessment																									
PB-1	1/28/2016	1-7	<50	160	<250	<0.5	<0.5	<0.5 st	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit
PB-2	1/28/2016	1-7	<50	190	290	<0.5	<0.5	<0.5 st	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit
PB-3	1/28/2016	1-8	<50	180	<250	<0.5	<0.5	<0.5 st	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit
PB-4	1/28/2016	1-7	54	5,200	27,000	<0.5	<0.5	a, tba	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	In pit

Explanation:

TPH (g, d, and m) - Total Petroleum Hydrocarbons (as gasoline, diesel, and motor oil) by EPA Method 8015C.

VOCs = Volatile Organic Compounds by EPA Method 8260B unless otherwise notes.

H = VOCs by EPA Method 8260B (reported Method 8010 list for chlorinated VOCs).

SVOCs = Semivolatile Organic Compounds by EPA Method 8270C.

PCB = Polychlorinated Biphenyls by EPA Method 8082.

Pesticides = Organochlorine Pesticides by EPA Method 8081A.

Dissolved Metals by EPA Method E200.8

Cyanide by EPA Method 9014.

µg/L = micrograms per Liter

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

-- = Not analyzed

ND = Not Detected at levels above laboratory reporting limits. Limits vary by constituent.

ft - ft = Approximate groundwater sample depth interval, in feet below grade surface.

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, groundwater is a current or potential source of drinking water. (Table F-1a).

ESL established by the SFBRWQCB, Interim Final - February 2005 and amended in December 2013.

Bold = Concentration above final ESLs for groundwater. Site groundwater is not used for beneficial use.

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

dw = groundwater is a current or potential source of drinking water

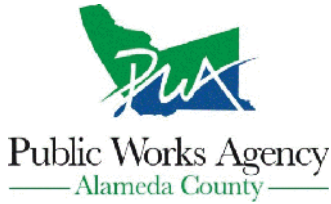
a = acetone, 13 ug/L

tba = tert-butyl alcohol, 5 ug/L

APPENDIX A

Boring Permit

Alameda County Public Works Agency - Water Resources Well Permit



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

Application Approved on: 11/12/2015 By jamesy

Permit Numbers: W2015-1013
Permits Valid from 11/19/2015 to 11/19/2015

Application Id: 1447114591290
Site Location: 4901 Broadway, Oakland
Project Start Date: 11/19/2015
Assigned Inspector: Contact Balance Hydrologics, Inc at (510) 473-5663 or acwells@balancehydro.com

City of Project Site:Oakland

Completion Date:11/19/2015

Applicant: Pangea Environmental Services - Elizabeth Avery
1710 Franklin Street #200, Oakland, CA 94612
Property Owner: US TP SRM Temescal, LLC
101 North Post, Suite 200, Spokane, WA 99201
Client: ** same as Property Owner **
Contact: Erik Lervaag

Phone: 510-965-5489

Phone: --

Phone: 925-822-6749
Cell: --

Receipt Number: WR2015-0553 Total Due: \$265.00
Payer Name : Robert Clark-Riddell Total Amount Paid: \$265.00
Paid By: VISA PAID IN FULL

Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitorinig Study - 8 Boreholes
Driller: Confluence Environmental - Lic #: 913194 - Method: DP

Work Total: \$265.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2015-1013	11/12/2015	02/17/2016	8	2.25 in.	25.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
5. 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.

Alameda County Public Works Agency - Water Resources Well Permit

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

7. NOTE:

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

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

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

APPENDIX B

Boring Logs



Pangea Environmental Services, Inc.
 1710 Franklin Street, Suite 200
 Oakland, CA 94612
 Telephone: 510-836-3700
 Fax: 510-836-3709

BORING NUMBER _____

B-1

PAGE 1 OF 1

CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION _____
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Hand Auger AT TIME OF DRILLING ---
 LOGGED BY E. Lervaag CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
	12 12-0.5' (Bi)				dk brown clayey gravel Boring terminated @ 1' bgs	Backfill w/ native soil
5						
10						
15						
20						

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BORING NUMBER B-2 PAGE 1 OF 1

CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION _____
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Direct Push AT TIME OF DRILLING ---
 LOGGED BY E. Lervaaq CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
					Light brown gravelly clay to 3' bgs. Dry	NATIVE SOIL
	S11-2' (B2)				3' Brown sandy clay to 6' bgs Dry	Graut TO 1' below grade
5					Brown clay, Dry	
	B2-6'					
10					- Transition to sand/cemented sand Light brown, Dry	
					- Boring Terminated (refusal)	
15						
20						

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BORING NUMBER B-3
 PAGE 1 OF 1

CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION _____
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Direct Push AT TIME OF DRILLING ---
 LOGGED BY _____ CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
						<p>Native soil Grout</p>
	S10-3'(B3)				<p>- refusal at 3' bgs</p> <p>4 attempts were made at location B-3 (see map)</p> <ol style="list-style-type: none"> 1) 0" penetration 2) 1' penetration 3) 3' penetration 4) 3' penetration (sample location) 	
5						
10						
15						
20						

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BORING NUMBER

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PAGE 1 OF 1

CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Hand Auger AT TIME OF DRILLING _____
 LOGGED BY E. Lervaaq CHECKED BY _____ AT END OF DRILLING _____
 NOTES _____ AFTER DRILLING _____

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
	1 S9-1' (B4)				gray gravelly clay - Boring terminated 1.25' bgs	Native soil Backfill
5						
10						
15						
20						

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BORING NUMBER B-5
 PAGE 1 OF 1

CLIENT SIRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Direct push AT TIME OF DRILLING ---
 LOGGED BY E. Lervaaq CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
					brown gravelly clay, dry to 3' bgs	Native soil
5				3'	brown sandy clay, dry to 8' bgs	Grout to 1' below grade
10				8'	brown clay, dry to 13' bgs	
15				13'	Sand + cemented Sand light brown to yellow, dry	
16'	38-16'(B5)				Boring terminated	
20						

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 Fax: 510-836-3709

BORING NUMBER

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PAGE 1 OF 2

CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway, Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Direct Push AT TIME OF DRILLING ---
 LOGGED BY E. Lervaa CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0					mixed gravel, sand, clay to 3' bgs	<p>Backfill w/ native soil</p> <p>Ground TO 1' below grade</p>
3'				Brown Sandy Clay. Dry. No odor TO 7' bgs		
7'				Brown Clay Dry TO 19'		
12'	37-12'(86)					
15'						
18'	36-18'					
19'					Light brown cemented sand	
20.0						

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BORING NUMBER

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PAGE 1 OF 2

CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway, Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Direct Push AT TIME OF DRILLING ---
 LOGGED BY E. Lesvay CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
2.1					Light Brown cemented sand. Boring terminated (refusal)	
2.5						
3.0						
3.5						
4.0						

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BORING NUMBER B-7
 PAGE 1 OF 1

CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway, Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Direct Push AT TIME OF DRILLING ---
 LOGGED BY E. Leruag CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
					brown gravelly clay dry to 2'	Native soil
					3' sandy clay, Dry to 8' bgs	Grout to 1' below grade
5						
					8' light brown clay, dry to 10' bgs	
10					SS-10'(B7) - Boring terminated	
15						
20						



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 Oakland, CA 94612
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BORING NUMBER B-8
 PAGE 1 OF 1

CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway, Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Hand Auger AT TIME OF DRILLING ---
 LOGGED BY E. Lervag CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
					brown gravelly clay	
	33-2'(B8)				Boring terminated	Backfill w/ Native Soil.
5						
10						
15						
20						

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BORING NUMBER _____

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CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway, Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Direct Push AT TIME OF DRILLING ---
 LOGGED BY E. Lervag CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
	B9-2'				Brown gravelly clay, dry to 4' bgs	Native soil
	B9-4'				- Boring terminated	Grout to 1' below grade
5						
10						
15						
20						

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BORING NUMBER B-10
 PAGE 1 OF 1

CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway, Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Direct Push AT TIME OF DRILLING ---
 LOGGED BY E. Lervaaag CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
	B10-2'				brown sandy clay to 4' bgs	<p>Native soil Grout to 1' below grade</p>
5	B10-4'				Boring terminated	
10						
15						
20						

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BORING NUMBER B-14
 PAGE 1 OF 1

CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway, Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Direct Push AT TIME OF DRILLING ---
 LOGGED BY E. Lervag CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0					2" Asphalt Base rock	
					gravelly clay, Brown, Dry to 4' bgs	
					Boring terminated	Native soil Grout to 1' below grade
5						
10						
15						
20						

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BORING NUMBER

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PAGE 1 OF 1

CLIENT SRM PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway, Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Direct Push AT TIME OF DRILLING _____
 LOGGED BY E. Lervag CHECKED BY _____ AT END OF DRILLING _____
 NOTES _____ AFTER DRILLING _____

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
					1' Gravelly clay, Brown Dry Sandy Clay, Brown, Dry TO 6'	Native soil
5	B15-6'				5.5' - Black clayey sand. No odor - 6' light brown clay, Dry TO 14'	Grout to 1' below grade
10						
15	S4-14' (B15)				- Boring terminated 14' bgs	
20						

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 Fax: 510-836-3709

BORING NUMBER B-16
 PAGE 1 OF 1

CLIENT _____ PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway, Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Hand Auger AT TIME OF DRILLING ---
 LOGGED BY E. Lervaag CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
	S1-1' (B16)				Brown sandy clay with some gravel - Boring terminated	Backfilled with Native Soil
5						
10						
15						
20						

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BORING NUMBER B-17
 PAGE 1 OF 1

CLIENT _____ PROJECT NAME 4901 Broadway
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway, Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Hand Auger AT TIME OF DRILLING ---
 LOGGED BY E. Lervag CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
	B17-1'				Black clay to 1' Dry - DK brown clay with large rubble or rock. Hard to hand Auger around them. - Sandy Clay Brown, Dry	Native soil Grouted TO 1' below grade
	B17-4'				- Boring terminated	
5						
10						
15						
20						

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BORING NUMBER _____

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PAGE 1 OF 1

CLIENT _____ PROJECT NAME _____
 PROJECT NUMBER _____ PROJECT LOCATION 4901 Broadway, Oakland
 DATE STARTED 11.19.15 COMPLETED 11.19.15 GROUND ELEVATION _____ HOLE SIZE _____
 DRILLING CONTRACTOR Confluence GROUND WATER LEVELS:
 DRILLING METHOD Hand Auger AT TIME OF DRILLING ---
 LOGGED BY E. Lervaaag CHECKED BY _____ AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0						
	B18-1'				Black clay to 1' dry Brown clay with rubble or large rock to 3'. Too large to bring up in Auger.	<p>Native Soil Grout to 1' below grade</p>
	B18-4'				Sandy clay Boring Terminated	
5						
10						
15						
20						

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APPENDIX C

Standard Operating Procedures

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 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.

APPENDIX D

Laboratory Analytical Results: Export Profiling



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04 December 2015

Bob Clark-Riddell
Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
RE: 4901 Broadway

Enclosed are the results of analyses for samples received by the laboratory on 11/21/15 10:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Katherine RunningCrane
Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S12-0.5' (B1)	T152950-01	Soil	11/19/15 13:45	11/21/15 10:20
S11-2' (B2)	T152950-02	Soil	11/19/15 09:46	11/21/15 10:20
S10-3' (B3)	T152950-03	Soil	11/19/15 15:20	11/21/15 10:20
S9-1' (B4)	T152950-04	Soil	11/19/15 14:00	11/21/15 10:20
S8-16' (B5)	T152950-05	Soil	11/19/15 13:00	11/21/15 10:20
S7-12' (B6)	T152950-06	Soil	11/19/15 10:15	11/21/15 10:20
S5-10' (B7)	T152950-07	Soil	11/19/15 13:20	11/21/15 10:20
S3-2' (B8)	T152950-08	Soil	11/19/15 14:50	11/21/15 10:20
S2-6' (B11)	T152950-09	Soil	11/19/15 12:50	11/21/15 10:20
S6-4' (B14)	T152950-10	Soil	11/19/15 14:10	11/21/15 10:20
S4-14' (B15)	T152950-11	Soil	11/19/15 11:00	11/21/15 10:20
S1-1' (B16)	T152950-12	Soil	11/19/15 14:30	11/21/15 10:20

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager

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

Project: 4901 Broadway
Project Number: [none]
Project Manager: Bob Clark-Riddell

Reported:
12/04/15 16:58

DETECTIONS SUMMARY

Sample ID: S12-0.5' (B1)

Laboratory ID: T152950-01

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Arsenic	5.4	5.0		mg/kg	EPA 6010B	
Barium	200	1.0		mg/kg	EPA 6010B	
Chromium	12	2.0		mg/kg	EPA 6010B	
Cobalt	6.0	2.0		mg/kg	EPA 6010B	
Copper	15	1.0		mg/kg	EPA 6010B	
Lead	87	3.0		mg/kg	EPA 6010B	
Nickel	14	2.0		mg/kg	EPA 6010B	
Vanadium	12	5.0		mg/kg	EPA 6010B	
Zinc	12	1.0		mg/kg	EPA 6010B	
Mercury	0.26	0.10		mg/kg	EPA 7471A Soil	

Sample ID: S11-2' (B2)

Laboratory ID: T152950-02

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	120	1.0		mg/kg	EPA 6010B	
Chromium	18	2.0		mg/kg	EPA 6010B	
Cobalt	4.0	2.0		mg/kg	EPA 6010B	
Copper	11	1.0		mg/kg	EPA 6010B	
Nickel	16	2.0		mg/kg	EPA 6010B	
Vanadium	20	5.0		mg/kg	EPA 6010B	
Zinc	20	1.0		mg/kg	EPA 6010B	
PCB-1254	40	10		ug/kg	EPA 8082	

Sample ID: S10-3' (B3)

Laboratory ID: T152950-03

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	73	1.0		mg/kg	EPA 6010B	
Chromium	2.3	2.0		mg/kg	EPA 6010B	
Cobalt	3.8	2.0		mg/kg	EPA 6010B	
Copper	2.1	1.0		mg/kg	EPA 6010B	
Lead	7.8	3.0		mg/kg	EPA 6010B	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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 1710 Franklin Street, Suite 200
 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

Sample ID: S10-3' (B3) **Laboratory ID:** T152950-03

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
Nickel	4.7	2.0	mg/kg	EPA 6010B	
Mercury	0.75	0.10	mg/kg	EPA 7471A Soil	

Sample ID: S9-1' (B4) **Laboratory ID:** T152950-04

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
Barium	220	1.0	mg/kg	EPA 6010B	
Chromium	10	2.0	mg/kg	EPA 6010B	
Cobalt	5.5	2.0	mg/kg	EPA 6010B	
Copper	27	1.0	mg/kg	EPA 6010B	
Lead	150	3.0	mg/kg	EPA 6010B	
Nickel	12	2.0	mg/kg	EPA 6010B	
Vanadium	9.5	5.0	mg/kg	EPA 6010B	
Zinc	10	1.0	mg/kg	EPA 6010B	
Lead	5.2	0.10	mg/l	STLC Waste Extraction 1	
Mercury	0.73	0.10	mg/kg	EPA 7471A Soil	

Sample ID: S8-16' (B5) **Laboratory ID:** T152950-05

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
Barium	32	1.0	mg/kg	EPA 6010B	
Chromium	3.5	2.0	mg/kg	EPA 6010B	
Copper	1.7	1.0	mg/kg	EPA 6010B	
Lead	6.7	3.0	mg/kg	EPA 6010B	
Nickel	8.0	2.0	mg/kg	EPA 6010B	
Zinc	4.1	1.0	mg/kg	EPA 6010B	
Mercury	0.13	0.10	mg/kg	EPA 7471A Soil	

Sample ID: S7-12' (B6) **Laboratory ID:** T152950-06

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
Barium	63	1.0	mg/kg	EPA 6010B	
Chromium	13	2.0	mg/kg	EPA 6010B	
Cobalt	3.4	2.0	mg/kg	EPA 6010B	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager

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

Project: 4901 Broadway
Project Number: [none]
Project Manager: Bob Clark-Riddell

Reported:
12/04/15 16:58

Sample ID: S7-12' (B6)

Laboratory ID: T152950-06

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Copper	3.8	1.0		mg/kg	EPA 6010B	
Lead	7.9	3.0		mg/kg	EPA 6010B	
Nickel	20	2.0		mg/kg	EPA 6010B	
Vanadium	26	5.0		mg/kg	EPA 6010B	
Zinc	13	1.0		mg/kg	EPA 6010B	
Mercury	0.15	0.10		mg/kg	EPA 7471A Soil	

Sample ID: S5-10' (B7)

Laboratory ID: T152950-07

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	180	1.0		mg/kg	EPA 6010B	
Chromium	19	2.0		mg/kg	EPA 6010B	
Cobalt	6.3	2.0		mg/kg	EPA 6010B	
Copper	7.5	1.0		mg/kg	EPA 6010B	
Lead	8.8	3.0		mg/kg	EPA 6010B	
Nickel	15	2.0		mg/kg	EPA 6010B	
Vanadium	13	5.0		mg/kg	EPA 6010B	
Zinc	20	1.0		mg/kg	EPA 6010B	

Sample ID: S3-2' (B8)

Laboratory ID: T152950-08

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	210	1.0		mg/kg	EPA 6010B	
Chromium	19	2.0		mg/kg	EPA 6010B	
Cobalt	11	2.0		mg/kg	EPA 6010B	
Copper	7.6	1.0		mg/kg	EPA 6010B	
Lead	10	3.0		mg/kg	EPA 6010B	
Nickel	59	2.0		mg/kg	EPA 6010B	
Vanadium	27	5.0		mg/kg	EPA 6010B	
Zinc	20	1.0		mg/kg	EPA 6010B	

Sample ID: S2-6' (B11)

Laboratory ID: T152950-09

Analyte	Result	Reporting		Units	Method	Notes
		Limit				

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Katherine RunningCrane, Project Manager



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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
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Sample ID: S2-6' (B11)

Laboratory ID: T152950-09

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	340	1.0		mg/kg	EPA 6010B	
Chromium	38	2.0		mg/kg	EPA 6010B	
Cobalt	15	2.0		mg/kg	EPA 6010B	
Copper	14	1.0		mg/kg	EPA 6010B	
Lead	8.6	3.0		mg/kg	EPA 6010B	
Nickel	45	2.0		mg/kg	EPA 6010B	
Vanadium	28	5.0		mg/kg	EPA 6010B	
Zinc	40	1.0		mg/kg	EPA 6010B	

Sample ID: S6-4' (B14)

Laboratory ID: T152950-10

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	90	1.0		mg/kg	EPA 6010B	
Chromium	14	2.0		mg/kg	EPA 6010B	
Cobalt	5.2	2.0		mg/kg	EPA 6010B	
Copper	5.3	1.0		mg/kg	EPA 6010B	
Lead	7.9	3.0		mg/kg	EPA 6010B	
Nickel	21	2.0		mg/kg	EPA 6010B	
Vanadium	10	5.0		mg/kg	EPA 6010B	
Zinc	15	1.0		mg/kg	EPA 6010B	
Mercury	0.33	0.10		mg/kg	EPA 7471A Soil	

Sample ID: S4-14' (B15)

Laboratory ID: T152950-11

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	60	1.0		mg/kg	EPA 6010B	
Chromium	10	2.0		mg/kg	EPA 6010B	
Cobalt	7.3	2.0		mg/kg	EPA 6010B	
Copper	4.0	1.0		mg/kg	EPA 6010B	
Lead	7.6	3.0		mg/kg	EPA 6010B	
Nickel	10	2.0		mg/kg	EPA 6010B	
Vanadium	14	5.0		mg/kg	EPA 6010B	
Zinc	11	1.0		mg/kg	EPA 6010B	
Mercury	0.11	0.10		mg/kg	EPA 7471A Soil	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

Sample ID: S1-1' (B16)

Laboratory ID: T152950-12

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	160	1.0		mg/kg	EPA 6010B	
Chromium	32	2.0		mg/kg	EPA 6010B	
Cobalt	8.1	2.0		mg/kg	EPA 6010B	
Copper	10	1.0		mg/kg	EPA 6010B	
Lead	7.8	3.0		mg/kg	EPA 6010B	
Nickel	46	2.0		mg/kg	EPA 6010B	
Vanadium	22	5.0		mg/kg	EPA 6010B	
Zinc	33	1.0		mg/kg	EPA 6010B	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S12-0.5' (B1)
T152950-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112322	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		99.0 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	5.4	5.0	"	"	"	"	"	"	
Barium	200	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	12	2.0	"	"	"	"	"	"	
Cobalt	6.0	2.0	"	"	"	"	"	"	
Copper	15	1.0	"	"	"	"	"	"	
Lead	87	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	14	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	12	5.0	"	"	"	"	"	"	
Zinc	12	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	0.26	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S12-0.5' (B1)
T152950-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	

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Katherine RunningCrane

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S12-0.5' (B1)
T152950-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

cis-1,3-Dichloropropene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		118 %	81.2-123		"	"	"	"	
Surrogate: Dibromofluoromethane		185 %	95.7-135		"	"	"	"	S-GC
Surrogate: Toluene-d8		86.1 %	85.5-116		"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S11-2' (B2)
T152950-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112322	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		101 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	120	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	18	2.0	"	"	"	"	"	"	
Cobalt	4.0	2.0	"	"	"	"	"	"	
Copper	11	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	16	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	20	5.0	"	"	"	"	"	"	
Zinc	20	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S11-2' (B2)
T152950-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		48.5 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		46.9 %		35-140	"	"	"	"	

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	40	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S11-2' (B2)
T152950-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

Surrogate: Tetrachloro-meta-xylene	91.7 %	35-140	5112343	11/23/15	12/01/15	EPA 8082
Surrogate: Decachlorobiphenyl	97.2 %	35-140	"	"	"	"

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B
Bromochloromethane	ND	5.0	"	"	"	"	"	"
Bromodichloromethane	ND	5.0	"	"	"	"	"	"
Bromoform	ND	5.0	"	"	"	"	"	"
Bromomethane	ND	5.0	"	"	"	"	"	"
n-Butylbenzene	ND	5.0	"	"	"	"	"	"
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"
Chlorobenzene	ND	5.0	"	"	"	"	"	"
Chloroethane	ND	5.0	"	"	"	"	"	"
Chloroform	ND	5.0	"	"	"	"	"	"
Chloromethane	ND	5.0	"	"	"	"	"	"
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"
Dibromochloromethane	ND	5.0	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"
Dibromomethane	ND	5.0	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S11-2' (B2)
T152950-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,3-Dichloropropane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene
 Surrogate: Dibromofluoromethane

116 % 81.2-123
 133 % 95.7-135

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Katherine RunningCrane, Project Manager



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 1710 Franklin Street, Suite 200
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S11-2' (B2)
T152950-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Toluene-d8 89.8 % 85.5-116 5112333 11/23/15 12/03/15 EPA 8260B

Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C
Phenol	ND	1000	"	"	"	"	"	"
Aniline	ND	300	"	"	"	"	"	"
2-Chlorophenol	ND	1000	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"
2-Methylnaphthalene	ND	300	"	"	"	"	"	"
1-Methylnaphthalene	ND	300	"	"	"	"	"	"
Acenaphthene	ND	300	"	"	"	"	"	"
4-Nitrophenol	ND	1000	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"
Pentachlorophenol	ND	1000	"	"	"	"	"	"
Pyrene	ND	300	"	"	"	"	"	"
Acenaphthylene	ND	300	"	"	"	"	"	"
Anthracene	ND	300	"	"	"	"	"	"
Benzo (a) anthracene	ND	300	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S11-2' (B2)
T152950-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2-Chloronaphthalene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	

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Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S11-2' (B2)
T152950-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

N-Nitrosodimethylamine	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		28.7 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		47.0 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		21.6 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		43.0 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		79.3 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-dl4		84.3 %	29.1-130		"	"	"	"	

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Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc.
 1710 Franklin Street, Suite 200
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S10-3' (B3)
T152950-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112322	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		99.8 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	73	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	2.3	2.0	"	"	"	"	"	"	
Cobalt	3.8	2.0	"	"	"	"	"	"	
Copper	2.1	1.0	"	"	"	"	"	"	
Lead	7.8	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	4.7	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	ND	5.0	"	"	"	"	"	"	
Zinc	ND	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	0.75	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S10-3' (B3)
T152950-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Chlordane (tech)	ND	50	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		47.5 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		44.3 %		35-140	"	"	"	"	

SunStar Laboratories, Inc.

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S10-3' (B3)
T152950-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		96.2 %	35-140		"	"	"	"	
Surrogate: Decachlorobiphenyl		96.3 %	35-140		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S10-3' (B3)
T152950-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,4-Dichlorobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc.
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 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S10-3' (B3)
T152950-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Vinyl chloride	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		129 %	81.2-123		"	"	"	"	S-GC
Surrogate: Dibromofluoromethane		266 %	95.7-135		"	"	"	"	S-GC
Surrogate: Toluene-d8		92.6 %	85.5-116		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
Aniline	ND	300	"	"	"	"	"	"	
Phenol	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S10-3' (B3)
T152950-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Benzo (a) pyrene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S10-3' (B3)
T152950-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Isophorone	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		49.4 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		50.2 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		52.7 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		58.4 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		79.8 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-dl4		71.1 %	29.1-130		"	"	"	"	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S9-1' (B4)
T152950-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112322	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		93.2 %		65-135	"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	220	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	10	2.0	"	"	"	"	"	"	
Cobalt	5.5	2.0	"	"	"	"	"	"	
Copper	27	1.0	"	"	"	"	"	"	
Lead	150	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	12	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	9.5	5.0	"	"	"	"	"	"	
Zinc	10	1.0	"	"	"	"	"	"	

STLC Metals by 6000/7000 Series Methods

Lead	5.2	0.10	mg/l	1	5120128	12/01/15	12/04/15	STLC Waste Extraction Test	
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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S9-1' (B4)
T152950-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Cold Vapor Extraction EPA 7470/7471

Mercury	0.73	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	

Surrogate: Tetrachloro-meta-xylene	50.9 %	35-140	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl	42.9 %	35-140	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S9-1' (B4)
T152950-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		93.4 %	35-140		"	"	"	"	
Surrogate: Decachlorobiphenyl		85.2 %	35-140		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S9-1' (B4)
T152950-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,4-Dichlorobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S9-1' (B4)
T152950-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Vinyl chloride	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		118 %	81.2-123		"	"	"	"	
Surrogate: Dibromofluoromethane		165 %	95.7-135		"	"	"	"	S-GC
Surrogate: Toluene-d8		99.5 %	85.5-116		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S9-1' (B4)
T152950-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Benzo (a) pyrene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S9-1' (B4)
T152950-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Isophorone	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		53.2 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		58.4 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		56.0 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		60.5 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		89.4 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-dl4		80.8 %	29.1-130		"	"	"	"	

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S8-16' (B5)
T152950-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		90.6 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	32	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	3.5	2.0	"	"	"	"	"	"	
Cobalt	ND	2.0	"	"	"	"	"	"	
Copper	1.7	1.0	"	"	"	"	"	"	
Lead	6.7	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	8.0	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	ND	5.0	"	"	"	"	"	"	
Zinc	4.1	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	0.13	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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Pangea Environmental Services, Inc.
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S8-16' (B5)
T152950-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		59.6 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		51.2 %		35-140	"	"	"	"	

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S8-16' (B5)
T152950-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

Surrogate: Tetrachloro-meta-xylene	103 %	35-140	5112343	11/23/15	12/01/15	EPA 8082
Surrogate: Decachlorobiphenyl	94.3 %	35-140	"	"	"	"

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B
Bromochloromethane	ND	5.0	"	"	"	"	"	"
Bromodichloromethane	ND	5.0	"	"	"	"	"	"
Bromoform	ND	5.0	"	"	"	"	"	"
Bromomethane	ND	5.0	"	"	"	"	"	"
n-Butylbenzene	ND	5.0	"	"	"	"	"	"
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"
Chlorobenzene	ND	5.0	"	"	"	"	"	"
Chloroethane	ND	5.0	"	"	"	"	"	"
Chloroform	ND	5.0	"	"	"	"	"	"
Chloromethane	ND	5.0	"	"	"	"	"	"
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"
Dibromochloromethane	ND	5.0	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"
Dibromomethane	ND	5.0	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S8-16' (B5)
T152950-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Volatile Organic Compounds by EPA Method 8260B

1,3-Dichloropropane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene
 Surrogate: Dibromofluoromethane

121 % 81.2-123
 198 % 95.7-135

S-GC

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 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S8-16' (B5)
T152950-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Toluene-d8	88.2 %	85.5-116	5112333	11/23/15	12/03/15	EPA 8260B
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Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C
Aniline	ND	300	"	"	"	"	"	"
Phenol	ND	1000	"	"	"	"	"	"
2-Chlorophenol	ND	1000	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"
1-Methylnaphthalene	ND	300	"	"	"	"	"	"
2-Methylnaphthalene	ND	300	"	"	"	"	"	"
Acenaphthene	ND	300	"	"	"	"	"	"
4-Nitrophenol	ND	1000	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"
Pentachlorophenol	ND	1000	"	"	"	"	"	"
Pyrene	ND	300	"	"	"	"	"	"
Acenaphthylene	ND	300	"	"	"	"	"	"
Anthracene	ND	300	"	"	"	"	"	"
Benzo (a) anthracene	ND	300	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S8-16' (B5)
T152950-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2-Chloronaphthalene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S8-16' (B5)
T152950-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

N-Nitrosodimethylamine	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		56.8 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		55.9 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		55.8 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		66.5 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		90.7 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-dl4		82.4 %	29.1-130		"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S7-12' (B6)
T152950-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		89.3 %		65-135	"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	63	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	13	2.0	"	"	"	"	"	"	
Cobalt	3.4	2.0	"	"	"	"	"	"	
Copper	3.8	1.0	"	"	"	"	"	"	
Lead	7.9	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	20	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	26	5.0	"	"	"	"	"	"	
Zinc	13	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	0.15	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S7-12' (B6)
T152950-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		49.2 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		52.3 %		35-140	"	"	"	"	

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S7-12' (B6)
T152950-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

Surrogate: Tetrachloro-meta-xylene	80.7 %	35-140	5112343	11/23/15	12/01/15	EPA 8082
Surrogate: Decachlorobiphenyl	88.5 %	35-140	"	"	"	"

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B
Bromochloromethane	ND	5.0	"	"	"	"	"	"
Bromodichloromethane	ND	5.0	"	"	"	"	"	"
Bromoform	ND	5.0	"	"	"	"	"	"
Bromomethane	ND	5.0	"	"	"	"	"	"
n-Butylbenzene	ND	5.0	"	"	"	"	"	"
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"
Chlorobenzene	ND	5.0	"	"	"	"	"	"
Chloroethane	ND	5.0	"	"	"	"	"	"
Chloroform	ND	5.0	"	"	"	"	"	"
Chloromethane	ND	5.0	"	"	"	"	"	"
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"
Dibromochloromethane	ND	5.0	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"
Dibromomethane	ND	5.0	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S7-12' (B6)
T152950-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Volatile Organic Compounds by EPA Method 8260B

1,3-Dichloropropane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene	113 %	81.2-123	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane	196 %	95.7-135	"	"	"	"	"	"	S-GC

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S7-12' (B6)
T152950-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Toluene-d8	89.5 %	85.5-116	5112333	11/23/15	12/03/15	EPA 8260B
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Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C
Phenol	ND	1000	"	"	"	"	"	"
Aniline	ND	300	"	"	"	"	"	"
2-Chlorophenol	ND	1000	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"
1-Methylnaphthalene	ND	300	"	"	"	"	"	"
2-Methylnaphthalene	ND	300	"	"	"	"	"	"
Acenaphthene	ND	300	"	"	"	"	"	"
4-Nitrophenol	ND	1000	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"
Pentachlorophenol	ND	1000	"	"	"	"	"	"
Pyrene	ND	300	"	"	"	"	"	"
Acenaphthylene	ND	300	"	"	"	"	"	"
Anthracene	ND	300	"	"	"	"	"	"
Benzo (a) anthracene	ND	300	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S7-12' (B6)
T152950-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2-Chloronaphthalene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S7-12' (B6)
T152950-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

N-Nitrosodimethylamine	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		50.3 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		66.6 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		49.9 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		60.5 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		93.4 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-d14		80.4 %	29.1-130		"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S5-10' (B7)
T152950-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		92.8 %		65-135	"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	180	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	19	2.0	"	"	"	"	"	"	
Cobalt	6.3	2.0	"	"	"	"	"	"	
Copper	7.5	1.0	"	"	"	"	"	"	
Lead	8.8	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	15	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	13	5.0	"	"	"	"	"	"	
Zinc	20	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S5-10' (B7)
T152950-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		50.9 %	35-140		"	"	"	"	
Surrogate: Decachlorobiphenyl		54.7 %	35-140		"	"	"	"	

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S5-10' (B7)
T152950-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

Surrogate: Tetrachloro-meta-xylene	78.9 %	35-140	5112343	11/23/15	12/01/15	EPA 8082
Surrogate: Decachlorobiphenyl	83.9 %	35-140	"	"	"	"

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B
Bromochloromethane	ND	5.0	"	"	"	"	"	"
Bromodichloromethane	ND	5.0	"	"	"	"	"	"
Bromoform	ND	5.0	"	"	"	"	"	"
Bromomethane	ND	5.0	"	"	"	"	"	"
n-Butylbenzene	ND	5.0	"	"	"	"	"	"
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"
Chlorobenzene	ND	5.0	"	"	"	"	"	"
Chloroethane	ND	5.0	"	"	"	"	"	"
Chloroform	ND	5.0	"	"	"	"	"	"
Chloromethane	ND	5.0	"	"	"	"	"	"
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"
Dibromochloromethane	ND	5.0	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"
Dibromomethane	ND	5.0	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S5-10' (B7)
T152950-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,3-Dichloropropane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene	115 %	81.2-123	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane	237 %	95.7-135	"	"	"	"	"	"	S-GC

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S5-10' (B7)
T152950-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Toluene-d8 94.4 % 85.5-116 5112333 11/23/15 12/03/15 EPA 8260B

Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C
Phenol	ND	1000	"	"	"	"	"	"
Aniline	ND	300	"	"	"	"	"	"
2-Chlorophenol	ND	1000	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"
2-Methylnaphthalene	ND	300	"	"	"	"	"	"
1-Methylnaphthalene	ND	300	"	"	"	"	"	"
Acenaphthene	ND	300	"	"	"	"	"	"
4-Nitrophenol	ND	1000	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"
Pentachlorophenol	ND	1000	"	"	"	"	"	"
Pyrene	ND	300	"	"	"	"	"	"
Acenaphthylene	ND	300	"	"	"	"	"	"
Anthracene	ND	300	"	"	"	"	"	"
Benzo (a) anthracene	ND	300	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S5-10' (B7)
T152950-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
2-Chloronaphthalene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

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 1710 Franklin Street, Suite 200
 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S5-10' (B7)
T152950-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

N-Nitrosodimethylamine	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		49.3 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		58.3 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		45.7 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		57.0 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		78.2 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-dl4		73.8 %	29.1-130		"	"	"	"	

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 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S3-2' (B8)
T152950-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		91.0 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	210	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	19	2.0	"	"	"	"	"	"	
Cobalt	11	2.0	"	"	"	"	"	"	
Copper	7.6	1.0	"	"	"	"	"	"	
Lead	10	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	59	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	27	5.0	"	"	"	"	"	"	
Zinc	20	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S3-2' (B8)
T152950-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		44.7 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		46.7 %		35-140	"	"	"	"	

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Pangea Environmental Services, Inc.
 1710 Franklin Street, Suite 200
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S3-2' (B8)
T152950-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

Surrogate: Tetrachloro-meta-xylene	74.6 %	35-140	5112343	11/23/15	12/01/15	EPA 8082
Surrogate: Decachlorobiphenyl	80.9 %	35-140	"	"	"	"

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B
Bromochloromethane	ND	5.0	"	"	"	"	"	"
Bromodichloromethane	ND	5.0	"	"	"	"	"	"
Bromoform	ND	5.0	"	"	"	"	"	"
Bromomethane	ND	5.0	"	"	"	"	"	"
n-Butylbenzene	ND	5.0	"	"	"	"	"	"
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"
Chlorobenzene	ND	5.0	"	"	"	"	"	"
Chloroethane	ND	5.0	"	"	"	"	"	"
Chloroform	ND	5.0	"	"	"	"	"	"
Chloromethane	ND	5.0	"	"	"	"	"	"
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"
Dibromochloromethane	ND	5.0	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"
Dibromomethane	ND	5.0	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S3-2' (B8)
T152950-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,3-Dichloropropane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene	115 %	81.2-123	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane	202 %	95.7-135	"	"	"	"	"	"	S-GC

SunStar Laboratories, Inc.

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Katherine RunningCrane

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
---	--	-----------------------------

S3-2' (B8)
T152950-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Toluene-d8	86.1 %	85.5-116	5112333	11/23/15	12/03/15	EPA 8260B
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Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C
Phenol	ND	1000	"	"	"	"	"	"
Aniline	ND	300	"	"	"	"	"	"
2-Chlorophenol	ND	1000	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"
2-Methylnaphthalene	ND	300	"	"	"	"	"	"
1-Methylnaphthalene	ND	300	"	"	"	"	"	"
Acenaphthene	ND	300	"	"	"	"	"	"
4-Nitrophenol	ND	1000	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"
Pentachlorophenol	ND	1000	"	"	"	"	"	"
Pyrene	ND	300	"	"	"	"	"	"
Acenaphthylene	ND	300	"	"	"	"	"	"
Anthracene	ND	300	"	"	"	"	"	"
Benzo (a) anthracene	ND	300	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S3-2' (B8)
T152950-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

2-Chloronaphthalene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S3-2' (B8)
T152950-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

N-Nitrosodimethylamine	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		45.9 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		56.8 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		48.8 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		51.5 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		74.9 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-dl4		68.0 %	29.1-130		"	"	"	"	

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Pangea Environmental Services, Inc.
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S2-6' (B11)
T152950-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		94.5 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	340	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	38	2.0	"	"	"	"	"	"	
Cobalt	15	2.0	"	"	"	"	"	"	
Copper	14	1.0	"	"	"	"	"	"	
Lead	8.6	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	45	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	28	5.0	"	"	"	"	"	"	
Zinc	40	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S2-6' (B11)
T152950-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		41.0 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		41.8 %		35-140	"	"	"	"	

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S2-6' (B11)
T152950-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

Surrogate: Tetrachloro-meta-xylene	68.3 %	35-140	5112343	11/23/15	12/01/15	EPA 8082
Surrogate: Decachlorobiphenyl	73.9 %	35-140	"	"	"	"

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B
Bromochloromethane	ND	5.0	"	"	"	"	"	"
Bromodichloromethane	ND	5.0	"	"	"	"	"	"
Bromoform	ND	5.0	"	"	"	"	"	"
Bromomethane	ND	5.0	"	"	"	"	"	"
n-Butylbenzene	ND	5.0	"	"	"	"	"	"
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"
Chlorobenzene	ND	5.0	"	"	"	"	"	"
Chloroethane	ND	5.0	"	"	"	"	"	"
Chloroform	ND	5.0	"	"	"	"	"	"
Chloromethane	ND	5.0	"	"	"	"	"	"
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"
Dibromochloromethane	ND	5.0	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"
Dibromomethane	ND	5.0	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"

SunStar Laboratories, Inc.

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S2-6' (B11)
T152950-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,3-Dichloropropane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene
 Surrogate: Dibromofluoromethane

113 % 81.2-123
 191 % 95.7-135

S-GC

SunStar Laboratories, Inc.

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Katherine RunningCrane

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S2-6' (B11)
T152950-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Toluene-d8 86.2 % 85.5-116 5112333 11/23/15 12/03/15 EPA 8260B

Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C
Phenol	ND	1000	"	"	"	"	"	"
Aniline	ND	300	"	"	"	"	"	"
2-Chlorophenol	ND	1000	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"
2-Methylnaphthalene	ND	300	"	"	"	"	"	"
1-Methylnaphthalene	ND	300	"	"	"	"	"	"
Acenaphthene	ND	300	"	"	"	"	"	"
4-Nitrophenol	ND	1000	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"
Pentachlorophenol	ND	1000	"	"	"	"	"	"
Pyrene	ND	300	"	"	"	"	"	"
Acenaphthylene	ND	300	"	"	"	"	"	"
Anthracene	ND	300	"	"	"	"	"	"
Benzo (a) anthracene	ND	300	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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 1710 Franklin Street, Suite 200
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
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S2-6' (B11)
T152950-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

2-Chloronaphthalene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S2-6' (B11)
T152950-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

N-Nitrosodimethylamine	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		38.7 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		53.4 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		33.6 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		43.1 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		80.5 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-dl4		73.7 %	29.1-130		"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S6-4' (B14)
T152950-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		90.0 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	90	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	14	2.0	"	"	"	"	"	"	
Cobalt	5.2	2.0	"	"	"	"	"	"	
Copper	5.3	1.0	"	"	"	"	"	"	
Lead	7.9	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	21	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	10	5.0	"	"	"	"	"	"	
Zinc	15	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	0.33	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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Katherine RunningCrane, Project Manager



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 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S6-4' (B14)
T152950-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		51.2 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		51.1 %		35-140	"	"	"	"	

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S6-4' (B14)
T152950-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

Surrogate: Tetrachloro-meta-xylene	102 %	35-140	5112343	11/23/15	12/01/15	EPA 8082
Surrogate: Decachlorobiphenyl	95.5 %	35-140	"	"	"	"

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B
Bromochloromethane	ND	5.0	"	"	"	"	"	"
Bromodichloromethane	ND	5.0	"	"	"	"	"	"
Bromoform	ND	5.0	"	"	"	"	"	"
Bromomethane	ND	5.0	"	"	"	"	"	"
n-Butylbenzene	ND	5.0	"	"	"	"	"	"
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"
Chlorobenzene	ND	5.0	"	"	"	"	"	"
Chloroethane	ND	5.0	"	"	"	"	"	"
Chloroform	ND	5.0	"	"	"	"	"	"
Chloromethane	ND	5.0	"	"	"	"	"	"
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"
Dibromochloromethane	ND	5.0	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"
Dibromomethane	ND	5.0	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc.
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 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S6-4' (B14)
T152950-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,3-Dichloropropane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene
 Surrogate: Dibromofluoromethane

118 % 81.2-123
 181 % 95.7-135

S-GC

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S6-4' (B14)
T152950-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Toluene-d8	92.6 %	85.5-116	5112333	11/23/15	12/03/15	EPA 8260B
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Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C
Phenol	ND	1000	"	"	"	"	"	"
Aniline	ND	300	"	"	"	"	"	"
2-Chlorophenol	ND	1000	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"
2-Methylnaphthalene	ND	300	"	"	"	"	"	"
1-Methylnaphthalene	ND	300	"	"	"	"	"	"
Acenaphthene	ND	300	"	"	"	"	"	"
4-Nitrophenol	ND	1000	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"
Pentachlorophenol	ND	1000	"	"	"	"	"	"
Pyrene	ND	300	"	"	"	"	"	"
Acenaphthylene	ND	300	"	"	"	"	"	"
Anthracene	ND	300	"	"	"	"	"	"
Benzo (a) anthracene	ND	300	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S6-4' (B14)
T152950-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

2-Chloronaphthalene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S6-4' (B14)
T152950-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

N-Nitrosodimethylamine	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		40.9 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		51.8 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		46.4 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		54.0 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		74.5 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-dl4		65.5 %	29.1-130		"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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S4-14' (B15)
T152950-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		91.3 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	60	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	10	2.0	"	"	"	"	"	"	
Cobalt	7.3	2.0	"	"	"	"	"	"	
Copper	4.0	1.0	"	"	"	"	"	"	
Lead	7.6	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	10	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	14	5.0	"	"	"	"	"	"	
Zinc	11	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	0.11	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc.
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 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S4-14' (B15)
T152950-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		57.4 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		53.9 %		35-140	"	"	"	"	

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc.
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 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S4-14' (B15)
T152950-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

Surrogate: Tetrachloro-meta-xylene	89.3 %	35-140	5112343	11/23/15	12/01/15	EPA 8082
Surrogate: Decachlorobiphenyl	93.2 %	35-140	"	"	"	"

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B
Bromochloromethane	ND	5.0	"	"	"	"	"	"
Bromodichloromethane	ND	5.0	"	"	"	"	"	"
Bromoform	ND	5.0	"	"	"	"	"	"
Bromomethane	ND	5.0	"	"	"	"	"	"
n-Butylbenzene	ND	5.0	"	"	"	"	"	"
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"
Chlorobenzene	ND	5.0	"	"	"	"	"	"
Chloroethane	ND	5.0	"	"	"	"	"	"
Chloroform	ND	5.0	"	"	"	"	"	"
Chloromethane	ND	5.0	"	"	"	"	"	"
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"
Dibromochloromethane	ND	5.0	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"
Dibromomethane	ND	5.0	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S4-14' (B15)
T152950-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,3-Dichloropropane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene
 Surrogate: Dibromofluoromethane

117 % 81.2-123
 207 % 95.7-135

S-GC

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager



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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S4-14' (B15)
T152950-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Toluene-d8	84.5 %	85.5-116	5112333	11/23/15	12/03/15	EPA 8260B	S-GC
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Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C
Phenol	ND	1000	"	"	"	"	"	"
Aniline	ND	300	"	"	"	"	"	"
2-Chlorophenol	ND	1000	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"
1-Methylnaphthalene	ND	300	"	"	"	"	"	"
2-Methylnaphthalene	ND	300	"	"	"	"	"	"
Acenaphthene	ND	300	"	"	"	"	"	"
4-Nitrophenol	ND	1000	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"
Pentachlorophenol	ND	1000	"	"	"	"	"	"
Pyrene	ND	300	"	"	"	"	"	"
Acenaphthylene	ND	300	"	"	"	"	"	"
Anthracene	ND	300	"	"	"	"	"	"
Benzo (a) anthracene	ND	300	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S4-14' (B15)
T152950-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

2-Chloronaphthalene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S4-14' (B15)
T152950-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

N-Nitrosodimethylamine	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		30.3 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		46.9 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		25.0 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		35.5 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		68.6 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-d14		66.6 %	29.1-130		"	"	"	"	

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S1-1' (B16)
T152950-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		88.4 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	160	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	32	2.0	"	"	"	"	"	"	
Cobalt	8.1	2.0	"	"	"	"	"	"	
Copper	10	1.0	"	"	"	"	"	"	
Lead	7.8	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	46	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	22	5.0	"	"	"	"	"	"	
Zinc	33	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	ND	0.10	mg/kg	1	5112013	11/20/15	11/24/15	EPA 7471A Soil	
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SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S1-1' (B16)
T152950-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		51.7 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		49.4 %		35-140	"	"	"	"	

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc.
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S1-1' (B16)
T152950-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

Surrogate: Tetrachloro-meta-xylene	87.2 %	35-140	5112343	11/23/15	12/01/15	EPA 8082
Surrogate: Decachlorobiphenyl	94.9 %	35-140	"	"	"	"

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B
Bromochloromethane	ND	5.0	"	"	"	"	"	"
Bromodichloromethane	ND	5.0	"	"	"	"	"	"
Bromoform	ND	5.0	"	"	"	"	"	"
Bromomethane	ND	5.0	"	"	"	"	"	"
n-Butylbenzene	ND	5.0	"	"	"	"	"	"
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"
Chlorobenzene	ND	5.0	"	"	"	"	"	"
Chloroethane	ND	5.0	"	"	"	"	"	"
Chloroform	ND	5.0	"	"	"	"	"	"
Chloromethane	ND	5.0	"	"	"	"	"	"
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"
Dibromochloromethane	ND	5.0	"	"	"	"	"	"
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"
Dibromomethane	ND	5.0	"	"	"	"	"	"
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S1-1' (B16)
T152950-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,3-Dichloropropane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene
 Surrogate: Dibromofluoromethane

108 % 81.2-123
 198 % 95.7-135

S-GC

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S1-1' (B16)
T152950-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Toluene-d8 85.9 % 85.5-116 5112333 11/23/15 12/03/15 EPA 8260B

Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C
Aniline	ND	300	"	"	"	"	"	"
Phenol	ND	1000	"	"	"	"	"	"
2-Chlorophenol	ND	1000	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"
2-Methylnaphthalene	ND	300	"	"	"	"	"	"
1-Methylnaphthalene	ND	300	"	"	"	"	"	"
Acenaphthene	ND	300	"	"	"	"	"	"
4-Nitrophenol	ND	1000	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"
Pentachlorophenol	ND	1000	"	"	"	"	"	"
Pyrene	ND	300	"	"	"	"	"	"
Acenaphthylene	ND	300	"	"	"	"	"	"
Anthracene	ND	300	"	"	"	"	"	"
Benzo (a) anthracene	ND	300	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S1-1' (B16)
T152950-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

2-Chloronaphthalene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

S1-1' (B16)
T152950-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

N-Nitrosodimethylamine	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		40.6 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		51.8 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		43.7 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		52.1 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		78.9 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-dl4		73.9 %	29.1-130		"	"	"	"	

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

Extractable Petroleum Hydrocarbons by 8015C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112322 - EPA 3550B GC

Blank (5112322-BLK1)

Prepared & Analyzed: 11/23/15

C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	98.6		"	100		98.6	65-135			

LCS (5112322-BS1)

Prepared & Analyzed: 11/23/15

C13-C28 (DRO)	430	10	mg/kg	500		86.3	75-125			
Surrogate: p-Terphenyl	97.2		"	100		97.2	65-135			

Matrix Spike (5112322-MS1)

Source: T152943-02

Prepared: 11/23/15 Analyzed: 11/24/15

C13-C28 (DRO)	520	10	mg/kg	500	ND	104	75-125			
Surrogate: p-Terphenyl	111		"	100		111	65-135			

Matrix Spike Dup (5112322-MSD1)

Source: T152943-02

Prepared: 11/23/15 Analyzed: 11/24/15

C13-C28 (DRO)	500	10	mg/kg	500	ND	100	75-125	3.33	20	
Surrogate: p-Terphenyl	103		"	99.9		103	65-135			

Batch 5112330 - EPA 3550B GC

Blank (5112330-BLK1)

Prepared: 11/23/15 Analyzed: 11/24/15

C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	89.5		"	100		89.5	65-135			

LCS (5112330-BS1)

Prepared: 11/23/15 Analyzed: 11/24/15

C13-C28 (DRO)	460	10	mg/kg	500		92.0	75-125			
Surrogate: p-Terphenyl	96.7		"	99.9		96.8	65-135			

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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Extractable Petroleum Hydrocarbons by 8015C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112330 - EPA 3550B GC

Matrix Spike (5112330-MS1)		Source: T152950-05			Prepared: 11/23/15		Analyzed: 11/25/15	
C13-C28 (DRO)	450	10	mg/kg	500	ND	89.8	75-125	
Surrogate: <i>p</i> -Terphenyl	98.0		"	100		98.0	65-135	
Matrix Spike Dup (5112330-MSD1)		Source: T152950-05			Prepared: 11/23/15		Analyzed: 11/25/15	
C13-C28 (DRO)	450	10	mg/kg	500	ND	90.9	75-125	1.25
Surrogate: <i>p</i> -Terphenyl	104		"	100		104	65-135	

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112325 - EPA 3051

Blank (5112325-BLK1)

Prepared: 11/23/15 Analyzed: 11/24/15

Antimony	ND	3.0	mg/kg							
Silver	ND	2.0	"							
Arsenic	ND	5.0	"							
Barium	ND	1.0	"							
Beryllium	ND	1.0	"							
Cadmium	ND	2.0	"							
Chromium	ND	2.0	"							
Cobalt	ND	2.0	"							
Copper	ND	1.0	"							
Lead	ND	3.0	"							
Molybdenum	ND	5.0	"							
Nickel	ND	2.0	"							
Selenium	ND	5.0	"							
Thallium	ND	2.0	"							
Vanadium	ND	5.0	"							
Zinc	ND	1.0	"							

LCS (5112325-BS1)

Prepared: 11/23/15 Analyzed: 11/24/15

Arsenic	90.6	5.0	mg/kg	100		90.6	75-125			
Barium	84.1	1.0	"	100		84.1	75-125			
Cadmium	83.4	2.0	"	100		83.4	75-125			
Chromium	85.7	2.0	"	100		85.7	75-125			
Lead	90.5	3.0	"	100		90.5	75-125			

Matrix Spike (5112325-MS1)

Source: T152950-01

Prepared: 11/23/15 Analyzed: 11/24/15

Arsenic	75.8	5.0	mg/kg	99.0	5.42	71.1	75-125			QM-05
Barium	224	1.0	"	99.0	201	24.2	75-125			QM-05
Cadmium	70.3	2.0	"	99.0	0.484	70.6	75-125			QM-05
Chromium	80.8	2.0	"	99.0	11.9	69.6	75-125			QM-05
Lead	143	3.0	"	99.0	86.8	57.0	75-125			QM-05

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/04/15 16:58
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Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112325 - EPA 3051

Matrix Spike Dup (5112325-MSD1)	Source: T152950-01			Prepared: 11/23/15 Analyzed: 11/24/15						
Arsenic	73.4	5.0	mg/kg	100	5.42	67.9	75-125	3.24	20	QM-05
Barium	226	1.0	"	100	201	25.5	75-125	0.691	20	QM-05
Cadmium	71.2	2.0	"	100	0.484	70.8	75-125	1.27	20	QM-05
Chromium	81.0	2.0	"	100	11.9	69.1	75-125	0.217	20	QM-05
Lead	146	3.0	"	100	86.8	59.5	75-125	2.09	20	QM-05

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 Project Number: [none]
 Project Manager: Bob Clark-Riddell

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STLC Metals by 6000/7000 Series Methods - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5120128 - STLC Metals

Blank (5120128-BLK1)

Prepared: 12/01/15 Analyzed: 12/04/15

Lead	ND	0.10	mg/l							
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LCS (5120128-BS1)

Prepared: 12/01/15 Analyzed: 12/04/15

Lead	9.68	0.10	mg/l	10.0		96.8	75-125			
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Matrix Spike (5120128-MS1)

Source: T152950-04

Prepared: 12/01/15 Analyzed: 12/04/15

Lead	14.7	0.10	mg/l	10.0	5.24	94.8	75-125			
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Matrix Spike Dup (5120128-MSD1)

Source: T152950-04

Prepared: 12/01/15 Analyzed: 12/04/15

Lead	15.2	0.10	mg/l	10.0	5.24	99.6	75-125	3.21	30	
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 Project Number: [none]
 Project Manager: Bob Clark-Riddell

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Cold Vapor Extraction EPA 7470/7471 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112013 - EPA 7471A Soil

Blank (5112013-BLK1)

Prepared: 11/20/15 Analyzed: 11/24/15

Mercury ND 0.10 mg/kg

LCS (5112013-BS1)

Prepared: 11/20/15 Analyzed: 11/24/15

Mercury 0.347 0.10 mg/kg 0.417 83.3 75-125

Matrix Spike (5112013-MS1)

Source: T152873-15

Prepared: 11/20/15 Analyzed: 11/24/15

Mercury 0.295 0.10 mg/kg 0.410 ND 72.0 75-125 QM-05

Matrix Spike Dup (5112013-MSD1)

Source: T152873-15

Prepared: 11/20/15 Analyzed: 11/24/15

Mercury 0.308 0.10 mg/kg 0.417 ND 74.0 75-125 4.35 20 QM-05

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Organochlorine Pesticides by EPA Method 8081A - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112345 - EPA 3550 ECD/GCMS

Blank (5112345-BLK1)

Prepared: 11/25/15 Analyzed: 11/30/15

alpha-BHC	ND	5.0	ug/kg							
gamma-BHC (Lindane)	ND	5.0	"							
beta-BHC	ND	5.0	"							
delta-BHC	ND	5.0	"							
Heptachlor	ND	5.0	"							
Aldrin	ND	5.0	"							
Heptachlor epoxide	ND	5.0	"							
gamma-Chlordane	ND	5.0	"							
alpha-Chlordane	ND	5.0	"							
Endosulfan I	ND	5.0	"							
4,4'-DDE	ND	5.0	"							
Dieldrin	ND	5.0	"							
Endrin	ND	5.0	"							
4,4'-DDD	ND	5.0	"							
Endosulfan II	ND	5.0	"							
4,4'-DDT	ND	5.0	"							
Endrin aldehyde	ND	5.0	"							
Endosulfan sulfate	ND	5.0	"							
Methoxychlor	ND	10	"							
Endrin ketone	ND	5.0	"							
Toxaphene	ND	200	"							
Chlordane (tech)	ND	50	"							
Surrogate: Tetrachloro-meta-xylene	5.63		"	9.97		56.5	35-140			
Surrogate: Decachlorobiphenyl	5.36		"	9.97		53.8	35-140			

LCS (5112345-BS1)

Prepared: 11/25/15 Analyzed: 11/30/15

gamma-BHC (Lindane)	24.1	5.0	ug/kg	40.0		60.3	40-120			
Heptachlor	23.8	5.0	"	40.0		59.4	40-120			
Aldrin	23.7	5.0	"	40.0		59.3	40-120			
Dieldrin	24.6	5.0	"	40.0		61.6	40-120			
Endrin	27.1	5.0	"	40.0		67.9	40-120			
4,4'-DDT	23.4	5.0	"	40.0		58.4	33-147			
Surrogate: Tetrachloro-meta-xylene	5.63		"	10.0		56.3	35-140			
Surrogate: Decachlorobiphenyl	5.34		"	10.0		53.4	35-140			

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

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Organochlorine Pesticides by EPA Method 8081A - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112345 - EPA 3550 ECD/GCMS

Matrix Spike (5112345-MS1)		Source: T152950-03			Prepared: 11/25/15		Analyzed: 11/30/15	
gamma-BHC (Lindane)	25.0	5.0	ug/kg	40.0	ND	62.4	30-120	
Heptachlor	23.8	5.0	"	40.0	ND	59.6	30-120	
Aldrin	23.2	5.0	"	40.0	ND	57.9	30-120	
Dieldrin	24.7	5.0	"	40.0	ND	61.7	30-120	
Endrin	26.3	5.0	"	40.0	ND	65.7	30-120	
4,4'-DDT	28.7	5.0	"	40.0	ND	71.8	30-120	
Surrogate: Tetrachloro-meta-xylene	5.08		"	10.0		50.8	35-140	
Surrogate: Decachlorobiphenyl	4.80		"	10.0		48.0	35-140	

Matrix Spike Dup (5112345-MSD1)		Source: T152950-03			Prepared: 11/25/15		Analyzed: 11/30/15	
gamma-BHC (Lindane)	23.4	5.0	ug/kg	39.9	ND	58.5	30-120	6.48 30
Heptachlor	22.8	5.0	"	39.9	ND	57.1	30-120	4.20 30
Aldrin	22.4	5.0	"	39.9	ND	56.0	30-120	3.34 30
Dieldrin	23.7	5.0	"	39.9	ND	59.4	30-120	3.75 30
Endrin	25.6	5.0	"	39.9	ND	64.1	30-120	2.59 30
4,4'-DDT	27.9	5.0	"	39.9	ND	69.8	30-120	2.92 30
Surrogate: Tetrachloro-meta-xylene	4.97		"	9.98		49.8	35-140	
Surrogate: Decachlorobiphenyl	4.68		"	9.98		46.9	35-140	

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 12/04/15 16:58

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112343 - EPA 3550 ECD/GCMS

Blank (5112343-BLK1)

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	7.48		"	10.0		74.8	35-140			
Surrogate: Decachlorobiphenyl	7.94		"	10.0		79.4	35-140			

LCS (5112343-BS1)

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	93.8	10	ug/kg	99.9		93.9	40-130			
PCB-1260	103	10	"	99.9		104	40-130			
Surrogate: Tetrachloro-meta-xylene	7.80		"	9.99		78.1	35-140			
Surrogate: Decachlorobiphenyl	8.32		"	9.99		83.3	35-140			

Matrix Spike (5112343-MS1)

Source: T152951-01

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	102	10	ug/kg	99.7	ND	103	40-130			
PCB-1260	117	10	"	99.7	ND	117	40-130			
Surrogate: Tetrachloro-meta-xylene	8.31		"	9.97		83.3	35-140			
Surrogate: Decachlorobiphenyl	8.76		"	9.97		87.9	35-140			

Matrix Spike Dup (5112343-MSD1)

Source: T152951-01

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	116	10	ug/kg	100	ND	116	40-130	12.8	30	
PCB-1260	130	10	"	100	ND	130	40-130	10.6	30	
Surrogate: Tetrachloro-meta-xylene	8.42		"	10.0		84.2	35-140			
Surrogate: Decachlorobiphenyl	9.97		"	10.0		99.7	35-140			

SunStar Laboratories, Inc.

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 Project Number: [none]
 Project Manager: Bob Clark-Riddell

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 12/04/15 16:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112333 - EPA 5030 GCMS

Blank (5112333-BLK1)

Prepared: 11/23/15 Analyzed: 12/03/15

Bromobenzene	ND	5.0	ug/kg
Bromochloromethane	ND	5.0	"
Bromodichloromethane	ND	5.0	"
Bromoform	ND	5.0	"
Bromomethane	ND	5.0	"
n-Butylbenzene	ND	5.0	"
sec-Butylbenzene	ND	5.0	"
tert-Butylbenzene	ND	5.0	"
Carbon tetrachloride	ND	5.0	"
Chlorobenzene	ND	5.0	"
Chloroethane	ND	5.0	"
Chloroform	ND	5.0	"
Chloromethane	ND	5.0	"
2-Chlorotoluene	ND	5.0	"
4-Chlorotoluene	ND	5.0	"
Dibromochloromethane	ND	5.0	"
1,2-Dibromo-3-chloropropane	ND	10	"
1,2-Dibromoethane (EDB)	ND	5.0	"
Dibromomethane	ND	5.0	"
1,2-Dichlorobenzene	ND	5.0	"
1,3-Dichlorobenzene	ND	5.0	"
1,4-Dichlorobenzene	ND	5.0	"
Dichlorodifluoromethane	ND	5.0	"
1,1-Dichloroethane	ND	5.0	"
1,2-Dichloroethane	ND	5.0	"
1,1-Dichloroethene	ND	5.0	"
cis-1,2-Dichloroethene	ND	5.0	"
trans-1,2-Dichloroethene	ND	5.0	"
1,2-Dichloropropane	ND	5.0	"
1,3-Dichloropropane	ND	5.0	"
2,2-Dichloropropane	ND	5.0	"
1,1-Dichloropropene	ND	5.0	"
cis-1,3-Dichloropropene	ND	5.0	"
trans-1,3-Dichloropropene	ND	5.0	"
Hexachlorobutadiene	ND	5.0	"
Isopropylbenzene	ND	5.0	"

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 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112333 - EPA 5030 GCMS

Blank (5112333-BLK1)

Prepared: 11/23/15 Analyzed: 12/03/15

p-Isopropyltoluene	ND	5.0	ug/kg							
Methylene chloride	ND	5.0	"							
Naphthalene	ND	5.0	"							
n-Propylbenzene	ND	5.0	"							
Styrene	ND	5.0	"							
1,1,2,2-Tetrachloroethane	ND	5.0	"							
1,1,1,2-Tetrachloroethane	ND	5.0	"							
Tetrachloroethene	ND	5.0	"							
1,2,3-Trichlorobenzene	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
1,1,2-Trichloroethane	ND	5.0	"							
1,1,1-Trichloroethane	ND	5.0	"							
Trichloroethene	ND	5.0	"							
Trichlorofluoromethane	ND	5.0	"							
1,2,3-Trichloropropane	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
Vinyl chloride	ND	5.0	"							
Benzene	ND	5.0	"							
Toluene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
m,p-Xylene	ND	10	"							
o-Xylene	ND	5.0	"							
Surrogate: 4-Bromofluorobenzene	46.3		"	40.0		116	81.2-123			
Surrogate: Dibromofluoromethane	64.4		"	40.0		161	95.7-135			S-GC
Surrogate: Toluene-d8	38.6		"	40.0		96.4	85.5-116			

LCS (5112333-BS1)

Prepared: 11/23/15 Analyzed: 12/03/15

Chlorobenzene	120	5.0	ug/kg	100		120	75-125			
1,1-Dichloroethene	122	5.0	"	100		122	75-125			
Trichloroethene	121	5.0	"	100		121	75-125			
Benzene	119	5.0	"	100		119	75-125			
Toluene	119	5.0	"	100		119	75-125			
Surrogate: 4-Bromofluorobenzene	43.7		"	40.0		109	81.2-123			
Surrogate: Dibromofluoromethane	74.1		"	40.0		185	95.7-135			S-GC
Surrogate: Toluene-d8	35.9		"	40.0		89.8	85.5-116			

SunStar Laboratories, Inc.

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 Project Manager: Bob Clark-Riddell

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 12/04/15 16:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112333 - EPA 5030 GCMS

LCS Dup (5112333-BSD1)

Prepared: 11/23/15 Analyzed: 12/03/15

Chlorobenzene	124	5.0	ug/kg	100	124	75-125	3.24	20		
1,1-Dichloroethene	124	5.0	"	100	124	75-125	1.46	20		
Trichloroethene	120	5.0	"	100	120	75-125	0.871	20		
Benzene	124	5.0	"	100	124	75-125	4.15	20		
Toluene	117	5.0	"	100	117	75-125	1.10	20		
Surrogate: 4-Bromofluorobenzene	46.2		"	40.0	116	81.2-123				
Surrogate: Dibromofluoromethane	68.6		"	40.0	172	95.7-135				S-GC
Surrogate: Toluene-d8	36.3		"	40.0	90.8	85.5-116				

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Project: 4901 Broadway
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 Project Manager: Bob Clark-Riddell

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Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112334 - EPA 3550 ECD/GCMS

Blank (5112334-BLK1)

Prepared: 11/23/15 Analyzed: 11/25/15

Carbazole	ND	300	ug/kg							
Aniline	ND	300	"							
Phenol	ND	1000	"							
2-Chlorophenol	ND	1000	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	1000	"							
1-Methylnaphthalene	ND	300	"							
2-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	1000	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	1000	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5112334 - EPA 3550 ECD/GCMS

Blank (5112334-BLK1)

Prepared: 11/23/15 Analyzed: 11/25/15

1,2-Dichlorobenzene	ND	300	ug/kg							
1,3-Dichlorobenzene	ND	300	"							
2,4-Dichlorophenol	ND	1000	"							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	1000	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	1000	"							
2,4-Dinitrophenol	ND	1000	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	1000	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	1000	"							
N-Nitrosodimethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
Azobenzene	ND	300	"							
Pyridine	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
2,4,6-Trichlorophenol	ND	1000	"							

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 5112334 - EPA 3550 ECD/GCMS

Blank (5112334-BLK1)

Prepared: 11/23/15 Analyzed: 11/25/15

Surrogate: 2-Fluorophenol	1530		ug/kg	3330		45.9	15-121			
Surrogate: Phenol-d6	1980		"	3330		59.4	24-113			
Surrogate: Nitrobenzene-d5	1740		"	3330		52.3	21.3-119			
Surrogate: 2-Fluorobiphenyl	1830		"	3330		55.0	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2530		"	3330		75.9	18.1-105			
Surrogate: Terphenyl-dl4	2290		"	3330		68.7	29.1-130			

LCS (5112334-BS1)

Prepared: 11/23/15 Analyzed: 11/25/15

Phenol	1950	1000	ug/kg	3330		58.5	34-114			
2-Chlorophenol	1750	1000	"	3330		52.5	34-114			
1,4-Dichlorobenzene	1600	300	"	3330		48.0	34-114			
N-Nitrosodi-n-propylamine	1940	300	"	3330		58.3	30-110			
1,2,4-Trichlorobenzene	1760	300	"	3330		52.7	39-119			
4-Chloro-3-methylphenol	2270	1000	"	3330		68.2	50-130			
Acenaphthene	2060	300	"	3330		61.9	34-114			
4-Nitrophenol	2450	1000	"	3330		73.7	40-120			
2,4-Dinitrotoluene	1560	300	"	3330		46.9	35-115			
Pentachlorophenol	2880	1000	"	3330		86.5	50-130			
Pyrene	2060	300	"	3330		61.8	30-110			
Surrogate: 2-Fluorophenol	1300		"	3330		39.0	15-121			
Surrogate: Phenol-d6	1640		"	3330		49.1	24-113			
Surrogate: Nitrobenzene-d5	1390		"	3330		41.7	21.3-119			
Surrogate: 2-Fluorobiphenyl	1530		"	3330		46.0	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2190		"	3330		65.8	18.1-105			
Surrogate: Terphenyl-dl4	2040		"	3330		61.2	29.1-130			

Matrix Spike (5112334-MS1)

Source: T152950-01

Prepared: 11/23/15 Analyzed: 11/25/15

Phenol	2210	1000	ug/kg	3330	ND	66.3	34-114			
2-Chlorophenol	1930	1000	"	3330	ND	57.8	34-114			
1,4-Dichlorobenzene	941	300	"	3330	ND	28.2	34-114			
N-Nitrosodi-n-propylamine	1980	300	"	3330	ND	59.3	30-110			
1,2,4-Trichlorobenzene	1580	300	"	3330	ND	47.3	39-119			
4-Chloro-3-methylphenol	2500	1000	"	3330	ND	74.9	50-130			
Acenaphthene	2190	300	"	3330	ND	65.8	34-114			
4-Nitrophenol	2500	1000	"	3330	ND	75.0	40-120			
2,4-Dinitrotoluene	1690	300	"	3330	ND	50.7	35-115			

QM-07

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/04/15 16:58

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112334 - EPA 3550 ECD/GCMS

Matrix Spike (5112334-MS1)

Source: T152950-01

Prepared: 11/23/15 Analyzed: 11/25/15

Pentachlorophenol	3310	1000	ug/kg	3330	ND	99.2	50-130			
Pyrene	2400	300	"	3330	105	68.9	30-110			
Surrogate: 2-Fluorophenol	1620		"	3330		48.6	15-121			
Surrogate: Phenol-d6	2080		"	3330		62.3	24-113			
Surrogate: Nitrobenzene-d5	1730		"	3330		51.9	21.3-119			
Surrogate: 2-Fluorobiphenyl	1900		"	3330		57.0	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2660		"	3330		79.9	18.1-105			
Surrogate: Terphenyl-dl4	2570		"	3330		77.0	29.1-130			

Matrix Spike Dup (5112334-MSD1)

Source: T152950-01

Prepared: 11/23/15 Analyzed: 11/25/15

Phenol	1990	1000	ug/kg	3330	ND	59.7	34-114	10.4	42	
2-Chlorophenol	1950	1000	"	3330	ND	58.5	34-114	1.17	40	
1,4-Dichlorobenzene	1060	300	"	3330	ND	31.8	34-114	12.0	28	QM-07
N-Nitrosodi-n-propylamine	1970	300	"	3330	ND	59.2	30-110	0.169	38	
1,2,4-Trichlorobenzene	1700	300	"	3330	ND	50.9	39-119	7.41	28	
4-Chloro-3-methylphenol	2480	1000	"	3330	ND	74.5	50-130	0.562	42	
Acenaphthene	2210	300	"	3330	ND	66.3	34-114	0.788	31	
4-Nitrophenol	2410	1000	"	3330	ND	72.2	40-120	3.71	50	
2,4-Dinitrotoluene	1540	300	"	3330	ND	46.3	35-115	9.08	38	
Pentachlorophenol	3380	1000	"	3330	ND	101	50-130	2.05	50	
Pyrene	2460	300	"	3330	105	70.5	30-110	2.25	31	
Surrogate: 2-Fluorophenol	1530		"	3330		45.9	15-121			
Surrogate: Phenol-d6	1830		"	3330		54.9	24-113			
Surrogate: Nitrobenzene-d5	1730		"	3330		52.0	21.3-119			
Surrogate: 2-Fluorobiphenyl	1910		"	3330		57.2	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2740		"	3330		82.3	18.1-105			
Surrogate: Terphenyl-dl4	2520		"	3330		75.6	29.1-130			

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
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949.297.5027 Fax

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

Project: 4901 Broadway
Project Number: [none]
Project Manager: Bob Clark-Riddell

Reported:
12/04/15 16:58

Notes and Definitions

- S-GC Surrogate recovery outside of established control limits. The data was accepted based on valid recovery of the remaining surrogate(s).
- QM-07 The spike recovery and or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS was within acceptance criteria. The data is acceptable as no negative impact on data is expected.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager



SunStar
Laboratories, Inc.

Chain of Custody Record
Support

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE
25712 Commerce Centre Drive, Lake Forest, CA 92630
949-297-5020

Client: Pangea Env. Svcs
Address: 1710 Franklin St. Oakland CA
Phone: 510-836-3100 Fax: _____
Project Manager: Bob Clark-R. Jell

Date: 11-20-15 Page: 1 of 1
Project Name: 4901 Broadway
Collector: E. Lervag Client Project #: _____
Batch #: 7152950 EDF #: _____

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015B (gasoline) + D + MO	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals CAM1	6020/10P-MG Metals Asbestos	Lead	8081A Chlor. Pest.	8082 - PCB	Laboratory ID #	Comments/Preservative	Total # of containers
512-05' (B1)	11-19-15	1345	5011	51eave	X			X	X	X	X	X	X	X	X	X	X	01		1
511-2' (B2)		0946			X			X	X	X	X	X	X	X	X	X	X	02		
510-3' (B3)		1520			X			X	X	X	X	X	X	X	X	X	X	03		
59-1' (B4)		1400			X			X	X	X	X	X	X	X	X	X	X	04		
58-14' (B5)		1300			X			X	X	X	X	X	X	X	X	X	X	05		
57-12' (B6)		1015			X			X	X	X	X	X	X	X	X	X	X	06		
55-10' (B7)		1320			X			X	X	X	X	X	X	X	X	X	X	07		
53-2' (B8)		1450			X			X	X	X	X	X	X	X	X	X	X	08		
52-6' (B11)		1250			X			X	X	X	X	X	X	X	X	X	X	09		
56-4' (B14)		1410			X			X	X	X	X	X	X	X	X	X	X	10		
54-14' (B15)		1100			X			X	X	X	X	X	X	X	X	X	X	11		
51-1' (B16)	11-19-15	1430	5011	51eave	X			X	X	X	X	X	X	X	X	X	X	12		1

Relinquished by: (signature) _____ Date / Time 11-20-15 1230
Refiniquished by: (signature) _____ Date / Time _____
Relinquished by: (signature) _____ Date / Time 11-21-15 10:20

Received by: (signature) _____ Date / Time 11-20-15 1230
Received by: (signature) _____ Date / Time _____
Received by: (signature) _____ Date / Time 11-21-15 10:20

Turn around time: 5 day
Total # of containers: 130
Chain of Custody seals: Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold

Notes
STD. TAT

Sample disposal instructions: Disposal @ \$2.00 each _____ Return to client _____ Pickup _____

COC 141044

SAMPLE RECEIVING REVIEW SHEET

BATCH # 7152950

Client Name: PANGEA ENV.

Project: 4901 BROADWAY

Received by: SUNNY

Date/Time Received: 11-21-15 / 10:20

Delivered by : Client SunStar Courier GSO FedEx Other _____

Total number of coolers received 1 **Temp criteria = 6°C > 0°C (no frozen containers)**

Temperature: cooler #1 5.3 °C +/- the CF (- 0.2°C) = 5.1 °C corrected temperature

cooler #2 _____ °C +/- the CF (- 0.2°C) = _____ °C corrected temperature

cooler #3 _____ °C +/- the CF (- 0.2°C) = _____ °C corrected temperature

Samples outside temp. but received on ice, w/in 6 hours of final sampling. Yes No* N/A

Custody Seals Intact on Cooler/Sample Yes No* N/A

Sample Containers Intact Yes No*

Sample labels match COC ID's Yes No*

Total number of containers received match COC Yes No*

Proper containers received for analyses requested on COC Yes No*

Proper preservative indicated on COC/containers for analyses requested Yes No* N/A

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times. Yes No*

* Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date SL 11-21-15

Comments:



EMSL Analytical, Inc

464 McCormick Street, San Leandro, CA 94577

Phone/Fax: (510) 895-3675 / (510) 895-3680

<http://www.EMSL.com>

sanleandrolab@emsl.com

EMSL Order:	091519860
CustomerID:	32SUNS45
CustomerPO:	T152950
ProjectID:	

Attn: **Katherine RunningCrane**
Sunstar Laboratories, Inc.
25712 Commercentre Drive
Lake Forest, CA 92630

Phone: (949) 297-5020
 Fax: (949) 297-5027
 Received: 11/24/15 9:00 AM
 Analysis Date: 12/1/2015
 Collected: 12/17/2015

Project: T152950

Test Report: PLM Analysis of Bulk Samples for Asbestos via EPA 600/R-93/116 Method with CARB 435 Prep (Milling) Level A for 0.25% Target Analytical Sensitivity

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
T152950-01 <i>091519860-0001</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152950-02 <i>091519860-0002</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152950-03 <i>091519860-0003</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152950-04 <i>091519860-0004</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152950-05 <i>091519860-0005</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152950-06 <i>091519860-0006</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152950-07 <i>091519860-0007</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected

Analyst(s)

Adam C. Fink (12)

Chris Dojlidko, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc San Leandro, CA

Initial report from 12/01/2015 22:25:41

**EMSL Analytical, Inc**

464 McCormick Street, San Leandro, CA 94577

Phone/Fax: (510) 895-3675 / (510) 895-3680

<http://www.EMSL.com>sanleandrolab@emsl.com

EMSL Order:	091519860
CustomerID:	32SUNS45
CustomerPO:	T152950
ProjectID:	

Attn: **Katherine RunningCrane**
Sunstar Laboratories, Inc.
25712 Commercentre Drive
Lake Forest, CA 92630

Phone: (949) 297-5020
 Fax: (949) 297-5027
 Received: 11/24/15 9:00 AM
 Analysis Date: 12/1/2015
 Collected: 12/17/2015

Project: T152950

Test Report: PLM Analysis of Bulk Samples for Asbestos via EPA 600/R-93/116 Method with CARB 435 Prep (Milling) Level A for 0.25% Target Analytical Sensitivity

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
T152950-08 <i>091519860-0008</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152950-09 <i>091519860-0009</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152950-10 <i>091519860-0010</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152950-11 <i>091519860-0011</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152950-12 <i>091519860-0012</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected

Analyst(s)

Adam C. Fink (12)

Chris Dojlidko, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc San Leandro, CA

Initial report from 12/01/2015 22:25:41



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1511B02

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: 1740.001.110; 4901 BWAY

Project Received: 11/25/2015

Analytical Report reviewed & approved for release on 12/01/2015 by:

Angela Rydelius,
Laboratory Manager

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Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 1740.001.110; 4901 BWAY
WorkOrder: 1511B02

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 11/25/15 17:02
Date Prepared: 11/30/15
Project: 1740.001.110; 4901 BWAY

WorkOrder: 1511B02
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S12-05' (B1)2	1511B02-001A	Soil	11/25/2015 11:00	GC35	113532

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.020	2	11/30/2015 17:20
Acenaphthylene	ND	0.020	2	11/30/2015 17:20
Anthracene	ND	0.020	2	11/30/2015 17:20
Benzo (a) anthracene	0.021	0.020	2	11/30/2015 17:20
Benzo (a) pyrene	0.031	0.020	2	11/30/2015 17:20
Benzo (b) fluoranthene	0.033	0.020	2	11/30/2015 17:20
Benzo (g,h,i) perylene	0.032	0.020	2	11/30/2015 17:20
Benzo (k) fluoranthene	ND	0.020	2	11/30/2015 17:20
Chrysene	0.037	0.020	2	11/30/2015 17:20
Dibenzo (a,h) anthracene	ND	0.020	2	11/30/2015 17:20
Fluoranthene	0.056	0.020	2	11/30/2015 17:20
Fluorene	ND	0.020	2	11/30/2015 17:20
Indeno (1,2,3-cd) pyrene	0.022	0.020	2	11/30/2015 17:20
1-Methylnaphthalene	ND	0.020	2	11/30/2015 17:20
2-Methylnaphthalene	ND	0.020	2	11/30/2015 17:20
Naphthalene	ND	0.020	2	11/30/2015 17:20
Phenanthrene	0.053	0.020	2	11/30/2015 17:20
Pyrene	0.062	0.020	2	11/30/2015 17:20
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	80	30-130		11/30/2015 17:20
2-Fluorobiphenyl	88	30-130		11/30/2015 17:20

Analyst(s): HK



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 11/30/15
Date Analyzed: 11/30/15
Instrument: GC35
Matrix: Soil
Project: 1740.001.110; 4901 BWAY

WorkOrder: 1511B02
BatchID: 113532
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg
Sample ID: MB/LCS-113532
 1511B02-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	-	0.010	-	-	-	-
Acenaphthylene	ND	-	0.010	-	-	-	-
Anthracene	ND	-	0.010	-	-	-	-
Benzo (a) anthracene	ND	-	0.010	-	-	-	-
Benzo (a) pyrene	ND	0.124	0.010	0.20	-	62	30-130
Benzo (b) fluoranthene	ND	-	0.010	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.010	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.010	-	-	-	-
Chrysene	ND	0.136	0.010	0.20	-	68	30-130
Dibenzo (a,h) anthracene	ND	-	0.010	-	-	-	-
Fluoranthene	ND	-	0.010	-	-	-	-
Fluorene	ND	-	0.010	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.010	-	-	-	-
1-Methylnaphthalene	ND	0.143	0.010	0.20	-	71	30-130
2-Methylnaphthalene	ND	0.146	0.010	0.20	-	73	30-130
Naphthalene	ND	-	0.010	-	-	-	-
Phenanthrene	ND	0.136	0.010	0.20	-	68	30-130
Pyrene	ND	0.116	0.010	0.20	-	58	30-130
Surrogate Recovery							
1-Fluoronaphthalene	0.357	0.391		0.50	71	78	30-130
2-Fluorobiphenyl	0.377	0.395		0.50	75	79	30-130



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 11/30/15
Date Analyzed: 11/30/15
Instrument: GC35
Matrix: Soil
Project: 1740.001.110; 4901 BWAY

WorkOrder: 1511B02
BatchID: 113532
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg
Sample ID: MB/LCS-113532
 1511B02-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Benzo (a) pyrene	NR	NR		0.031	NR	NR	-	NR	
Chrysene	NR	NR		0.037	NR	NR	-	NR	
1-Methylnaphthalene	NR	NR		ND<0.02	NR	NR	-	NR	
2-Methylnaphthalene	NR	NR		ND<0.02	NR	NR	-	NR	
Phenanthrene	NR	NR		0.053	NR	NR	-	NR	
Pyrene	NR	NR		0.062	NR	NR	-	NR	
Surrogate Recovery									
1-Fluoronaphthalene	NR	NR			NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR			NR	NR	-	NR	



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1511B02

ClientCode: PEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: BRiddell@pangeaenv.com
cc/3rd Party:
PO:
ProjectNo: 1740.001.110; 4901 BWAY

Bill to:

Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 3 days;

Date Received: 11/25/2015

Date Logged: 11/25/2015

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)													
					1	2	3	4	5	6	7	8	9	10	11	12		
1511B02-001	S12-0.5' (B1)2	Soil	11/25/2015 11:00	<input type="checkbox"/>	A													

Test Legend:

1	8270_PNA_S	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina 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.



WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.

QC Level: LEVEL 2

Work Order: 1511B02

Project: 1740.001.110; 4901 BWAY

Client Contact: Bob Clark-Riddell

Date Logged: 11/25/2015

Comments:

Contact's Email: BRiddell@pangeaenv.com

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1511B02-001A	S12-0.5' (B1)2	Soil	SW8270C (PAHs/PNAs)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	11/25/2015 11:00	3 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
 Project Name: **1740.001.110; 4901 BWAY**
 WorkOrder No: **1511B02** Matrix: Soil
 Carrier: Bernie Cummins (MAI Courier)

Date and Time Received: **11/25/2015 16:20**
 Date Logged: **11/25/2015**
 Received by: **Agustina Venegas**
 Logged by: **Agustina Venegas**

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes 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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Sample/Temp Blank temperature Temp: 3°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

* NOTE: If the "No" box is checked, see comments below.

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1511B02 A

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: 1740.001.110; 4901 BWAY

Project Received: 11/25/2015

Analytical Report reviewed & approved for release on 12/08/2015 by:

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.





Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 1740.001.110; 4901 BWAY
WorkOrder: 1511B02

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

a3 sample diluted due to high organic content.



Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 1740.001.110; 4901 BWAY
WorkOrder: 1511B02

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F9 MS/MSD recovery and/or RPD was out of acceptance criteria; DLT validated the prep batch.



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 11/25/15 17:02
Date Prepared: 12/4/15
Project: 1740.001.110; 4901 BWAY

WorkOrder: 1511B02
Extraction Method: SW3050B
Analytical Method: SW6010B
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S12-0.5' (B1)2	1511B02-001A	Soil	11/25/2015 11:00	ICP-JY	113736

Analytes	Result	RL	DF	Date Analyzed
Lead	110	5.0	1	12/07/2015 12:44

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	88	70-130	12/07/2015 12:44

Analyst(s): BBO



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 12/4/15
Date Analyzed: 12/7/15
Instrument: ICP-JY
Matrix: Soil
Project: 1740.001.110; 4901 BWAY

WorkOrder: 1511B02
BatchID: 113736
Extraction Method: SW3050B
Analytical Method: SW6010B
Unit: mg/Kg
Sample ID: MB/LCS-113736
 1512163-035AMS/MSD

QC Summary Report for Lead

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	48.0	5.0	50	-	96	75-125
Surrogate Recovery							
Terbium	439	442		500	88	88	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	580	947	50	861.5	0,F9	170,F9	75-125	NA	25
Surrogate Recovery									
Terbium	370	472	500		74	94	70-130	24.3,F1	20

Analyte	DLT Result	DLTRef Val	RPD	RPD Limit
Lead	874	861.5	1.48	10



WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.
Project: 1740.001.110; 4901 BWAY
Comments: Lead added 12/3/15 1day TAT

QC Level: LEVEL 2
Client Contact: Bob Clark-Riddell
Contact's Email: BRiddell@pangeaenv.com

Work Order: 1511B02
Date Logged: 11/25/2015
Date Add-On: 12/3/2015

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1511B02-001A	S12-0.5' (B1)2	Soil	SW6010B (Lead)	1	Stainless Steel tube 2"x6"	11/25/2015 11:00	1 day		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1511B02 B

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: 1740.001.110; 4901 BWAY

Project Received: 11/25/2015

Analytical Report reviewed & approved for release on 12/08/2015 by:

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.





Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 1740.001.110; 4901 BWAY
WorkOrder: 1511B02

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

a3 sample diluted due to high organic content.



Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 1740.001.110; 4901 BWAY
WorkOrder: 1511B02

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F9 MS/MSD recovery and/or RPD was out of acceptance criteria; DLT validated the prep batch.



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 11/25/15 17:02
Date Prepared: 12/4/15
Project: 1740.001.110; 4901 BWAY

WorkOrder: 1511B02
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides (Basic Target List) + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S12-0.5' (B1)2	1511B02-001A	Soil	11/25/2015 11:00	GC22	113762

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.010	10	12/05/2015 09:25
a-BHC	ND	0.010	10	12/05/2015 09:25
b-BHC	ND	0.010	10	12/05/2015 09:25
d-BHC	ND	0.010	10	12/05/2015 09:25
g-BHC	ND	0.010	10	12/05/2015 09:25
Chlordane (Technical)	ND	0.25	10	12/05/2015 09:25
a-Chlordane	ND	0.010	10	12/05/2015 09:25
g-Chlordane	ND	0.010	10	12/05/2015 09:25
p,p-DDD	ND	0.010	10	12/05/2015 09:25
p,p-DDE	ND	0.010	10	12/05/2015 09:25
p,p-DDT	ND	0.010	10	12/05/2015 09:25
Dieldrin	ND	0.010	10	12/05/2015 09:25
Endosulfan I	ND	0.010	10	12/05/2015 09:25
Endosulfan II	ND	0.010	10	12/05/2015 09:25
Endosulfan sulfate	ND	0.010	10	12/05/2015 09:25
Endrin	ND	0.010	10	12/05/2015 09:25
Endrin aldehyde	ND	0.010	10	12/05/2015 09:25
Endrin ketone	ND	0.010	10	12/05/2015 09:25
Heptachlor	ND	0.010	10	12/05/2015 09:25
Heptachlor epoxide	ND	0.010	10	12/05/2015 09:25
Hexachlorobenzene	ND	0.10	10	12/05/2015 09:25
Hexachlorocyclopentadiene	ND	0.20	10	12/05/2015 09:25
Methoxychlor	ND	0.010	10	12/05/2015 09:25
Toxaphene	ND	0.50	10	12/05/2015 09:25
Aroclor1016	ND	0.50	10	12/05/2015 09:25
Aroclor1221	ND	0.50	10	12/05/2015 09:25
Aroclor1232	ND	0.50	10	12/05/2015 09:25
Aroclor1242	ND	0.50	10	12/05/2015 09:25
Aroclor1248	ND	0.50	10	12/05/2015 09:25
Aroclor1254	ND	0.50	10	12/05/2015 09:25
Aroclor1260	ND	0.50	10	12/05/2015 09:25
PCBs, total	ND	0.50	10	12/05/2015 09:25

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	78	70-130	12/05/2015 09:25

Analyst(s): CK

Analytical Comments: a3



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 12/4/15
Date Analyzed: 12/5/15
Instrument: GC22
Matrix: Soil
Project: 1740.001.110; 4901 BWAY

WorkOrder: 1511B02
BatchID: 113762
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-113762
 1512194-001AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
PCBs, total	ND	-	0.050	-	-	-	-
Aldrin	ND	0.0437	0.0010	0.050	-	87	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.0458	0.0010	0.050	-	92	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.0368	0.0010	0.050	-	74	70-130
Dieldrin	ND	0.0489	0.0010	0.050	-	98	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	0.0400	0.0010	0.050	-	80	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.0491	0.0010	0.050	-	98	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-
Aroclor1016	ND	-	0.050	-	-	-	-
Aroclor1221	ND	-	0.050	-	-	-	-
Aroclor1232	ND	-	0.050	-	-	-	-
Aroclor1242	ND	-	0.050	-	-	-	-
Aroclor1248	ND	-	0.050	-	-	-	-
Aroclor1254	ND	-	0.050	-	-	-	-
Aroclor1260	ND	-	0.050	-	-	-	-
Surrogate Recovery							
Decachlorobiphenyl	0.0466	0.0462		0.050	93	92	70-130

(Cont.)



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 12/4/15
Date Analyzed: 12/5/15
Instrument: GC22
Matrix: Soil
Project: 1740.001.110; 4901 BWAY

WorkOrder: 1511B02
BatchID: 113762
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS-113762
 1512194-001AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	NR	NR		ND<0.01	NR	NR	-	NR	
g-BHC	NR	NR		ND<0.01	NR	NR	-	NR	
p,p-DDT	NR	NR		0.03	NR	NR	-	NR	
Dieldrin	NR	NR		ND<0.01	NR	NR	-	NR	
Endrin	NR	NR		0.028	NR	NR	-	NR	
Heptachlor	NR	NR		ND<0.01	NR	NR	-	NR	

Surrogate Recovery

Decachlorobiphenyl	NR	NR			NR	NR	-	NR	
--------------------	----	----	--	--	----	----	---	----	--



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1511B02 **B** ClientCode: PEO

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:
 Bob Clark-Riddell
 Pangea Environmental Svcs., Inc.
 1710 Franklin Street, Ste. 200
 Oakland, CA 94612
 (510) 836-3700 FAX: (510) 836-3709

Email: BRiddell@pangeaenv.com
 cc/3rd Party:
 PO:
 ProjectNo: 1740.001.110; 4901 BWAY

Bill to:
 Bob Clark-Riddell
 Pangea Environmental Svcs., Inc.
 1710 Franklin Street, Ste. 200
 Oakland, CA 94612

Requested TAT: 2 days;

Date Received: 11/25/2015
Date Logged: 11/25/2015
Date Add-On: 12/04/2015

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1511B02-001	S12-0.5' (B1)2	Soil	11/25/2015 11:00	<input type="checkbox"/>	A												

Test Legend:

1	8081PCB_S	2		3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina Venegas
 Add-On Prepared By: Shino KH

Comments: Lead added 12/3/15 1day TAT. OC Pesticides/PCBs added 12/04/15 48hr.

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.



WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.

QC Level: LEVEL 2

Work Order: 1511B02

Project: 1740.001.110; 4901 BWAY

Client Contact: Bob Clark-Riddell

Date Logged: 11/25/2015

Comments: Lead added 12/3/15 1day TAT. OC Pesticides/PCBs added 12/04/15 48hr.

Contact's Email: BRiddell@pangeaenv.com

Date Add-On: 12/4/2015

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1511B02-001A	S12-0.5' (B1)2	Soil	SW8081A/8082 (OC Pesticides+PCBs)	1	Stainless Steel tube 2"x6"	11/25/2015 11:00	2 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

RUSH 1511B02

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565-1701

Website: www.mccampbell.com Email: main@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 (Normal) No Write On (DW) No

Report To: Bob Clark Riddell Bill To: Pangea

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

E-Mail: briddell@pangeaenv.com

Tele: (510) 435-8664 Fax: (510) 836-3709

Project #: 1740.001.110 Project Name: 4401 BWAY

Project Location: 4401 BWAY

Sampler Signature: [Signature]

Analysis Request Other Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED							
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other				
S12-0.5'(B1)2		11/25/15	11:20	1	TUBE	X					X							

BTEX & TPH as Gas (602/8020 + 8015)/MTBE	
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 / 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 625 / 8270 / 8310	X
CAM-17 Metals (6010 / 6020)	
LUFT 5 Metals (6010 / 6020)	
Lead (200.8 / 200.9 / 6010) 12-3-15	X
8081 + PCBs 12/4/15 48hr	X

Relinquished By: [Signature] Date: 11/25/15 Time: 12:45 Received By: [Signature]

Relinquished By: [Signature] Date: 11-25-15/1500 Received By: [Signature]

Relinquished By: Date: Time: Received By:

ICE/t° 3'
 GOOD CONDITION _____
 HEAD SPACE ABSENT _____
 DECHLORINATED IN LAB _____
 APPROPRIATE CONTAINERS _____
 PRESERVED IN LAB _____
 COMMENTS:
 VOAS O&G METALS OTHER
 PRESERVATION pH<2



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1511B02 C

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: 1740.001.110; 4901 BWAY

Project Received: 11/25/2015

Analytical Report reviewed & approved for release on 12/10/2015 by:

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.





Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 1740.001.110; 4901 BWAY
WorkOrder: 1511B02

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

a3 sample diluted due to high organic content.



Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 1740.001.110; 4901 BWAY
WorkOrder: 1511B02

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F9 MS/MSD recovery and/or RPD was out of acceptance criteria; DLT validated the prep batch.



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 11/25/15 17:02
Date Prepared: 12/7/15
Project: 1740.001.110; 4901 BWAY

WorkOrder: 1511B02
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L

STLC Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S12-0.5' (B1)2	1511B02-001A	Soil	11/25/2015 11:00	ICP-JY	113866

Analytes	Result	RL	DF	Date Analyzed
Lead	3.4	0.20	1	12/10/2015 10:56

Analyst(s): BBO



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 11/25/15 17:02
Date Prepared: 12/8/15
Project: 1740.001.110; 4901 BWAY

WorkOrder: 1511B02
Extraction Method: SW1311/SW3010
Analytical Method: SW6010B
Unit: mg/L

TCLP Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
S12-0.5' (B1)2	1511B02-001A	Soil	11/25/2015 11:00	ICP-JY	113864

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.20	1	12/10/2015 11:28

Analyst(s): BBO



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 12/7/15
Date Analyzed: 12/10/15
Instrument: ICP-JY
Matrix: Soil
Project: 1740.001.110; 4901 BWAY

WorkOrder: 1511B02
BatchID: 113866
Extraction Method: CA Title 22
Analytical Method: SW6010B
Unit: mg/L
Sample ID: MB/LCS-113866
 1511317-001AMS/MSD

QC Summary Report for Metals (STLC)

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	0.845	0.20	1	-	85	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	0.944	0.924	1	ND	94	92	70-130	2.19	30



Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	WorkOrder:	1511B02
Date Prepared:	12/7/15	BatchID:	113864
Date Analyzed:	12/8/15	Extraction Method:	SW1311/SW3010
Instrument:	ICP-JY	Analytical Method:	SW6010B
Matrix:	Soil	Unit:	mg/L
Project:	1740.001.110; 4901 BWAY	Sample ID:	MB/LCS-113864 1512264-001AMS/MSD

QC Summary Report for Metals (TCLP)

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	1.02	0.20	1	-	102	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	1.16	0.957	1	ND	116	96	70-130	19.4	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1511B02 C

ClientCode: PEO

WaterTrax
 WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Bob Clark-Riddell
 Pangea Environmental Svcs., Inc.
 1710 Franklin Street, Ste. 200
 Oakland, CA 94612
 (510) 836-3700 FAX: (510) 836-3709

Email: BRiddell@pangeaenv.com
 cc/3rd Party:
 PO:
 ProjectNo: 1740.001.110; 4901 BWAY

Bill to:

Bob Clark-Riddell
 Pangea Environmental Svcs., Inc.
 1710 Franklin Street, Ste. 200
 Oakland, CA 94612

Requested TAT: 1 day;

Date Received: 11/25/2015

Date Logged: 11/25/2015

Date Add-On: 12/07/2015

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1511B02-001	S12-0.5' (B1)2	Soil	11/25/2015 11:00	<input type="checkbox"/>	A	A											

Test Legend:

1	PB_STLC_S	2	PB_TCLP_S	3		4	
5		6		7		8	
9		10		11		12	

Prepared by: Agustina Venegas

Add-On Prepared By: Agustina Venegas

Comments: Lead added 12/3/15 1day TAT. OC Pesticides/PCBs added 12/04/15 48hr. STLC & TCLP Pb added 12/7/15 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.



WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.

QC Level: LEVEL 2

Work Order: 1511B02

Project: 1740.001.110; 4901 BWAY

Client Contact: Bob Clark-Riddell

Date Logged: 11/25/2015

Comments: Lead added 12/3/15 1day TAT. OC Pesticides/PCBs added 12/04/15 48hr. STLC & TCLP Pb added 12/7/15 RUSH

Contact's Email: BRiddell@pangeaenv.com

Date Add-On: 12/7/2015

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1511B02-001A	S12-0.5' (B1)2	Soil	SW6010B (Lead) (TCLP)	1	Stainless Steel tube 2"x6"	11/25/2015 11:00	1 day*		<input type="checkbox"/>	
			SW6010B (Lead) (STLC)				1 day*		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

RUSH 1511B02

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565-1701

Website: www.mccampbell.com Email: main@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 (Normal) No Write On (DW) No

Report To: Bob Clark Riddell Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: briddell@pangeaenv.com
Tele: (510) 435-8664 Fax: (510) 836-3709
Project #: 1740.001.110 Project Name: 4901 BWAY
Project Location: 4901 BROADWAY
Sampler Signature: [Signature]

Analysis Request										Other	Comments	
BTEX & TPH as Gas (602/8020 + 8015)/MTBE												Filter Samples for Metals analysis: Yes / No 1 DAY 1 DAY
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 / 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 625 / 8270 / 8310												
CAM-17 Metals (6010 / 6020)												
LUFT 5 Metals (6010 / 6020)												
Lead (200.8 / 200.9 / 6010)												

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED						
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other			
S12-0.5'(B1)2		11/25/15	11:00	1	TUBE	X					X						

Relinquished By: [Signature] Date: 11/25/15 Time: 12:45 Received By: [Signature]
Relinquished By: [Signature] Date: 11/25-15/16 Time: [Signature] Received By: [Signature]
Relinquished By: [Signature] Date: [Signature] Time: [Signature] Received By: [Signature]

ICE/° 3' COMMENTS:
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
APPROPRIATE CONTAINERS _____
PRESERVED IN LAB _____
VOAS O&G METALS OTHER
PRESERVATION pH<2

APPENDIX E

Laboratory Analytical Results: County Assessment,
November 2015



25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

09 December 2015

Bob Clark-Riddell
Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
RE: 4901 Broadway

Enclosed are the results of analyses for samples received by the laboratory on 11/21/15 10:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Katherine RunningCrane
Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B2-6'	T152951-01	Soil	11/19/15 09:55	11/21/15 10:20
B6-18'	T152951-02	Soil	11/19/15 10:45	11/21/15 10:20
B9-2'	T152951-03	Soil	11/19/15 14:25	11/21/15 10:20
B9-4'	T152951-04	Soil	11/19/15 14:20	11/21/15 10:20
B10-2'	T152951-05	Soil	11/19/15 14:35	11/21/15 10:20
B10-4'	T152951-06	Soil	11/19/15 14:30	11/21/15 10:20
B11-2'	T152951-07	Soil	11/19/15 12:55	11/21/15 10:20
B11-6'	T152951-08	Soil	11/19/15 12:50	11/21/15 10:20
B11-12'	T152951-09	Soil	11/19/15 13:00	11/21/15 10:20
B12-12	T152951-10	Soil	11/19/15 16:00	11/21/15 10:20
B17-4'	T152951-12	Soil	11/20/15 10:30	11/21/15 10:20
B18-4'	T152951-14	Soil	11/20/15 10:00	11/21/15 10:20
B12-W	T152951-15	Water	11/20/15 12:15	11/21/15 10:20

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager

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

Project: 4901 Broadway
Project Number: [none]
Project Manager: Bob Clark-Riddell

Reported:
12/09/15 15:21

DETECTIONS SUMMARY

Sample ID: B2-6' **Laboratory ID:** T152951-01

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Barium	52	1.0		mg/kg	EPA 6010B	
Chromium	8.4	2.0		mg/kg	EPA 6010B	
Cobalt	3.3	2.0		mg/kg	EPA 6010B	
Copper	3.1	1.0		mg/kg	EPA 6010B	
Nickel	7.3	2.0		mg/kg	EPA 6010B	
Vanadium	12	5.0		mg/kg	EPA 6010B	
Zinc	9.3	1.0		mg/kg	EPA 6010B	
Mercury	0.15	0.10		mg/kg	EPA 7471A Soil	

Sample ID: B6-18' **Laboratory ID:** T152951-02

No Results Detected

Sample ID: B9-2' **Laboratory ID:** T152951-03

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Lead	13	3.0		mg/kg	EPA 6010B	

Sample ID: B9-4' **Laboratory ID:** T152951-04

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Lead	40	3.0		mg/kg	EPA 6010B	

Sample ID: B10-2' **Laboratory ID:** T152951-05

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Lead	29	3.0		mg/kg	EPA 6010B	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager

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

Project: 4901 Broadway
Project Number: [none]
Project Manager: Bob Clark-Riddell

Reported:
12/09/15 15:21

Sample ID: B10-4'

Laboratory ID: T152951-06

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Lead	11	3.0		mg/kg	EPA 6010B	

Sample ID: B11-2'

Laboratory ID: T152951-07

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Lead	27	3.0		mg/kg	EPA 6010B	

Sample ID: B11-6'

Laboratory ID: T152951-08

No Results Detected

Sample ID: B11-12'

Laboratory ID: T152951-09

No Results Detected

Sample ID: B12-12

Laboratory ID: T152951-10

No Results Detected

Sample ID: B17-4'

Laboratory ID: T152951-12

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
C29-C40 (MORO)	49	10		mg/kg	EPA 8015C	
Barium	150	1.0		mg/kg	EPA 6010B	
Chromium	16	2.0		mg/kg	EPA 6010B	
Cobalt	6.6	2.0		mg/kg	EPA 6010B	
Copper	26	1.0		mg/kg	EPA 6010B	
Lead	210	3.0		mg/kg	EPA 6010B	
Nickel	27	2.0		mg/kg	EPA 6010B	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
---	--	-----------------------------

Sample ID: B17-4' **Laboratory ID:** T152951-12

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
Vanadium	13	5.0	mg/kg	EPA 6010B	
Zinc	17	1.0	mg/kg	EPA 6010B	
Lead	2.9	0.10	mg/l	STLC Waste Extraction T	
Mercury	0.28	0.10	mg/kg	EPA 7471A Soil	

Sample ID: B18-4' **Laboratory ID:** T152951-14

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
Lead	13	3.0	mg/kg	EPA 6010B	

Sample ID: B12-W **Laboratory ID:** T152951-15

No Results Detected

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
---	--	-----------------------------

B2-6'
T152951-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		91.4 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	52	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	8.4	2.0	"	"	"	"	"	"	
Cobalt	3.3	2.0	"	"	"	"	"	"	
Copper	3.1	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	7.3	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	12	5.0	"	"	"	"	"	"	
Zinc	9.3	1.0	"	"	"	"	"	"	

Cold Vapor Extraction EPA 7470/7471

Mercury	0.15	0.10	mg/kg	1	5112323	11/23/15	11/24/15	EPA 7471A Soil	
---------	------	------	-------	---	---------	----------	----------	-------------------	--

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
---	--	-----------------------------

B2-6'
T152951-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

SunStar Laboratories, Inc.

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		56.9 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		56.5 %		35-140	"	"	"	"	

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B2-6'

T152951-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

Surrogate: Tetrachloro-meta-xylene	96.0 %	35-140			5112343	11/23/15	12/01/15	EPA 8082	
Surrogate: Decachlorobiphenyl	99.6 %	35-140			"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	

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Katherine RunningCrane, Project Manager



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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B2-6'

T152951-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,3-Dichloropropane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	

Surrogate: 4-Bromofluorobenzene
 Surrogate: Dibromofluoromethane

114 % 81.2-123
 185 % 95.7-135

S-GC

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Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B2-6'
T152951-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Surrogate: Toluene-d8	86.9 %	85.5-116	5112333	11/23/15	12/03/15	EPA 8260B
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Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C
Phenol	ND	1000	"	"	"	"	"	"
Aniline	ND	300	"	"	"	"	"	"
2-Chlorophenol	ND	1000	"	"	"	"	"	"
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"
2-Methylnaphthalene	ND	300	"	"	"	"	"	"
1-Methylnaphthalene	ND	300	"	"	"	"	"	"
Acenaphthene	ND	300	"	"	"	"	"	"
4-Nitrophenol	ND	1000	"	"	"	"	"	"
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"
Pentachlorophenol	ND	1000	"	"	"	"	"	"
Pyrene	ND	300	"	"	"	"	"	"
Acenaphthylene	ND	300	"	"	"	"	"	"
Anthracene	ND	300	"	"	"	"	"	"
Benzo (a) anthracene	ND	300	"	"	"	"	"	"
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"
Benzo (a) pyrene	ND	300	"	"	"	"	"	"
Benzyl alcohol	ND	300	"	"	"	"	"	"
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"
4-Chloroaniline	ND	300	"	"	"	"	"	"

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B2-6'
T152951-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

2-Chloronaphthalene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B2-6'
T152951-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

N-Nitrosodimethylamine	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		41.5 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		54.6 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		36.3 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		42.9 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		71.0 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-d14		69.9 %	29.1-130		"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B6-18'
T152951-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/25/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		92.1 %	65-135		"	"	"	"	

Metals by EPA 6010B

Lead	ND	3.0	mg/kg	1	5112516	11/25/15	11/30/15	EPA 6010B	
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Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B6-18'
T152951-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,2-Dichloroethane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B6-18'
T152951-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Ethylbenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		110 %	81.2-123		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		188 %	95.7-135		"	"	"	"	S-GC
<i>Surrogate: Toluene-d8</i>		81.1 %	85.5-116		"	"	"	"	S-GC

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B9-2'
T152951-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/25/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		75.4 %	65-135		"	"	"	"	

Metals by EPA 6010B

Lead	13	3.0	mg/kg	1	5112328	11/23/15	11/23/15	EPA 6010B	
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Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B9-4'
T152951-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/25/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		96.5 %		65-135	"	"	"	"	

Metals by EPA 6010B

Lead	40	3.0	mg/kg	1	5112328	11/23/15	11/23/15	EPA 6010B	
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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B10-2'
T152951-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/25/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		92.8 %		65-135	"	"	"	"	

Metals by EPA 6010B

Lead	29	3.0	mg/kg	1	5112328	11/23/15	11/23/15	EPA 6010B	
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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B10-4'
T152951-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/25/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		90.9 %	65-135		"	"	"	"	

Metals by EPA 6010B

Lead	11	3.0	mg/kg	1	5112328	11/23/15	11/23/15	EPA 6010B	
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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B11-2'
T152951-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/25/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		91.2 %	65-135		"	"	"	"	

Metals by EPA 6010B

Lead	27	3.0	mg/kg	1	5112328	11/23/15	11/23/15	EPA 6010B	
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Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc.
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 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B11-6'
T152951-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/25/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		93.1 %	65-135		"	"	"	"	

Metals by EPA 6010B

Lead	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
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Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B11-6'
T152951-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,2-Dichloroethane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B11-6'
T152951-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Ethylbenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		116 %	81.2-123		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		188 %	95.7-135		"	"	"	"	S-GC
<i>Surrogate: Toluene-d8</i>		89.0 %	85.5-116		"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B11-12'
T152951-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/25/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		94.7 %	65-135		"	"	"	"	

Metals by EPA 6010B

Lead	ND	3.0	mg/kg	1	5112516	11/25/15	11/30/15	EPA 6010B	
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Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc.
 1710 Franklin Street, Suite 200
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B11-12'
T152951-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,2-Dichloroethane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B11-12'
T152951-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Ethylbenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		116 %	81.2-123		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		184 %	95.7-135		"	"	"	"	S-GC
<i>Surrogate: Toluene-d8</i>		87.5 %	85.5-116		"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B12-12
T152951-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112410	11/24/15	11/26/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		111 %	65-135		"	"	"	"	

Metals by EPA 6010B

Lead	ND	3.0	mg/kg	1	5112516	11/25/15	11/30/15	EPA 6010B	
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Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc.
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B12-12
T152951-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,2-Dichloroethane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B12-12
T152951-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Ethylbenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		116 %	81.2-123		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		187 %	95.7-135		"	"	"	"	S-GC
<i>Surrogate: Toluene-d8</i>		97.2 %	85.5-116		"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B17-4'
T152951-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/25/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	49	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		101 %	65-135		"	"	"	"	

Metals by EPA 6010B

Antimony	ND	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
Barium	150	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
Chromium	16	2.0	"	"	"	"	"	"	
Cobalt	6.6	2.0	"	"	"	"	"	"	
Copper	26	1.0	"	"	"	"	"	"	
Lead	210	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
Nickel	27	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
Vanadium	13	5.0	"	"	"	"	"	"	
Zinc	17	1.0	"	"	"	"	"	"	

TCLP Metals by 6000/7000 Series Methods

Lead	ND	0.10	mg/l	1	5120841	12/08/15	12/09/15	EPA 1311	
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B17-4'
T152951-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

STLC Metals by 6000/7000 Series Methods

Lead	0.28	0.10	mg/l	1	5120128	12/01/15	12/04/15	STLC Waste Extraction Test	
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Cold Vapor Extraction EPA 7470/7471

Mercury	0.28	0.10	mg/kg	1	5112323	11/23/15	11/24/15	EPA 7471A Soil	
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Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	5.0	ug/kg	1	5112345	11/25/15	11/30/15	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		54.8 %	35-140		"	"	"	"	
Surrogate: Decachlorobiphenyl		39.6 %	35-140		"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B17-4'
T152951-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		88.3 %	35-140		"	"	"	"	
Surrogate: Decachlorobiphenyl		77.0 %	35-140		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc.
 1710 Franklin Street, Suite 200
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B17-4'
T152951-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,4-Dichlorobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B17-4'
T152951-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Vinyl chloride	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		114 %	81.2-123		"	"	"	"	
Surrogate: Dibromofluoromethane		193 %	95.7-135		"	"	"	"	S-GC
Surrogate: Toluene-d8		89.1 %	85.5-116		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	
Acenaphthylene	ND	300	"	"	"	"	"	"	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B17-4'
T152951-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzo (a) pyrene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	
Fluorene	ND	300	"	"	"	"	"	"	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B17-4'
T152951-12 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Isophorone	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		56.4 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		66.8 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		60.1 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		65.7 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		92.1 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-dl4		85.3 %	29.1-130		"	"	"	"	

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Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B18-4'
T152951-14 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112330	11/23/15	11/25/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		102 %	65-135		"	"	"	"	

Metals by EPA 6010B

Lead	13	3.0	mg/kg	1	5112325	11/23/15	11/24/15	EPA 6010B	
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Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	

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Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B18-4'
T152951-14 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2-Dichloroethane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B18-4'
T152951-14 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Ethylbenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		113 %	81.2-123		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		195 %	95.7-135		"	"	"	"	S-GC
<i>Surrogate: Toluene-d8</i>		86.6 %	85.5-116		"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B12-W
T152951-15 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	0.050	mg/l	1	5112408	11/24/15	11/24/15	EPA 8015C	
C13-C28 (DRO)	ND	0.050	"	"	"	"	"	"	
C29-C40 (MORO)	ND	0.10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		65.5 %	65-135		"	"	"	"	

Organochlorine Pesticides by EPA Method 8081A

alpha-BHC	ND	1.00	ug/l	1	5112409	11/24/15	12/01/15	EPA 8081A	
gamma-BHC (Lindane)	ND	1.00	"	"	"	"	"	"	
beta-BHC	ND	1.00	"	"	"	"	"	"	
delta-BHC	ND	1.00	"	"	"	"	"	"	
Heptachlor	ND	1.00	"	"	"	"	"	"	
Aldrin	ND	1.00	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.00	"	"	"	"	"	"	
gamma-Chlordane	ND	1.00	"	"	"	"	"	"	
alpha-Chlordane	ND	1.00	"	"	"	"	"	"	
Endosulfan I	ND	1.00	"	"	"	"	"	"	
4,4'-DDE	ND	1.00	"	"	"	"	"	"	
Dieldrin	ND	1.00	"	"	"	"	"	"	
Endrin	ND	1.00	"	"	"	"	"	"	
4,4'-DDD	ND	1.00	"	"	"	"	"	"	
Endosulfan II	ND	1.00	"	"	"	"	"	"	
4,4'-DDT	ND	2.00	"	"	"	"	"	"	
Endrin aldehyde	ND	1.00	"	"	"	"	"	"	
Endosulfan sulfate	ND	1.00	"	"	"	"	"	"	
Methoxychlor	ND	5.00	"	"	"	"	"	"	
Endrin ketone	ND	1.00	"	"	"	"	"	"	
Toxaphene	ND	20.0	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		42.1 %	35-140		"	"	"	"	
Surrogate: Decachlorobiphenyl		60.7 %	35-140		"	"	"	"	

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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B12-W
T152951-15 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	2.00	ug/l	1	5112342	11/23/15	12/02/15	EPA 8082	
PCB-1221	ND	2.00	"	"	"	"	"	"	
PCB-1232	ND	2.00	"	"	"	"	"	"	
PCB-1242	ND	2.00	"	"	"	"	"	"	
PCB-1248	ND	2.00	"	"	"	"	"	"	
PCB-1254	ND	2.00	"	"	"	"	"	"	
PCB-1260	ND	2.00	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		73.3 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		84.9 %		35-140	"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	1.0	ug/l	1	5112038	11/20/15	11/26/15	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	

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Pangea Environmental Services, Inc.
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 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B12-W
T152951-15 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,4-Dichlorobenzene	ND	1.0	ug/l	1	5112038	11/20/15	11/26/15	EPA 8260B	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B12-W
T152951-15 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Vinyl chloride	ND	1.0	ug/l	1	5112038	11/20/15	11/26/15	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	83.5-119		"	"	"	"	
Surrogate: Dibromofluoromethane		91.8 %	81-136		"	"	"	"	
Surrogate: Toluene-d8		95.9 %	88.8-117		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	10	ug/l	1	5112332	11/23/15	11/24/15	EPA 8270C	
Phenol	ND	10	"	"	"	"	"	"	
Aniline	ND	10	"	"	"	"	"	"	
Acenaphthylene	ND	10	"	"	"	"	"	"	
2-Chlorophenol	ND	10	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	5.0	"	"	"	"	"	"	
Anthracene	ND	10	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1-Methylnaphthalene	ND	10	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	10	"	"	"	"	"	"	
2-Methylnaphthalene	ND	20	"	"	"	"	"	"	
Acenaphthene	ND	10	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10	"	"	"	"	"	"	
4-Nitrophenol	ND	10	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	10	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	20	"	"	"	"	"	"	
Pentachlorophenol	ND	10	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B12-W
T152951-15 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Pyrene	ND	10	ug/l	1	5112332	11/23/15	11/24/15	EPA 8270C	
Benzyl alcohol	ND	50	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	10	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	5.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	20	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	5.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10	"	"	"	"	"	"	
4-Chloroaniline	ND	20	"	"	"	"	"	"	
2-Chloronaphthalene	ND	10	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	20	"	"	"	"	"	"	
Chrysene	ND	10	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10	"	"	"	"	"	"	
Dibenzofuran	ND	20	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	10	"	"	"	"	"	"	
Diethyl phthalate	ND	10	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	5.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	5.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	20	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10	"	"	"	"	"	"	
Fluoranthene	ND	5.0	"	"	"	"	"	"	
Fluorene	ND	10	"	"	"	"	"	"	
Hexachlorobenzene	ND	20	"	"	"	"	"	"	
Hexachlorobutadiene	ND	10	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	20	"	"	"	"	"	"	
Hexachloroethane	ND	5.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10	"	"	"	"	"	"	

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

B12-W
T152951-15 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Isophorone	ND	10	ug/l	1	5112332	11/23/15	11/24/15	EPA 8270C	
2-Methylphenol	ND	10	"	"	"	"	"	"	
4-Methylphenol	ND	20	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
2-Nitroaniline	ND	10	"	"	"	"	"	"	
3-Nitroaniline	ND	10	"	"	"	"	"	"	
4-Nitroaniline	ND	20	"	"	"	"	"	"	
Nitrobenzene	ND	20	"	"	"	"	"	"	
2-Nitrophenol	ND	10	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	10	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	10	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	20	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	10	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	10	"	"	"	"	"	"	
1,4-Dinitrobenzene	ND	10	"	"	"	"	"	"	
Pyridine	ND	10	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		33.4 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		24.7 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		64.2 %	14.7-110		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		64.3 %	33.3-110		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		88.6 %	12.9-110		"	"	"	"	
Surrogate: Terphenyl-dl4		80.5 %	15.8-136		"	"	"	"	

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Extractable Petroleum Hydrocarbons by 8015C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112330 - EPA 3550B GC

Blank (5112330-BLK1)

Prepared: 11/23/15 Analyzed: 11/24/15

C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	89.5		"	100		89.5	65-135			

LCS (5112330-BS1)

Prepared: 11/23/15 Analyzed: 11/24/15

C13-C28 (DRO)	460	10	mg/kg	500		92.0	75-125			
Surrogate: p-Terphenyl	96.7		"	99.9		96.8	65-135			

Matrix Spike (5112330-MS1)

Source: T152950-05

Prepared: 11/23/15 Analyzed: 11/25/15

C13-C28 (DRO)	450	10	mg/kg	500	ND	89.8	75-125			
Surrogate: p-Terphenyl	98.0		"	100		98.0	65-135			

Matrix Spike Dup (5112330-MSD1)

Source: T152950-05

Prepared: 11/23/15 Analyzed: 11/25/15

C13-C28 (DRO)	450	10	mg/kg	500	ND	90.9	75-125	1.25	20	
Surrogate: p-Terphenyl	104		"	100		104	65-135			

Batch 5112408 - EPA 3510C GC

Blank (5112408-BLK1)

Prepared & Analyzed: 11/24/15

C6-C12 (GRO)	ND	0.050	mg/l							
C13-C28 (DRO)	ND	0.050	"							
C29-C40 (MORO)	ND	0.10	"							
Surrogate: p-Terphenyl	2.66		"	4.00		66.5	65-135			

LCS (5112408-BS1)

Prepared & Analyzed: 11/24/15

C13-C28 (DRO)	17.2	0.050	mg/l	20.0		85.9	75-125			
Surrogate: p-Terphenyl	2.74		"	4.00		68.4	65-135			

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Extractable Petroleum Hydrocarbons by 8015C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112408 - EPA 3510C GC

LCS Dup (5112408-BSD1)

Prepared & Analyzed: 11/24/15

C13-C28 (DRO)	17.1	0.050	mg/l	20.0		85.3	75-125	0.691	20	
Surrogate: <i>p</i> -Terphenyl	3.25		"	4.00		81.3	65-135			

Batch 5112410 - EPA 3550B GC

Blank (5112410-BLK1)

Prepared: 11/24/15 Analyzed: 11/26/15

C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: <i>p</i> -Terphenyl	109		"	99.7		109	65-135			

LCS (5112410-BS1)

Prepared: 11/24/15 Analyzed: 11/26/15

C13-C28 (DRO)	570	10	mg/kg	500		113	75-125			
Surrogate: <i>p</i> -Terphenyl	114		"	100		114	65-135			

Matrix Spike (5112410-MS1)

Source: T152951-10

Prepared: 11/24/15 Analyzed: 11/26/15

C13-C28 (DRO)	520	10	mg/kg	498	ND	105	75-125			
Surrogate: <i>p</i> -Terphenyl	109		"	99.5		110	65-135			

Matrix Spike Dup (5112410-MSD1)

Source: T152951-10

Prepared: 11/24/15 Analyzed: 11/26/15

C13-C28 (DRO)	530	10	mg/kg	500	ND	106	75-125	1.16	20	
Surrogate: <i>p</i> -Terphenyl	90.7		"	100		90.7	65-135			

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112325 - EPA 3051

Blank (5112325-BLK1)

Prepared: 11/23/15 Analyzed: 11/24/15

Antimony	ND	3.0	mg/kg							
Silver	ND	2.0	"							
Arsenic	ND	5.0	"							
Barium	ND	1.0	"							
Beryllium	ND	1.0	"							
Cadmium	ND	2.0	"							
Chromium	ND	2.0	"							
Cobalt	ND	2.0	"							
Copper	ND	1.0	"							
Lead	ND	3.0	"							
Molybdenum	ND	5.0	"							
Nickel	ND	2.0	"							
Selenium	ND	5.0	"							
Thallium	ND	2.0	"							
Vanadium	ND	5.0	"							
Zinc	ND	1.0	"							

LCS (5112325-BS1)

Prepared: 11/23/15 Analyzed: 11/24/15

Arsenic	90.6	5.0	mg/kg	100		90.6	75-125			
Barium	84.1	1.0	"	100		84.1	75-125			
Cadmium	83.4	2.0	"	100		83.4	75-125			
Chromium	85.7	2.0	"	100		85.7	75-125			
Lead	90.5	3.0	"	100		90.5	75-125			

Matrix Spike (5112325-MS1)

Source: T152950-01

Prepared: 11/23/15 Analyzed: 11/24/15

Arsenic	75.8	5.0	mg/kg	99.0	5.42	71.1	75-125			QM-05
Barium	224	1.0	"	99.0	201	24.2	75-125			QM-05
Cadmium	70.3	2.0	"	99.0	0.484	70.6	75-125			QM-05
Chromium	80.8	2.0	"	99.0	11.9	69.6	75-125			QM-05
Lead	143	3.0	"	99.0	86.8	57.0	75-125			QM-05

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112325 - EPA 3051

Matrix Spike Dup (5112325-MSD1)	Source: T152950-01			Prepared: 11/23/15 Analyzed: 11/24/15						
Arsenic	73.4	5.0	mg/kg	100	5.42	67.9	75-125	3.24	20	QM-05
Barium	226	1.0	"	100	201	25.5	75-125	0.691	20	QM-05
Cadmium	71.2	2.0	"	100	0.484	70.8	75-125	1.27	20	QM-05
Chromium	81.0	2.0	"	100	11.9	69.1	75-125	0.217	20	QM-05
Lead	146	3.0	"	100	86.8	59.5	75-125	2.09	20	QM-05

Batch 5112328 - EPA 3051

Blank (5112328-BLK1)				Prepared & Analyzed: 11/23/15						
Lead	ND	3.0	mg/kg							

LCS (5112328-BS1)				Prepared & Analyzed: 11/23/15						
Lead	106	3.0	mg/kg	100	106	75-125				

Matrix Spike (5112328-MS1)	Source: T152951-03			Prepared & Analyzed: 11/23/15						
Lead	101	3.0	mg/kg	98.0	12.8	90.0	75-125			

Matrix Spike Dup (5112328-MSD1)	Source: T152951-03			Prepared & Analyzed: 11/23/15						
Lead	88.9	3.0	mg/kg	100	12.8	76.1	75-125	12.8	20	

Batch 5112516 - EPA 3051

Blank (5112516-BLK1)				Prepared: 11/25/15 Analyzed: 11/30/15						
Lead	ND	3.0	mg/kg							

LCS (5112516-BS1)				Prepared: 11/25/15 Analyzed: 11/30/15						
Lead	103	3.0	mg/kg	100	103	75-125				

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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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Metals by EPA 6010B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112516 - EPA 3051

Matrix Spike (5112516-MS1)		Source: T152974-01			Prepared: 11/25/15		Analyzed: 11/30/15	
Lead	82.7	3.0	mg/kg	100	ND	82.7	75-125	
Matrix Spike Dup (5112516-MSD1)		Source: T152974-01			Prepared: 11/25/15		Analyzed: 11/30/15	
Lead	84.1	3.0	mg/kg	100	ND	84.1	75-125	1.70 20

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

TCLP Metals by 6000/7000 Series Methods - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5120841 - TCLP Metals

Blank (5120841-BLK1)

Prepared: 12/08/15 Analyzed: 12/09/15

Lead	ND	0.10	mg/l							
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LCS (5120841-BS1)

Prepared: 12/08/15 Analyzed: 12/09/15

Lead	0.545	0.10	mg/l	0.500		109	75-125			
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Matrix Spike (5120841-MS1)

Source: T152951-12

Prepared: 12/08/15 Analyzed: 12/09/15

Lead	0.607	0.10	mg/l	0.500	0.0583	110	75-125			
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Matrix Spike Dup (5120841-MSD1)

Source: T152951-12

Prepared: 12/08/15 Analyzed: 12/09/15

Lead	0.601	0.10	mg/l	0.500	0.0583	109	75-125	0.906	30	
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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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STLC Metals by 6000/7000 Series Methods - Quality Control
SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5120128 - STLC Metals

Blank (5120128-BLK1)				Prepared: 12/01/15 Analyzed: 12/04/15						
Lead	ND	0.10	mg/l							
LCS (5120128-BS1)				Prepared: 12/01/15 Analyzed: 12/04/15						
Lead	9.68	0.10	mg/l	10.0		96.8	75-125			
Matrix Spike (5120128-MS1)				Source: T152950-04		Prepared: 12/01/15 Analyzed: 12/04/15				
Lead	14.7	0.10	mg/l	10.0	5.24	94.8	75-125			
Matrix Spike Dup (5120128-MSD1)				Source: T152950-04		Prepared: 12/01/15 Analyzed: 12/04/15				
Lead	15.2	0.10	mg/l	10.0	5.24	99.6	75-125	3.21	30	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Cold Vapor Extraction EPA 7470/7471 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112323 - EPA 7471A Soil

Blank (5112323-BLK1)

Prepared: 11/23/15 Analyzed: 11/24/15

Mercury ND 0.10 mg/kg

LCS (5112323-BS1)

Prepared: 11/23/15 Analyzed: 11/24/15

Mercury 0.355 0.10 mg/kg 0.417 85.3 75-125

Matrix Spike (5112323-MS1)

Source: T152948-01

Prepared: 11/23/15 Analyzed: 11/24/15

Mercury 0.379 0.10 mg/kg 0.417 0.0490 79.3 75-125

Matrix Spike Dup (5112323-MSD1)

Source: T152948-01

Prepared: 11/23/15 Analyzed: 11/24/15

Mercury 0.381 0.10 mg/kg 0.417 0.0490 79.8 75-125 0.552 20

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Organochlorine Pesticides by EPA Method 8081A - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112345 - EPA 3550 ECD/GCMS

Blank (5112345-BLK1)

Prepared: 11/25/15 Analyzed: 11/30/15

alpha-BHC	ND	5.0	ug/kg							
gamma-BHC (Lindane)	ND	5.0	"							
beta-BHC	ND	5.0	"							
delta-BHC	ND	5.0	"							
Heptachlor	ND	5.0	"							
Aldrin	ND	5.0	"							
Heptachlor epoxide	ND	5.0	"							
gamma-Chlordane	ND	5.0	"							
alpha-Chlordane	ND	5.0	"							
Endosulfan I	ND	5.0	"							
4,4'-DDE	ND	5.0	"							
Dieldrin	ND	5.0	"							
Endrin	ND	5.0	"							
4,4'-DDD	ND	5.0	"							
Endosulfan II	ND	5.0	"							
4,4'-DDT	ND	5.0	"							
Endrin aldehyde	ND	5.0	"							
Endosulfan sulfate	ND	5.0	"							
Methoxychlor	ND	10	"							
Endrin ketone	ND	5.0	"							
Toxaphene	ND	200	"							
Chlordane (tech)	ND	50	"							

Surrogate: Tetrachloro-meta-xylene

5.63 " 9.97 56.5 35-140

Surrogate: Decachlorobiphenyl

5.36 " 9.97 53.8 35-140

LCS (5112345-BS1)

Prepared: 11/25/15 Analyzed: 11/30/15

gamma-BHC (Lindane)	24.1	5.0	ug/kg	40.0	60.3	40-120
Heptachlor	23.8	5.0	"	40.0	59.4	40-120
Aldrin	23.7	5.0	"	40.0	59.3	40-120
Dieldrin	24.6	5.0	"	40.0	61.6	40-120
Endrin	27.1	5.0	"	40.0	67.9	40-120
4,4'-DDT	23.4	5.0	"	40.0	58.4	33-147

Surrogate: Tetrachloro-meta-xylene

5.63 " 10.0 56.3 35-140

Surrogate: Decachlorobiphenyl

5.34 " 10.0 53.4 35-140

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager



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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Organochlorine Pesticides by EPA Method 8081A - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112345 - EPA 3550 ECD/GCMS

Matrix Spike (5112345-MS1)		Source: T152950-03			Prepared: 11/25/15		Analyzed: 11/30/15	
gamma-BHC (Lindane)	25.0	5.0	ug/kg	40.0	ND	62.4	30-120	
Heptachlor	23.8	5.0	"	40.0	ND	59.6	30-120	
Aldrin	23.2	5.0	"	40.0	ND	57.9	30-120	
Dieldrin	24.7	5.0	"	40.0	ND	61.7	30-120	
Endrin	26.3	5.0	"	40.0	ND	65.7	30-120	
4,4'-DDT	28.7	5.0	"	40.0	ND	71.8	30-120	
<i>Surrogate: Tetrachloro-meta-xylene</i>	5.08		"	10.0		50.8	35-140	
<i>Surrogate: Decachlorobiphenyl</i>	4.80		"	10.0		48.0	35-140	

Matrix Spike Dup (5112345-MSD1)		Source: T152950-03			Prepared: 11/25/15		Analyzed: 11/30/15	
gamma-BHC (Lindane)	23.4	5.0	ug/kg	39.9	ND	58.5	30-120	6.48 30
Heptachlor	22.8	5.0	"	39.9	ND	57.1	30-120	4.20 30
Aldrin	22.4	5.0	"	39.9	ND	56.0	30-120	3.34 30
Dieldrin	23.7	5.0	"	39.9	ND	59.4	30-120	3.75 30
Endrin	25.6	5.0	"	39.9	ND	64.1	30-120	2.59 30
4,4'-DDT	27.9	5.0	"	39.9	ND	69.8	30-120	2.92 30
<i>Surrogate: Tetrachloro-meta-xylene</i>	4.97		"	9.98		49.8	35-140	
<i>Surrogate: Decachlorobiphenyl</i>	4.68		"	9.98		46.9	35-140	

Batch 5112409 - EPA 3510C GCMS/ECD

Blank (5112409-BLK1)		Prepared: 11/24/15			Analyzed: 12/01/15	
alpha-BHC	ND	1.00	ug/l			
gamma-BHC (Lindane)	ND	1.00	"			
beta-BHC	ND	1.00	"			
delta-BHC	ND	1.00	"			
Heptachlor	ND	1.00	"			
Aldrin	ND	1.00	"			
Heptachlor epoxide	ND	1.00	"			
gamma-Chlordane	ND	1.00	"			
alpha-Chlordane	ND	1.00	"			
Endosulfan I	ND	1.00	"			
4,4'-DDE	ND	1.00	"			
Dieldrin	ND	1.00	"			
Endrin	ND	1.00	"			
4,4'-DDD	ND	1.00	"			

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Organochlorine Pesticides by EPA Method 8081A - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112409 - EPA 3510C GCMS/ECD

Blank (5112409-BLK1)

Prepared: 11/24/15 Analyzed: 12/01/15

Endosulfan II	ND	1.00	ug/l							
4,4'-DDT	ND	2.00	"							
Endrin aldehyde	ND	1.00	"							
Endosulfan sulfate	ND	1.00	"							
Methoxychlor	ND	5.00	"							
Endrin ketone	ND	1.00	"							
Toxaphene	ND	20.0	"							
Surrogate: Tetrachloro-meta-xylene	ND		"	1.00		57.1	35-140			
Surrogate: Decachlorobiphenyl	0.609		"	1.00		60.9	35-140			

LCS (5112409-BS1)

Prepared: 11/24/15 Analyzed: 12/01/15

gamma-BHC (Lindane)	2.27	1.00	ug/l	4.00		56.9	40-120			
Heptachlor	2.27	1.00	"	4.00		56.8	40-120			
Aldrin	2.11	1.00	"	4.00		52.8	40-120			
Dieldrin	2.38	1.00	"	4.00		59.6	40-120			
Endrin	2.63	1.00	"	4.00		65.8	40-120			
4,4'-DDT	2.89	2.00	"	4.00		72.3	40-120			
Surrogate: Tetrachloro-meta-xylene	0.499		"	1.00		49.9	35-140			
Surrogate: Decachlorobiphenyl	0.682		"	1.00		68.2	35-140			

LCS Dup (5112409-BSD1)

Prepared: 11/24/15 Analyzed: 12/01/15

gamma-BHC (Lindane)	2.40	1.00	ug/l	4.00	60.0	40-120	5.30	20		
Heptachlor	2.19	1.00	"	4.00	54.6	40-120	3.78	20		
Aldrin	2.11	1.00	"	4.00	52.7	40-120	0.151	20		
Dieldrin	2.41	1.00	"	4.00	60.3	40-120	1.11	20		
Endrin	2.63	1.00	"	4.00	65.8	40-120	0.0756	20		
4,4'-DDT	2.91	2.00	"	4.00	72.7	40-120	0.520	20		
Surrogate: Tetrachloro-meta-xylene	0.466		"	1.00	46.6	35-140				
Surrogate: Decachlorobiphenyl	0.529		"	1.00	52.9	35-140				

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112342 - EPA 3510C GCMS/ECD

Blank (5112342-BLK1)

Prepared: 11/23/15 Analyzed: 12/02/15

PCB-1016	ND	2.00	ug/l							
PCB-1221	ND	2.00	"							
PCB-1232	ND	2.00	"							
PCB-1242	ND	2.00	"							
PCB-1248	ND	2.00	"							
PCB-1254	ND	2.00	"							
PCB-1260	ND	2.00	"							
Surrogate: Tetrachloro-meta-xylene	0.754		"	1.00		75.4	35-140			
Surrogate: Decachlorobiphenyl	0.905		"	1.00		90.5	35-140			

LCS (5112342-BS1)

Prepared: 11/23/15 Analyzed: 12/02/15

PCB-1016	9.32	2.00	ug/l	10.0		93.2	40-130			
PCB-1260	8.96	2.00	"	10.0		89.6	40-130			
Surrogate: Tetrachloro-meta-xylene	0.846		"	1.00		84.6	35-140			
Surrogate: Decachlorobiphenyl	1.13		"	1.00		113	35-140			

LCS Dup (5112342-BSD1)

Prepared: 11/23/15 Analyzed: 12/02/15

PCB-1016	8.47	2.00	ug/l	10.0		84.7	40-130	9.52	30	
PCB-1260	7.81	2.00	"	10.0		78.1	40-130	13.7	30	
Surrogate: Tetrachloro-meta-xylene	0.650		"	1.00		65.0	35-140			
Surrogate: Decachlorobiphenyl	1.08		"	1.00		108	35-140			

Batch 5112343 - EPA 3550 ECD/GCMS

Blank (5112343-BLK1)

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	7.48		"	10.0		74.8	35-140			
Surrogate: Decachlorobiphenyl	7.94		"	10.0		79.4	35-140			

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager



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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112343 - EPA 3550 ECD/GCMS

LCS (5112343-BS1)

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	93.8	10	ug/kg	99.9		93.9	40-130			
PCB-1260	103	10	"	99.9		104	40-130			
Surrogate: Tetrachloro-meta-xylene	7.80		"	9.99		78.1	35-140			
Surrogate: Decachlorobiphenyl	8.32		"	9.99		83.3	35-140			

Matrix Spike (5112343-MS1)

Source: T152951-01

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	102	10	ug/kg	99.7	ND	103	40-130			
PCB-1260	117	10	"	99.7	ND	117	40-130			
Surrogate: Tetrachloro-meta-xylene	8.31		"	9.97		83.3	35-140			
Surrogate: Decachlorobiphenyl	8.76		"	9.97		87.9	35-140			

Matrix Spike Dup (5112343-MSD1)

Source: T152951-01

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	116	10	ug/kg	100	ND	116	40-130	12.8	30	
PCB-1260	130	10	"	100	ND	130	40-130	10.6	30	
Surrogate: Tetrachloro-meta-xylene	8.42		"	10.0		84.2	35-140			
Surrogate: Decachlorobiphenyl	9.97		"	10.0		99.7	35-140			

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112038 - EPA 5030 GCMS

Blank (5112038-BLK1)

Prepared: 11/20/15 Analyzed: 11/29/15

Bromobenzene	ND	1.0	ug/l							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
n-Butylbenzene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Carbon tetrachloride	ND	0.50	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							
Chloromethane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
Dibromomethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
Dichlorodifluoromethane	ND	0.50	"							
1,1-Dichloroethane	ND	1.0	"							
1,2-Dichloroethane	ND	0.50	"							
1,1-Dichloroethene	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							
cis-1,3-Dichloropropene	ND	0.50	"							
trans-1,3-Dichloropropene	ND	0.50	"							
Hexachlorobutadiene	ND	1.0	"							
Isopropylbenzene	ND	1.0	"							

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112038 - EPA 5030 GCMS

Blank (5112038-BLK1)

Prepared: 11/20/15 Analyzed: 11/29/15

p-Isopropyltoluene	ND	1.0	ug/l							
Methylene chloride	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,1,2-Tetrachloroethane	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
Vinyl chloride	ND	1.0	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.50	"							
Surrogate: 4-Bromofluorobenzene	8.90		"	8.00		111	83.5-119			
Surrogate: Dibromofluoromethane	7.65		"	8.00		95.6	81-136			
Surrogate: Toluene-d8	7.72		"	8.00		96.5	88.8-117			

LCS (5112038-BS1)

Prepared: 11/20/15 Analyzed: 11/29/15

Chlorobenzene	23.9	1.0	ug/l	20.0		119	75-125			
1,1-Dichloroethene	24.3	1.0	"	20.0		122	75-125			
Trichloroethene	24.6	1.0	"	20.0		123	75-125			
Benzene	20.9	0.50	"	20.0		105	75-125			
Toluene	22.0	0.50	"	20.0		110	75-125			
Surrogate: 4-Bromofluorobenzene	8.26		"	8.00		103	83.5-119			
Surrogate: Dibromofluoromethane	7.44		"	8.00		93.0	81-136			
Surrogate: Toluene-d8	7.66		"	8.00		95.8	88.8-117			

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112038 - EPA 5030 GCMS

LCS Dup (5112038-BSD1)

Prepared: 11/20/15 Analyzed: 11/29/15

Chlorobenzene	24.5	1.0	ug/l	20.0		122	75-125	2.44	20	
1,1-Dichloroethene	24.1	1.0	"	20.0		121	75-125	0.661	20	
Trichloroethene	23.4	1.0	"	20.0		117	75-125	5.08	20	
Benzene	21.2	0.50	"	20.0		106	75-125	1.52	20	
Toluene	21.6	0.50	"	20.0		108	75-125	1.65	20	
<i>Surrogate: 4-Bromofluorobenzene</i>	8.52		"	8.00		106	83.5-119			
<i>Surrogate: Dibromofluoromethane</i>	7.47		"	8.00		93.4	81-136			
<i>Surrogate: Toluene-d8</i>	7.78		"	8.00		97.2	88.8-117			

Batch 5112333 - EPA 5030 GCMS

Blank (5112333-BLK1)

Prepared: 11/23/15 Analyzed: 12/03/15

Bromobenzene	ND	5.0	ug/kg							
Bromochloromethane	ND	5.0	"							
Bromodichloromethane	ND	5.0	"							
Bromoform	ND	5.0	"							
Bromomethane	ND	5.0	"							
n-Butylbenzene	ND	5.0	"							
sec-Butylbenzene	ND	5.0	"							
tert-Butylbenzene	ND	5.0	"							
Carbon tetrachloride	ND	5.0	"							
Chlorobenzene	ND	5.0	"							
Chloroethane	ND	5.0	"							
Chloroform	ND	5.0	"							
Chloromethane	ND	5.0	"							
2-Chlorotoluene	ND	5.0	"							
4-Chlorotoluene	ND	5.0	"							
Dibromochloromethane	ND	5.0	"							
1,2-Dibromo-3-chloropropane	ND	10	"							
1,2-Dibromoethane (EDB)	ND	5.0	"							
Dibromomethane	ND	5.0	"							
1,2-Dichlorobenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	5.0	"							
1,4-Dichlorobenzene	ND	5.0	"							
Dichlorodifluoromethane	ND	5.0	"							
1,1-Dichloroethane	ND	5.0	"							

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112333 - EPA 5030 GCMS

Blank (5112333-BLK1)

Prepared: 11/23/15 Analyzed: 12/03/15

1,2-Dichloroethane	ND	5.0	ug/kg							
1,1-Dichloroethene	ND	5.0	"							
cis-1,2-Dichloroethene	ND	5.0	"							
trans-1,2-Dichloroethene	ND	5.0	"							
1,2-Dichloropropane	ND	5.0	"							
1,3-Dichloropropane	ND	5.0	"							
2,2-Dichloropropane	ND	5.0	"							
1,1-Dichloropropene	ND	5.0	"							
cis-1,3-Dichloropropene	ND	5.0	"							
trans-1,3-Dichloropropene	ND	5.0	"							
Hexachlorobutadiene	ND	5.0	"							
Isopropylbenzene	ND	5.0	"							
p-Isopropyltoluene	ND	5.0	"							
Methylene chloride	ND	5.0	"							
Naphthalene	ND	5.0	"							
n-Propylbenzene	ND	5.0	"							
Styrene	ND	5.0	"							
1,1,2,2-Tetrachloroethane	ND	5.0	"							
1,1,1,2-Tetrachloroethane	ND	5.0	"							
Tetrachloroethene	ND	5.0	"							
1,2,3-Trichlorobenzene	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
1,1,2-Trichloroethane	ND	5.0	"							
1,1,1-Trichloroethane	ND	5.0	"							
Trichloroethene	ND	5.0	"							
Trichlorofluoromethane	ND	5.0	"							
1,2,3-Trichloropropane	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
Vinyl chloride	ND	5.0	"							
Benzene	ND	5.0	"							
Toluene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
m,p-Xylene	ND	10	"							
o-Xylene	ND	5.0	"							

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112333 - EPA 5030 GCMS

Blank (5112333-BLK1)

Prepared: 11/23/15 Analyzed: 12/03/15

Surrogate: 4-Bromofluorobenzene	46.3		ug/kg	40.0		116	81.2-123			
Surrogate: Dibromofluoromethane	64.4		"	40.0		161	95.7-135			S-GC
Surrogate: Toluene-d8	38.6		"	40.0		96.4	85.5-116			

LCS (5112333-BS1)

Prepared: 11/23/15 Analyzed: 12/03/15

Chlorobenzene	120	5.0	ug/kg	100		120	75-125			
1,1-Dichloroethene	122	5.0	"	100		122	75-125			
Trichloroethene	121	5.0	"	100		121	75-125			
Benzene	119	5.0	"	100		119	75-125			
Toluene	119	5.0	"	100		119	75-125			
Surrogate: 4-Bromofluorobenzene	43.7		"	40.0		109	81.2-123			
Surrogate: Dibromofluoromethane	74.1		"	40.0		185	95.7-135			S-GC
Surrogate: Toluene-d8	35.9		"	40.0		89.8	85.5-116			

LCS Dup (5112333-BS1)

Prepared: 11/23/15 Analyzed: 12/03/15

Chlorobenzene	124	5.0	ug/kg	100		124	75-125	3.24	20	
1,1-Dichloroethene	124	5.0	"	100		124	75-125	1.46	20	
Trichloroethene	120	5.0	"	100		120	75-125	0.871	20	
Benzene	124	5.0	"	100		124	75-125	4.15	20	
Toluene	117	5.0	"	100		117	75-125	1.10	20	
Surrogate: 4-Bromofluorobenzene	46.2		"	40.0		116	81.2-123			
Surrogate: Dibromofluoromethane	68.6		"	40.0		172	95.7-135			S-GC
Surrogate: Toluene-d8	36.3		"	40.0		90.8	85.5-116			

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112332 - EPA 3510C GCMS/ECD

Blank (5112332-BLK1)

Prepared & Analyzed: 11/23/15

Carbazole	ND	10	ug/l							
Aniline	ND	10	"							
Phenol	ND	10	"							
Acenaphthylene	ND	10	"							
2-Chlorophenol	ND	10	"							
1,4-Dichlorobenzene	ND	10	"							
Anthracene	ND	10	"							
N-Nitrosodi-n-propylamine	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
4-Chloro-3-methylphenol	ND	10	"							
2-Methylnaphthalene	ND	20	"							
1-Methylnaphthalene	ND	10	"							
Benzo (a) anthracene	ND	10	"							
Acenaphthene	ND	10	"							
Benzo (b) fluoranthene	ND	10	"							
4-Nitrophenol	ND	10	"							
Benzo (k) fluoranthene	ND	10	"							
2,4-Dinitrotoluene	ND	10	"							
Benzo (g,h,i) perylene	ND	20	"							
Pentachlorophenol	ND	10	"							
Pyrene	ND	10	"							
Benzo (a) pyrene	ND	10	"							
Benzyl alcohol	ND	50	"							
Bis(2-chloroethoxy)methane	ND	10	"							
Bis(2-chloroethyl)ether	ND	5.0	"							
Bis(2-chloroisopropyl)ether	ND	20	"							
Bis(2-ethylhexyl)phthalate	ND	10	"							
4-Bromophenyl phenyl ether	ND	5.0	"							
Butyl benzyl phthalate	ND	10	"							
4-Chloroaniline	ND	20	"							
2-Chloronaphthalene	ND	10	"							
4-Chlorophenyl phenyl ether	ND	20	"							
Chrysene	ND	10	"							
Dibenz (a,h) anthracene	ND	10	"							
Dibenzofuran	ND	20	"							
Di-n-butyl phthalate	ND	5.0	"							

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112332 - EPA 3510C GCMS/ECD

Blank (5112332-BLK1)

Prepared & Analyzed: 11/23/15

1,2-Dichlorobenzene	ND	5.0	ug/l							
1,3-Dichlorobenzene	ND	5.0	"							
2,4-Dichlorophenol	ND	10	"							
Diethyl phthalate	ND	10	"							
2,4-Dimethylphenol	ND	5.0	"							
Dimethyl phthalate	ND	10	"							
4,6-Dinitro-2-methylphenol	ND	5.0	"							
2,4-Dinitrophenol	ND	10	"							
2,6-Dinitrotoluene	ND	20	"							
Di-n-octyl phthalate	ND	10	"							
Fluoranthene	ND	5.0	"							
Fluorene	ND	10	"							
Hexachlorobenzene	ND	20	"							
Hexachlorobutadiene	ND	10	"							
Hexachlorocyclopentadiene	ND	20	"							
Hexachloroethane	ND	5.0	"							
Indeno (1,2,3-cd) pyrene	ND	10	"							
Isophorone	ND	10	"							
2-Methylphenol	ND	10	"							
4-Methylphenol	ND	20	"							
Naphthalene	ND	5.0	"							
2-Nitroaniline	ND	10	"							
3-Nitroaniline	ND	10	"							
4-Nitroaniline	ND	20	"							
Nitrobenzene	ND	20	"							
2-Nitrophenol	ND	10	"							
N-Nitrosodiphenylamine	ND	10	"							
N-Nitrosodimethylamine	ND	25	"							
Phenanthrene	ND	10	"							
2,4,5-Trichlorophenol	ND	20	"							
2,4,6-Trichlorophenol	ND	10	"							
2,3,4,6-Tetrachlorophenol	ND	10	"							
2,3,5,6-Tetrachlorophenol	ND	10	"							
1,4-Dinitrobenzene	ND	10	"							
Pyridine	ND	10	"							

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112332 - EPA 3510C GCMS/ECD

Blank (5112332-BLK1)

Prepared & Analyzed: 11/23/15

Surrogate: 2-Fluorophenol	66.2		ug/l	200		33.1	15-121			
Surrogate: Phenol-d6	46.7		"	200		23.4	24-113			S-GC
Surrogate: Nitrobenzene-d5	103		"	200		51.5	14.7-110			
Surrogate: 2-Fluorobiphenyl	102		"	200		50.9	33.3-110			
Surrogate: 2,4,6-Tribromophenol	146		"	200		73.0	12.9-110			
Surrogate: Terphenyl-dl4	143		"	200		71.3	15.8-136			

LCS (5112332-BS1)

Prepared: 11/23/15 Analyzed: 11/24/15

Phenol	44.6	10	ug/l	200		22.3	12-89			
2-Chlorophenol	111	10	"	200		55.4	40-120			
1,4-Dichlorobenzene	74.5	10	"	200		37.3	33-94			
N-Nitrosodi-n-propylamine	115	5.0	"	200		57.7	40-120			
1,2,4-Trichlorobenzene	89.3	5.0	"	200		44.7	40-120			
4-Chloro-3-methylphenol	124	10	"	200		61.8	50-130			
Acenaphthene	124	10	"	200		61.8	50-130			
4-Nitrophenol	45.7	10	"	200		22.8	10-80			
2,4-Dinitrotoluene	77.4	10	"	200		38.7	24-96			
Pentachlorophenol	140	10	"	200		70.2	50-130			
Pyrene	124	10	"	200		61.9	26-127			
Surrogate: 2-Fluorophenol	54.7		"	200		27.3	15-121			
Surrogate: Phenol-d6	39.7		"	200		19.8	24-113			S-GC
Surrogate: Nitrobenzene-d5	99.5		"	200		49.8	14.7-110			
Surrogate: 2-Fluorobiphenyl	105		"	200		52.5	33.3-110			
Surrogate: 2,4,6-Tribromophenol	155		"	200		77.6	12.9-110			
Surrogate: Terphenyl-dl4	136		"	200		68.0	15.8-136			

LCS Dup (5112332-BS1)

Prepared: 11/23/15 Analyzed: 11/24/15

Phenol	49.7	10	ug/l	200		24.8	12-89	10.7	42	
2-Chlorophenol	124	10	"	200		62.2	40-120	11.6	40	
1,4-Dichlorobenzene	90.3	10	"	200		45.1	33-94	19.1	28	
N-Nitrosodi-n-propylamine	128	5.0	"	200		64.1	40-120	10.5	38	
1,2,4-Trichlorobenzene	103	5.0	"	200		51.7	40-120	14.6	28	
4-Chloro-3-methylphenol	140	10	"	200		70.2	50-130	12.8	42	
Acenaphthene	138	10	"	200		68.9	50-130	10.8	31	
4-Nitrophenol	62.3	10	"	200		31.1	10-80	30.7	50	
2,4-Dinitrotoluene	91.8	10	"	200		45.9	24-96	17.0	38	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112332 - EPA 3510C GCMS/ECD

LCS Dup (5112332-BSD1)

Prepared: 11/23/15 Analyzed: 11/24/15

Pentachlorophenol	152	10	ug/l	200		76.2	50-130	8.13	50	
Pyrene	154	10	"	200		77.1	26-127	21.9	31	
Surrogate: 2-Fluorophenol	64.7		"	200		32.4	15-121			
Surrogate: Phenol-d6	45.2		"	200		22.6	24-113			S-GC
Surrogate: Nitrobenzene-d5	113		"	200		56.6	14.7-110			
Surrogate: 2-Fluorobiphenyl	124		"	200		61.8	33.3-110			
Surrogate: 2,4,6-Tribromophenol	166		"	200		83.2	12.9-110			
Surrogate: Terphenyl-dl4	171		"	200		85.7	15.8-136			

Batch 5112334 - EPA 3550 ECD/GCMS

Blank (5112334-BLK1)

Prepared: 11/23/15 Analyzed: 11/25/15

Carbazole	ND	300	ug/kg							
Phenol	ND	1000	"							
Aniline	ND	300	"							
2-Chlorophenol	ND	1000	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	1000	"							
1-Methylnaphthalene	ND	300	"							
2-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	1000	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	1000	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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 1710 Franklin Street, Suite 200
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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112334 - EPA 3550 ECD/GCMS

Blank (5112334-BLK1)

Prepared: 11/23/15 Analyzed: 11/25/15

Bis(2-chloroethyl)ether	ND	300	ug/kg							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							
1,2-Dichlorobenzene	ND	300	"							
1,3-Dichlorobenzene	ND	300	"							
2,4-Dichlorophenol	ND	1000	"							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	1000	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	1000	"							
2,4-Dinitrophenol	ND	1000	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	1000	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112334 - EPA 3550 ECD/GCMS

Blank (5112334-BLK1)

Prepared: 11/23/15 Analyzed: 11/25/15

Nitrobenzene	ND	1000	ug/kg							
2-Nitrophenol	ND	1000	"							
N-Nitrosodimethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
Azobenzene	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
Pyridine	ND	300	"							
2,4,6-Trichlorophenol	ND	1000	"							
Surrogate: 2-Fluorophenol	1530		"	3330		45.9	15-121			
Surrogate: Phenol-d6	1980		"	3330		59.4	24-113			
Surrogate: Nitrobenzene-d5	1740		"	3330		52.3	21.3-119			
Surrogate: 2-Fluorobiphenyl	1830		"	3330		55.0	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2530		"	3330		75.9	18.1-105			
Surrogate: Terphenyl-dl4	2290		"	3330		68.7	29.1-130			

LCS (5112334-BS1)

Prepared: 11/23/15 Analyzed: 11/25/15

Phenol	1950	1000	ug/kg	3330		58.5	34-114			
2-Chlorophenol	1750	1000	"	3330		52.5	34-114			
1,4-Dichlorobenzene	1600	300	"	3330		48.0	34-114			
N-Nitrosodi-n-propylamine	1940	300	"	3330		58.3	30-110			
1,2,4-Trichlorobenzene	1760	300	"	3330		52.7	39-119			
4-Chloro-3-methylphenol	2270	1000	"	3330		68.2	50-130			
Acenaphthene	2060	300	"	3330		61.9	34-114			
4-Nitrophenol	2450	1000	"	3330		73.7	40-120			
2,4-Dinitrotoluene	1560	300	"	3330		46.9	35-115			
Pentachlorophenol	2880	1000	"	3330		86.5	50-130			
Pyrene	2060	300	"	3330		61.8	30-110			
Surrogate: 2-Fluorophenol	1300		"	3330		39.0	15-121			
Surrogate: Phenol-d6	1640		"	3330		49.1	24-113			
Surrogate: Nitrobenzene-d5	1390		"	3330		41.7	21.3-119			
Surrogate: 2-Fluorobiphenyl	1530		"	3330		46.0	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2190		"	3330		65.8	18.1-105			
Surrogate: Terphenyl-dl4	2040		"	3330		61.2	29.1-130			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/09/15 15:21

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112334 - EPA 3550 ECD/GCMS

Matrix Spike (5112334-MS1)

Source: T152950-01

Prepared: 11/23/15 Analyzed: 11/25/15

Phenol	2210	1000	ug/kg	3330	ND	66.3	34-114			
2-Chlorophenol	1930	1000	"	3330	ND	57.8	34-114			
1,4-Dichlorobenzene	941	300	"	3330	ND	28.2	34-114			QM-07
N-Nitrosodi-n-propylamine	1980	300	"	3330	ND	59.3	30-110			
1,2,4-Trichlorobenzene	1580	300	"	3330	ND	47.3	39-119			
4-Chloro-3-methylphenol	2500	1000	"	3330	ND	74.9	50-130			
Acenaphthene	2190	300	"	3330	ND	65.8	34-114			
4-Nitrophenol	2500	1000	"	3330	ND	75.0	40-120			
2,4-Dinitrotoluene	1690	300	"	3330	ND	50.7	35-115			
Pentachlorophenol	3310	1000	"	3330	ND	99.2	50-130			
Pyrene	2400	300	"	3330	105	68.9	30-110			
Surrogate: 2-Fluorophenol	1620		"	3330		48.6	15-121			
Surrogate: Phenol-d6	2080		"	3330		62.3	24-113			
Surrogate: Nitrobenzene-d5	1730		"	3330		51.9	21.3-119			
Surrogate: 2-Fluorobiphenyl	1900		"	3330		57.0	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2660		"	3330		79.9	18.1-105			
Surrogate: Terphenyl-dl4	2570		"	3330		77.0	29.1-130			

Matrix Spike Dup (5112334-MSD1)

Source: T152950-01

Prepared: 11/23/15 Analyzed: 11/25/15

Phenol	1990	1000	ug/kg	3330	ND	59.7	34-114	10.4	42	
2-Chlorophenol	1950	1000	"	3330	ND	58.5	34-114	1.17	40	
1,4-Dichlorobenzene	1060	300	"	3330	ND	31.8	34-114	12.0	28	QM-07
N-Nitrosodi-n-propylamine	1970	300	"	3330	ND	59.2	30-110	0.169	38	
1,2,4-Trichlorobenzene	1700	300	"	3330	ND	50.9	39-119	7.41	28	
4-Chloro-3-methylphenol	2480	1000	"	3330	ND	74.5	50-130	0.562	42	
Acenaphthene	2210	300	"	3330	ND	66.3	34-114	0.788	31	
4-Nitrophenol	2410	1000	"	3330	ND	72.2	40-120	3.71	50	
2,4-Dinitrotoluene	1540	300	"	3330	ND	46.3	35-115	9.08	38	
Pentachlorophenol	3380	1000	"	3330	ND	101	50-130	2.05	50	
Pyrene	2460	300	"	3330	105	70.5	30-110	2.25	31	
Surrogate: 2-Fluorophenol	1530		"	3330		45.9	15-121			
Surrogate: Phenol-d6	1830		"	3330		54.9	24-113			
Surrogate: Nitrobenzene-d5	1730		"	3330		52.0	21.3-119			
Surrogate: 2-Fluorobiphenyl	1910		"	3330		57.2	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2740		"	3330		82.3	18.1-105			
Surrogate: Terphenyl-dl4	2520		"	3330		75.6	29.1-130			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/09/15 15:21
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Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112334 - EPA 3550 ECD/GCMS

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

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

Project: 4901 Broadway
Project Number: [none]
Project Manager: Bob Clark-Riddell

Reported:
12/09/15 15:21

Notes and Definitions

- S-GC Surrogate recovery outside of established control limits. The data was accepted based on valid recovery of the remaining surrogate(s).
- QM-07 The spike recovery and or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS was within acceptance criteria. The data is acceptable as no negative impact on data is expected.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane, Project Manager

Chain of Custody Record
 County _____

Client: Pangea Env. Svs.
 Address: 1710 Franklin St, Oakland
 Phone: 510-836-3700 Fax: _____
 Project Manager: Bob Clark-Riddell

Date: 11.20.15 Page: 1 Of 2
 Project Name: 4901 Broadway
 Collector: E. Lervaag Client Project #: _____
 Batch #: T152951 EDF #: _____

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline) + D + MO.	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals CAM 17	6020/7000 Metals Asbestos	LEAD	8081A - chlor. pest	8082A - PCB	Laboratory ID #	Comments/Preservative	Total # of containers
B2-6'	11.19.15	0955	Soil	Sleeve	XX			X		XX			X	X		X	X	01		1
B6-18'		1045			XX					XX								02		
B9-2'		1425								XX					XX			03		
B9-4'		1420								XX					XX			04		
B10-2'		1435								XX					XX			05		
B10-4'		1430								XX					XX			06		
B11-2'		1255								XX					XX			07		
B11-6'		1250			XX			X		XX		XX				X	X	08		
B12-12'		1300			XX			X		XX		XX					X	09		
B12-12'		1600			XX					XX								10	HOLD	
B17-1'	11.19.15	1435																11		
B17-4'	11.20.15	1030			X			X		X		XX			X	X		12		
B18-1'	11.19.15	1445																13	HOLD	
B18-4'	11.20.15	1000	Soil	Sleeve	X			X		X		XX			X	X		14		

Relinquished by: (signature) <u>[Signature]</u>	Date / Time <u>11.20.15 1230</u>	Received by: (signature) <u>[Signature]</u>	Date / Time <u>11/20/15</u>	2:40 AM Total # of containers Chain of Custody seals Y/N/NA Seals intact? Y/N/NA Received good condition/cold <u>5.0</u> Turn around time: <u>5 Day</u>	Notes STD. TAT <input type="checkbox"/> 5.0
Relinquished by: (signature) <u>[Signature]</u>	Date / Time <u>11-21-15 10:20</u>	Received by: (signature) <u>[Signature]</u>	Date / Time <u>11-21-15 10:20</u>		
Relinquished by: (signature) _____	Date / Time _____	Received by: (signature) _____	Date / Time _____		

Sample disposal Instructions: Disposal @ \$2.00 each _____ Return to client _____ Pickup _____

COC 141045

Chain of Custody Record
 county

Client: Pangea Env. Svcs
 Address: 1710 Franklin St, OAKLAND
 Phone: 510-836-3700 Fax: _____
 Project Manager: Bob Clark-Riddell

Date: 11-20-15 Page: 2 Of 2
 Project Name: 4901 Broadway
 Collector: E. Lervaaq Client Project #: _____
 Batch #: T152951 EDF #: _____

briddell@pangeaenv.com													Laboratory ID #	Comments/Preservative	Total # of containers					
Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015B (gasoline)+D+M+O	8015M (diesel)	8015M,Ext./Carbon Chain				6010/7000 Title 22 Metals	6020 ICP-MS Metals	X 8082 - PCB	X 8081A - chlor. pest	
B12-W	11-20-15	12:15	GW	mult	X			X	X						X	X	15			

Relinquished by: (signature) <i>[Signature]</i>	Date / Time 11-20-15 12:30	Received by: (signature) <i>[Signature]</i>	Date / Time 11/20/15 12:30
Relinquished by: (signature) <i>[Signature]</i>	Date / Time 11-21-15 10:20	Received by: (signature) <i>[Signature]</i>	Date / Time 11-21-15 10:20
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers: 1230
 Chain of Custody seals: Y/N/NA
 Seals intact?: Y/N/NA
 Received good condition/cold: 5.0
 Turn around time: 5 day

Notes

STD. TAT

Sample disposal Instructions: Disposal @ \$2.00 each _____ Return to client _____ Pickup _____

COC 141047

SAMPLE RECEIVING REVIEW SHEET

BATCH # 7152951

Client Name: PANSEA

Project: 4901 BROADWAY

Received by: SUNSHY

Date/Time Received: 11.21.15 / 10:20

Delivered by : Client SunStar Courier GSO FedEx Other _____

Total number of coolers received 1 **Temp criteria = 6°C > 0°C (no frozen containers)**

Temperature: cooler #1 5.2 °C +/- the CF (-0.2°C) = 5.0 °C corrected temperature

cooler #2 _____ °C +/- the CF (-0.2°C) = _____ °C corrected temperature

cooler #3 _____ °C +/- the CF (-0.2°C) = _____ °C corrected temperature

Samples outside temp. but received on ice, w/in 6 hours of final sampling. Yes No* N/A

Custody Seals Intact on Cooler/Sample Yes No* N/A

Sample Containers Intact Yes No*

Sample labels match COC ID's Yes No*

Total number of containers received match COC Yes No*

Proper containers received for analyses requested on COC Yes No*

Proper preservative indicated on COC/containers for analyses requested Yes No* N/A

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times. Yes No*

* Complete Non-Conformance Receiving Sheet if checked

Cooler/Sample Review - Initials and date SL 11.21.15

Comments:

Chain of Custody Record

County

Client: Pangea Env. Svs.
 Address: 1710 Franklm St, Oakland
 Phone: 510-836-3700 Fax: _____
 Project Manager: Bob Clark-Riddell

Date: 11.20.15 Page: 1 Of 2
 Project Name: 4901 Broadway
 Collector: E. Lervaaag Client Project #: _____
 Batch #: T152951 EDF #: _____

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline) + D + MO.	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title-22-Metals CAM 17	6020/21/22-MS-Metals Asbestos	LEAD	8081A - chlor. pest	8082 - PCB	Laboratory ID #	Comments/Preservative	Total # of containers
briddelle@pangeaenv.com																				
B2-6'	11.19.15	0955	Soil	Sleeve	XX			X		XX			X	X	X	X		01		1
B6-18'	/	1045			XX					XX			X	X	X	X		02	ADD LEAD	}
B9-2'		1425								XX			X	X	X	X		03		
B9-4'		1430								XX			X	X	X	X		04		
B10-2'		1435								XX			X	X	X	X		05		
B10-4'		1430								XX			X	X	X	X		06		
B11-2'		1255								XX			X	X	X	X		07		
B11-6'		1250				XXX				XX			X	X	X	X		08	ADD LEAD. HOLD MARKED	
B11-12'		1300				XXX				XX			X	X	X	X		09	ADD LEAD.	
B12-12'		1600				XXX				XX			X	X	X	X		10	ADD LEAD.	
B17-1'		11.19.15	1435										X	X	X	X		11	HOLD	
B17-4'	11.20.15	1030			X			X		X		X	X	X	X		12			
B18-1'	11.19.15	1445										X	X	X	X		13	HOLD		
B18-4'	11.20.15	1000	Soil	Sleeve	X					X		X	X	X	X		14	ADD LEAD, HOLD MARKED		
Relinquished by: (signature) <u>[Signature]</u> Date / Time <u>11.20.15 12:30</u>					Received by: (signature) <u>[Signature]</u> Date / Time <u>11/20/15</u>					2:40 AM Total # of containers					Notes					
Relinquished by: (signature) _____ Date / Time _____					Received by: (signature) _____ Date / Time _____					Chain of Custody seals Y/N/NA					STD. TAT <input type="checkbox"/>					
Relinquished by: (signature) <u>GSO 11-21-15 10:20</u> Date / Time <u>11-21-15 10:20</u>					Received by: (signature) _____ Date / Time _____					Seals intact? Y/N/NA					Received good condition/cold <u>5.0</u>					
Relinquished by: (signature) _____ Date / Time _____					Received by: (signature) _____ Date / Time _____					Turn around time: <u>5 Day</u>										

Sample disposal Instructions: Disposal @ \$2.00 each _____ Return to client _____ Pickup _____

COC 141045

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE
 25712 Commercentre Drive, Lake Forest, CA 92630
 949-297-5020

Chain of Custody Record
 county

Client: Pangea Env. Svs
 Address: 1710 Franklin St, OAKLAND
 Phone: 510-836-3700 Fax: _____
 Project Manager: Bob Clark-Riddell

Date: 11-20-15 Page: 2 Of 2
 Project Name: 4901 Broadway
 Collector: E. Lervaag Client Project #: _____
 Batch #: T152951 EDF #: _____

briddell@pangeaenv.com

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015B (gasoline)+DTMO	8015M (diesel)	8015M, Ext./Carbon Chain	6010/7000 Title 22 Metals	6020 ICP-MS Metals	X 8082 - PCB	X 8081A - chlor. pest	Laboratory ID #	Comments/Preservative	Total # of containers
B12-W	11-20-15	12:15	GW	mult	X			X		X					X	X	15		

Relinquished by: (signature) <u>[Signature]</u>	Date / Time 11-20-15 12:30	Received by: (signature) <u>[Signature]</u>	Date / Time 11/20/15
Relinquished by: (signature) <u>[Signature]</u>	Date / Time 11-21-15 10:20	Received by: (signature) <u>[Signature]</u>	Date / Time 11-21-15 10:20
Relinquished by: (signature) <u>[Signature]</u>	Date / Time 	Received by: (signature) <u>[Signature]</u>	Date / Time

Total # of containers <u>230</u>	Notes STD. TAT <input type="checkbox"/>
Chain of Custody seals <u>Y/N/NA</u>	
Seals intact? <u>Y/N/NA</u>	
Received good condition/cold <u>5.0</u>	Turn around time: <u>5 day</u>

Sample disposal Instructions: Disposal @ \$2.00 each _____ Return to client _____ Pickup _____

COC 141047

**EMSL Analytical, Inc**

464 McCormick Street, San Leandro, CA 94577

Phone/Fax: (510) 895-3675 / (510) 895-3680

<http://www.EMSL.com>sanleandrolab@emsl.com

EMSL Order:	091519859
CustomerID:	32SUNS45
CustomerPO:	T152951
ProjectID:	

Attn: **Katherine RunningCrane**
Sunstar Laboratories, Inc.
25712 Commercentre Drive
Lake Forest, CA 92630

Phone: (949) 297-5020
 Fax: (949) 297-5027
 Received: 11/24/15 9:00 AM
 Analysis Date: 12/1/2015
 Collected:

Project: T152951

Test Report: PLM Analysis of Bulk Samples for Asbestos via EPA 600/R-93/116 Method with CARB 435 Prep (Milling) Level A for 0.25% Target Analytical Sensitivity

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
T152951-01 <i>091519859-0001</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152951-08 <i>091519859-0002</i>	SAMPLE ON HOLD				Not Analyzed
T152951-12 <i>091519859-0003</i>		Brown Non-Fibrous Homogeneous		100.00% Non-fibrous (other)	None Detected
T152951-14 <i>091519859-0004</i>	SAMPLE ON HOLD				Not Analyzed

Analyst(s)

Adam C. Fink (2)

Chris Dojlidko, Laboratory Manager
or other approved signatory

This report relates only to the samples listed above and may not be reproduced except in full, without EMSL's written approval. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. EMSL is not responsible for sample collection activities or method limitations. Some samples may contain asbestos fibers below the resolution limit of PLM. EMSL recommends that samples reported as none detected or less than the limit of detection undergo additional analysis via TEM. Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc San Leandro, CA

Initial report from 12/01/2015 20:41:45



25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

03 December 2015

Bob Clark-Riddell
Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612
RE: 4901 Broadway

Enclosed are the results of analyses for samples received by the laboratory on 11/21/15 10:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Katherine RunningCrane
Project Manager



25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

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

Project: 4901 Broadway
Project Number: [none]
Project Manager: Bob Clark-Riddell

Reported:
12/03/15 22:12

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B15-6'	T152954-01	Soil	11/19/15 11:05	11/21/15 10:20

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

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

Project: 4901 Broadway
Project Number: [none]
Project Manager: Bob Clark-Riddell

Reported:
12/03/15 22:12

DETECTIONS SUMMARY

Sample ID: B15-6'

Laboratory ID: T152954-01

No Results Detected

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

B15-6'
T152954-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Extractable Petroleum Hydrocarbons by 8015C

C6-C12 (GRO)	ND	10	mg/kg	1	5112410	11/24/15	11/26/15	EPA 8015C	
C13-C28 (DRO)	ND	10	"	"	"	"	"	"	
C29-C40 (MORO)	ND	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		94.8 %	65-135		"	"	"	"	

Polychlorinated Biphenyls by EPA Method 8082

PCB-1016	ND	10	ug/kg	1	5112343	11/23/15	12/01/15	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	
Surrogate: Tetrachloro- <i>meta</i> -xylene		94.4 %	35-140		"	"	"	"	
Surrogate: Decachlorobiphenyl		99.8 %	35-140		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Bromobenzene	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Bromochloromethane	ND	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	
Bromoform	ND	5.0	"	"	"	"	"	"	
Bromomethane	ND	5.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	
Chlorobenzene	ND	5.0	"	"	"	"	"	"	
Chloroethane	ND	5.0	"	"	"	"	"	"	
Chloroform	ND	5.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/03/15 22:12
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B15-6'
T152954-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Dibromochloromethane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	10	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	
Dibromomethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	5.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	
Methylene chloride	ND	5.0	"	"	"	"	"	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
n-Propylbenzene	ND	5.0	"	"	"	"	"	"	
Styrene	ND	5.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

B15-6'
T152954-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

1,1,1-Trichloroethane	ND	5.0	ug/kg	1	5112333	11/23/15	12/03/15	EPA 8260B	
Trichloroethene	ND	5.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	81.2-123		"	"	"	"	
Surrogate: Dibromofluoromethane		183 %	95.7-135		"	"	"	"	S-GC
Surrogate: Toluene-d8		88.1 %	85.5-116		"	"	"	"	

Semivolatile Organic Compounds by EPA Method 8270C

Carbazole	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
Phenol	ND	1000	"	"	"	"	"	"	
Aniline	ND	300	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	300	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	300	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	300	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	300	"	"	"	"	"	"	
1-Methylnaphthalene	ND	300	"	"	"	"	"	"	
Acenaphthene	ND	300	"	"	"	"	"	"	
4-Nitrophenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	300	"	"	"	"	"	"	
Pentachlorophenol	ND	1000	"	"	"	"	"	"	
Pyrene	ND	300	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Pangea Environmental Services, Inc. 1710 Franklin Street, Suite 200 Oakland CA, 94612	Project: 4901 Broadway Project Number: [none] Project Manager: Bob Clark-Riddell	Reported: 12/03/15 22:12
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B15-6'
T152954-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Acenaphthylene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
Anthracene	ND	300	"	"	"	"	"	"	
Benzo (a) anthracene	ND	300	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	300	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	1000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	300	"	"	"	"	"	"	
Benzyl alcohol	ND	300	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	300	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	300	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	300	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	300	"	"	"	"	"	"	
2-Chloronaphthalene	ND	300	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	300	"	"	"	"	"	"	
Chrysene	ND	300	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	300	"	"	"	"	"	"	
Dibenzofuran	ND	300	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	300	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	300	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	300	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	300	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	1000	"	"	"	"	"	"	
Dimethyl phthalate	ND	300	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	1000	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	300	"	"	"	"	"	"	
Fluoranthene	ND	300	"	"	"	"	"	"	

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Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

B15-6'
T152954-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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SunStar Laboratories, Inc.

Semivolatile Organic Compounds by EPA Method 8270C

Fluorene	ND	300	ug/kg	1	5112334	11/23/15	11/25/15	EPA 8270C	
Hexachlorobenzene	ND	1500	"	"	"	"	"	"	
Hexachlorobutadiene	ND	300	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	1000	"	"	"	"	"	"	
Hexachloroethane	ND	300	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	300	"	"	"	"	"	"	
Isophorone	ND	300	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol	ND	1000	"	"	"	"	"	"	
Naphthalene	ND	300	"	"	"	"	"	"	
2-Nitroaniline	ND	300	"	"	"	"	"	"	
3-Nitroaniline	ND	300	"	"	"	"	"	"	
4-Nitroaniline	ND	300	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	300	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	300	"	"	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	300	"	"	"	"	"	"	
Phenanthrene	ND	300	"	"	"	"	"	"	
Azobenzene	ND	300	"	"	"	"	"	"	
Pyridine	ND	300	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1000	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1000	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		49.2 %	15-121		"	"	"	"	
Surrogate: Phenol-d6		63.1 %	24-113		"	"	"	"	
Surrogate: Nitrobenzene-d5		52.0 %	21.3-119		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		58.4 %	32.4-102		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		81.5 %	18.1-105		"	"	"	"	
Surrogate: Terphenyl-d14		76.0 %	29.1-130		"	"	"	"	

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Katherine RunningCrane, Project Manager



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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

Extractable Petroleum Hydrocarbons by 8015C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112410 - EPA 3550B GC

Blank (5112410-BLK1)

Prepared: 11/24/15 Analyzed: 11/26/15

C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: p-Terphenyl	109		"	99.7		109	65-135			

LCS (5112410-BS1)

Prepared: 11/24/15 Analyzed: 11/26/15

C13-C28 (DRO)	570	10	mg/kg	500		113	75-125			
Surrogate: p-Terphenyl	114		"	100		114	65-135			

Matrix Spike (5112410-MS1)

Source: T152951-10

Prepared: 11/24/15 Analyzed: 11/26/15

C13-C28 (DRO)	520	10	mg/kg	498	ND	105	75-125			
Surrogate: p-Terphenyl	109		"	99.5		110	65-135			

Matrix Spike Dup (5112410-MSD1)

Source: T152951-10

Prepared: 11/24/15 Analyzed: 11/26/15

C13-C28 (DRO)	530	10	mg/kg	500	ND	106	75-125	1.16	20	
Surrogate: p-Terphenyl	90.7		"	100		90.7	65-135			

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112343 - EPA 3550 ECD/GCMS

Blank (5112343-BLK1)

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	7.48		"	10.0		74.8	35-140			
Surrogate: Decachlorobiphenyl	7.94		"	10.0		79.4	35-140			

LCS (5112343-BS1)

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	93.8	10	ug/kg	99.9		93.9	40-130			
PCB-1260	103	10	"	99.9		104	40-130			
Surrogate: Tetrachloro-meta-xylene	7.80		"	9.99		78.1	35-140			
Surrogate: Decachlorobiphenyl	8.32		"	9.99		83.3	35-140			

Matrix Spike (5112343-MS1)

Source: T152951-01

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	102	10	ug/kg	99.7	ND	103	40-130			
PCB-1260	117	10	"	99.7	ND	117	40-130			
Surrogate: Tetrachloro-meta-xylene	8.31		"	9.97		83.3	35-140			
Surrogate: Decachlorobiphenyl	8.76		"	9.97		87.9	35-140			

Matrix Spike Dup (5112343-MSD1)

Source: T152951-01

Prepared: 11/23/15 Analyzed: 12/01/15

PCB-1016	116	10	ug/kg	100	ND	116	40-130	12.8	30	
PCB-1260	130	10	"	100	ND	130	40-130	10.6	30	
Surrogate: Tetrachloro-meta-xylene	8.42		"	10.0		84.2	35-140			
Surrogate: Decachlorobiphenyl	9.97		"	10.0		99.7	35-140			

SunStar Laboratories, Inc.

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112333 - EPA 5030 GCMS

Blank (5112333-BLK1)

Prepared: 11/23/15 Analyzed: 12/03/15

Bromobenzene	ND	5.0	ug/kg							
Bromochloromethane	ND	5.0	"							
Bromodichloromethane	ND	5.0	"							
Bromoform	ND	5.0	"							
Bromomethane	ND	5.0	"							
n-Butylbenzene	ND	5.0	"							
sec-Butylbenzene	ND	5.0	"							
tert-Butylbenzene	ND	5.0	"							
Carbon tetrachloride	ND	5.0	"							
Chlorobenzene	ND	5.0	"							
Chloroethane	ND	5.0	"							
Chloroform	ND	5.0	"							
Chloromethane	ND	5.0	"							
2-Chlorotoluene	ND	5.0	"							
4-Chlorotoluene	ND	5.0	"							
Dibromochloromethane	ND	5.0	"							
1,2-Dibromo-3-chloropropane	ND	10	"							
1,2-Dibromoethane (EDB)	ND	5.0	"							
Dibromomethane	ND	5.0	"							
1,2-Dichlorobenzene	ND	5.0	"							
1,3-Dichlorobenzene	ND	5.0	"							
1,4-Dichlorobenzene	ND	5.0	"							
Dichlorodifluoromethane	ND	5.0	"							
1,1-Dichloroethane	ND	5.0	"							
1,2-Dichloroethane	ND	5.0	"							
1,1-Dichloroethene	ND	5.0	"							
cis-1,2-Dichloroethene	ND	5.0	"							
trans-1,2-Dichloroethene	ND	5.0	"							
1,2-Dichloropropane	ND	5.0	"							
1,3-Dichloropropane	ND	5.0	"							
2,2-Dichloropropane	ND	5.0	"							
1,1-Dichloropropene	ND	5.0	"							
cis-1,3-Dichloropropene	ND	5.0	"							
trans-1,3-Dichloropropene	ND	5.0	"							
Hexachlorobutadiene	ND	5.0	"							
Isopropylbenzene	ND	5.0	"							

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Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112333 - EPA 5030 GCMS

Blank (5112333-BLK1)

Prepared: 11/23/15 Analyzed: 12/03/15

p-Isopropyltoluene	ND	5.0	ug/kg							
Methylene chloride	ND	5.0	"							
Naphthalene	ND	5.0	"							
n-Propylbenzene	ND	5.0	"							
Styrene	ND	5.0	"							
1,1,2,2-Tetrachloroethane	ND	5.0	"							
1,1,1,2-Tetrachloroethane	ND	5.0	"							
Tetrachloroethene	ND	5.0	"							
1,2,3-Trichlorobenzene	ND	5.0	"							
1,2,4-Trichlorobenzene	ND	5.0	"							
1,1,2-Trichloroethane	ND	5.0	"							
1,1,1-Trichloroethane	ND	5.0	"							
Trichloroethene	ND	5.0	"							
Trichlorofluoromethane	ND	5.0	"							
1,2,3-Trichloropropane	ND	5.0	"							
1,3,5-Trimethylbenzene	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
Vinyl chloride	ND	5.0	"							
Benzene	ND	5.0	"							
Toluene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
m,p-Xylene	ND	10	"							
o-Xylene	ND	5.0	"							
Surrogate: 4-Bromofluorobenzene	46.3		"	40.0		116	81.2-123			
Surrogate: Dibromofluoromethane	64.4		"	40.0		161	95.7-135			S-GC
Surrogate: Toluene-d8	38.6		"	40.0		96.4	85.5-116			

LCS (5112333-BS1)

Prepared: 11/23/15 Analyzed: 12/03/15

Chlorobenzene	120	5.0	ug/kg	100		120	75-125			
1,1-Dichloroethene	122	5.0	"	100		122	75-125			
Trichloroethene	121	5.0	"	100		121	75-125			
Benzene	119	5.0	"	100		119	75-125			
Toluene	119	5.0	"	100		119	75-125			
Surrogate: 4-Bromofluorobenzene	43.7		"	40.0		109	81.2-123			
Surrogate: Dibromofluoromethane	74.1		"	40.0		185	95.7-135			S-GC
Surrogate: Toluene-d8	35.9		"	40.0		89.8	85.5-116			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
 Lake Forest, California 92630
 949.297.5020 Phone
 949.297.5027 Fax

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112333 - EPA 5030 GCMS

LCS Dup (5112333-BSD1)

Prepared: 11/23/15 Analyzed: 12/03/15

Chlorobenzene	124	5.0	ug/kg	100	124	75-125	3.24	20		
1,1-Dichloroethene	124	5.0	"	100	124	75-125	1.46	20		
Trichloroethene	120	5.0	"	100	120	75-125	0.871	20		
Benzene	124	5.0	"	100	124	75-125	4.15	20		
Toluene	117	5.0	"	100	117	75-125	1.10	20		
Surrogate: 4-Bromofluorobenzene	46.2		"	40.0	116	81.2-123				
Surrogate: Dibromofluoromethane	68.6		"	40.0	172	95.7-135				S-GC
Surrogate: Toluene-d8	36.3		"	40.0	90.8	85.5-116				

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112334 - EPA 3550 ECD/GCMS

Blank (5112334-BLK1)

Prepared: 11/23/15 Analyzed: 11/25/15

Carbazole	ND	300	ug/kg							
Aniline	ND	300	"							
Phenol	ND	1000	"							
2-Chlorophenol	ND	1000	"							
1,4-Dichlorobenzene	ND	300	"							
N-Nitrosodi-n-propylamine	ND	300	"							
1,2,4-Trichlorobenzene	ND	300	"							
4-Chloro-3-methylphenol	ND	1000	"							
1-Methylnaphthalene	ND	300	"							
2-Methylnaphthalene	ND	300	"							
Acenaphthene	ND	300	"							
4-Nitrophenol	ND	1000	"							
2,4-Dinitrotoluene	ND	300	"							
Pentachlorophenol	ND	1000	"							
Pyrene	ND	300	"							
Acenaphthylene	ND	300	"							
Anthracene	ND	300	"							
Benzo (a) anthracene	ND	300	"							
Benzo (b) fluoranthene	ND	300	"							
Benzo (k) fluoranthene	ND	300	"							
Benzo (g,h,i) perylene	ND	1000	"							
Benzo (a) pyrene	ND	300	"							
Benzyl alcohol	ND	300	"							
Bis(2-chloroethoxy)methane	ND	300	"							
Bis(2-chloroethyl)ether	ND	300	"							
Bis(2-chloroisopropyl)ether	ND	300	"							
Bis(2-ethylhexyl)phthalate	ND	300	"							
4-Bromophenyl phenyl ether	ND	300	"							
Butyl benzyl phthalate	ND	300	"							
4-Chloroaniline	ND	300	"							
2-Chloronaphthalene	ND	300	"							
4-Chlorophenyl phenyl ether	ND	300	"							
Chrysene	ND	300	"							
Dibenz (a,h) anthracene	ND	300	"							
Dibenzofuran	ND	300	"							
Di-n-butyl phthalate	ND	300	"							

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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 949.297.5020 Phone
 949.297.5027 Fax

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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112334 - EPA 3550 ECD/GCMS

Blank (5112334-BLK1)

Prepared: 11/23/15 Analyzed: 11/25/15

1,2-Dichlorobenzene	ND	300	ug/kg							
1,3-Dichlorobenzene	ND	300	"							
2,4-Dichlorophenol	ND	1000	"							
Diethyl phthalate	ND	300	"							
2,4-Dimethylphenol	ND	1000	"							
Dimethyl phthalate	ND	300	"							
4,6-Dinitro-2-methylphenol	ND	1000	"							
2,4-Dinitrophenol	ND	1000	"							
2,6-Dinitrotoluene	ND	1000	"							
Di-n-octyl phthalate	ND	300	"							
Fluoranthene	ND	300	"							
Fluorene	ND	300	"							
Hexachlorobenzene	ND	1500	"							
Hexachlorobutadiene	ND	300	"							
Hexachlorocyclopentadiene	ND	1000	"							
Hexachloroethane	ND	300	"							
Indeno (1,2,3-cd) pyrene	ND	300	"							
Isophorone	ND	300	"							
2-Methylphenol	ND	1000	"							
4-Methylphenol	ND	1000	"							
Naphthalene	ND	300	"							
2-Nitroaniline	ND	300	"							
3-Nitroaniline	ND	300	"							
4-Nitroaniline	ND	300	"							
Nitrobenzene	ND	1000	"							
2-Nitrophenol	ND	1000	"							
N-Nitrosodimethylamine	ND	300	"							
N-Nitrosodiphenylamine	ND	300	"							
2,3,5,6-Tetrachlorophenol	ND	300	"							
2,3,4,6-Tetrachlorophenol	ND	300	"							
Phenanthrene	ND	300	"							
Azobenzene	ND	300	"							
2,4,5-Trichlorophenol	ND	1000	"							
Pyridine	ND	300	"							
2,4,6-Trichlorophenol	ND	1000	"							

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112334 - EPA 3550 ECD/GCMS

Blank (5112334-BLK1)

Prepared: 11/23/15 Analyzed: 11/25/15

Surrogate: 2-Fluorophenol	1530		ug/kg	3330		45.9	15-121			
Surrogate: Phenol-d6	1980		"	3330		59.4	24-113			
Surrogate: Nitrobenzene-d5	1740		"	3330		52.3	21.3-119			
Surrogate: 2-Fluorobiphenyl	1830		"	3330		55.0	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2530		"	3330		75.9	18.1-105			
Surrogate: Terphenyl-dl4	2290		"	3330		68.7	29.1-130			

LCS (5112334-BS1)

Prepared: 11/23/15 Analyzed: 11/25/15

Phenol	1950	1000	ug/kg	3330		58.5	34-114			
2-Chlorophenol	1750	1000	"	3330		52.5	34-114			
1,4-Dichlorobenzene	1600	300	"	3330		48.0	34-114			
N-Nitrosodi-n-propylamine	1940	300	"	3330		58.3	30-110			
1,2,4-Trichlorobenzene	1760	300	"	3330		52.7	39-119			
4-Chloro-3-methylphenol	2270	1000	"	3330		68.2	50-130			
Acenaphthene	2060	300	"	3330		61.9	34-114			
4-Nitrophenol	2450	1000	"	3330		73.7	40-120			
2,4-Dinitrotoluene	1560	300	"	3330		46.9	35-115			
Pentachlorophenol	2880	1000	"	3330		86.5	50-130			
Pyrene	2060	300	"	3330		61.8	30-110			
Surrogate: 2-Fluorophenol	1300		"	3330		39.0	15-121			
Surrogate: Phenol-d6	1640		"	3330		49.1	24-113			
Surrogate: Nitrobenzene-d5	1390		"	3330		41.7	21.3-119			
Surrogate: 2-Fluorobiphenyl	1530		"	3330		46.0	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2190		"	3330		65.8	18.1-105			
Surrogate: Terphenyl-dl4	2040		"	3330		61.2	29.1-130			

Matrix Spike (5112334-MS1)

Source: T152950-01

Prepared: 11/23/15 Analyzed: 11/25/15

Phenol	2210	1000	ug/kg	3330	ND	66.3	34-114			
2-Chlorophenol	1930	1000	"	3330	ND	57.8	34-114			
1,4-Dichlorobenzene	941	300	"	3330	ND	28.2	34-114			
N-Nitrosodi-n-propylamine	1980	300	"	3330	ND	59.3	30-110			
1,2,4-Trichlorobenzene	1580	300	"	3330	ND	47.3	39-119			
4-Chloro-3-methylphenol	2500	1000	"	3330	ND	74.9	50-130			
Acenaphthene	2190	300	"	3330	ND	65.8	34-114			
4-Nitrophenol	2500	1000	"	3330	ND	75.0	40-120			
2,4-Dinitrotoluene	1690	300	"	3330	ND	50.7	35-115			

QM-07

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



25712 Commercentre Drive
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Pangea Environmental Services, Inc.
 1710 Franklin Street, Suite 200
 Oakland CA, 94612

Project: 4901 Broadway
 Project Number: [none]
 Project Manager: Bob Clark-Riddell

Reported:
 12/03/15 22:12

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 5112334 - EPA 3550 ECD/GCMS

Matrix Spike (5112334-MS1)	Source: T152950-01			Prepared: 11/23/15 Analyzed: 11/25/15						
Pentachlorophenol	3310	1000	ug/kg	3330	ND	99.2	50-130			
Pyrene	2400	300	"	3330	105	68.9	30-110			
Surrogate: 2-Fluorophenol	1620		"	3330		48.6	15-121			
Surrogate: Phenol-d6	2080		"	3330		62.3	24-113			
Surrogate: Nitrobenzene-d5	1730		"	3330		51.9	21.3-119			
Surrogate: 2-Fluorobiphenyl	1900		"	3330		57.0	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2660		"	3330		79.9	18.1-105			
Surrogate: Terphenyl-dl4	2570		"	3330		77.0	29.1-130			

Matrix Spike Dup (5112334-MSD1)	Source: T152950-01			Prepared: 11/23/15 Analyzed: 11/25/15						
Phenol	1990	1000	ug/kg	3330	ND	59.7	34-114	10.4	42	
2-Chlorophenol	1950	1000	"	3330	ND	58.5	34-114	1.17	40	
1,4-Dichlorobenzene	1060	300	"	3330	ND	31.8	34-114	12.0	28	QM-07
N-Nitrosodi-n-propylamine	1970	300	"	3330	ND	59.2	30-110	0.169	38	
1,2,4-Trichlorobenzene	1700	300	"	3330	ND	50.9	39-119	7.41	28	
4-Chloro-3-methylphenol	2480	1000	"	3330	ND	74.5	50-130	0.562	42	
Acenaphthene	2210	300	"	3330	ND	66.3	34-114	0.788	31	
4-Nitrophenol	2410	1000	"	3330	ND	72.2	40-120	3.71	50	
2,4-Dinitrotoluene	1540	300	"	3330	ND	46.3	35-115	9.08	38	
Pentachlorophenol	3380	1000	"	3330	ND	101	50-130	2.05	50	
Pyrene	2460	300	"	3330	105	70.5	30-110	2.25	31	
Surrogate: 2-Fluorophenol	1530		"	3330		45.9	15-121			
Surrogate: Phenol-d6	1830		"	3330		54.9	24-113			
Surrogate: Nitrobenzene-d5	1730		"	3330		52.0	21.3-119			
Surrogate: 2-Fluorobiphenyl	1910		"	3330		57.2	32.4-102			
Surrogate: 2,4,6-Tribromophenol	2740		"	3330		82.3	18.1-105			
Surrogate: Terphenyl-dl4	2520		"	3330		75.6	29.1-130			

SunStar Laboratories, Inc.

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Katherine RunningCrane

Katherine RunningCrane, Project Manager



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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

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

Project: 4901 Broadway
Project Number: [none]
Project Manager: Bob Clark-Riddell

Reported:
12/03/15 22:12

Notes and Definitions

- S-GC Surrogate recovery outside of established control limits. The data was accepted based on valid recovery of the remaining surrogate(s).
- QM-07 The spike recovery and or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

SunStar Laboratories, Inc.

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Katherine RunningCrane, Project Manager

Chain of Custody Record

Client: Pangea Env. Svs.
 Address: 1710 Franklins St. Oakland
 Phone: 510-836-3700 Fax: _____
 Project Manager: Bob Clark-Riddell

Date: 11.20.15 Page: 1 Of 1
 Project Name: 4901 Broadway
 Collector: _____ Client Project #: _____
 Batch #: 17 7152954 EDF #: _____

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline) + D + MO	8015M (diesel)	8015M Ext./Carbon Chain	8010/7000 Metals - CAM 17	8020/4000MS Metals A Metals - stobos	8081A - chlor. pest	8082 - PCB	Laboratory ID #	Comments/Preservative	Total # of containers
B15-6'	11.19.15	1205	Soil	Sleeve	X			X	X	X		X	X		X	X	9		1

Relinquished by: (signature) <u>[Signature]</u>	Date / Time <u>11.20.15 1230</u>	Received by: (signature) <u>[Signature]</u>	Date / Time <u>11/20/15 1230</u>	Total # of containers <u>1</u>	Notes STD. TAT <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Received good condition/cold <u>5.1</u>
Relinquished by: (signature) _____	Date / Time _____	Received by: (signature) _____	Date / Time _____	Chain of Custody seals <u>Y/N/NA</u>	
Relinquished by: (signature) <u>[Signature]</u>	Date / Time <u>11.21.15 10:20</u>	Received by: (signature) <u>[Signature]</u>	Date / Time <u>11.21.15 10:20</u>	Seals intact? <u>Y/N/NA</u>	

SAMPLE RECEIVING REVIEW SHEET

BATCH # T152954

Client Name: PANFEA ENV.

Project: 4901 BROADWAY

Received by: SUNNY

Date/Time Received: 11.21.15 / 10:20

Delivered by : Client SunStar Courier GSO FedEx Other _____

Total number of coolers received 1 Temp criteria = 6°C > 0°C (no frozen containers)

Temperature: cooler #1 5.2 °C +/- the CF (- 0.2°C) = 5.1 °C corrected temperature

cooler #2 _____ °C +/- the CF (- 0.2°C) = _____ °C corrected temperature

cooler #3 _____ °C +/- the CF (- 0.2°C) = _____ °C corrected temperature

Samples outside temp. but received on ice, w/in 6 hours of final sampling. Yes No* N/A

Custody Seals Intact on Cooler/Sample Yes No* N/A

Sample Containers Intact Yes No*

Sample labels match COC ID's Yes No*

Total number of containers received match COC Yes No*

Proper containers received for analyses requested on COC Yes No*

Proper preservative indicated on COC/containers for analyses requested Yes No* N/A

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times. Yes No*

* Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date SL 11.21.15

Comments:

WORK ORDER

T152954

Client: Pangea Environmental Services, Inc.
Project: 4901 Broadway

Project Manager: Katherine RunningCrane
Project Number: [none]

Report To:

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

Date Due: 12/02/15 15:00 (5 day TAT)

Received By: Sunny Lounethone

Date Received: 11/21/15 10:20

Logged In By: Sunny Lounethone

Date Logged In: 11/21/15 12:06

Samples Received at: **5.1°C**
 Custody Seals Yes Received On Ice Yes
 Containers Intact Yes
 COC/Labels Agree Yes
 Preservation Confir No

Analysis	Due	TAT	Expires	Comments
T152954-01 B15-6' [Soil] Sampled 11/19/15 11:05 (GMT-08:00) Pacific Time (US &				
6010 Title 22	12/02/15 15:00	5	05/17/16 11:05	
8015 Carbon Chain	12/02/15 15:00	5	12/03/15 11:05	
8081 Pesticides	12/02/15 15:00	5	12/03/15 11:05	
8082 PCB	12/02/15 15:00	5	12/03/15 11:05	
8260	12/02/15 15:00	5	12/03/15 11:05	
8270C	12/02/15 15:00	5	12/03/15 11:05	

EMSL -- San Leandro

T152954-01 B15-6' [Soil] Sampled 11/19/15 11:05 (GMT-08:00) Pacific Time (US &

Asbestos	12/04/15 15:00	7	12/17/15 11:05	PLM CARB 435, Level A (0.25%)
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Analysis groups included in this work order

6010 Title 22

subgroup 6010B T22 7470/71 Hg

APPENDIX F

Laboratory Analytical Results: County Assessment,
January 2016



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1601A40

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: 4901 Broadway

Project Received: 01/27/2016

Analytical Report reviewed & approved for release on 01/29/2016 by:

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.





Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 4901 Broadway
WorkOrder: 1601A40

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e7	oil range compounds are significant
e8	kerosene/kerosene range/jet fuel range



Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 4901 Broadway
WorkOrder: 1601A40

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-7'	1601A40-001A	Soil	01/27/2016 15:30	GC16	115915
Analytes	Result	RL	DF	Date Analyzed	
Bromobenzene	ND	0.0050	1	01/28/2016 15:34	
Bromochloromethane	ND	0.0050	1	01/28/2016 15:34	
Bromodichloromethane	ND	0.0050	1	01/28/2016 15:34	
Bromoform	ND	0.0050	1	01/28/2016 15:34	
Bromomethane	ND	0.0050	1	01/28/2016 15:34	
Carbon Tetrachloride	ND	0.0050	1	01/28/2016 15:34	
Chlorobenzene	ND	0.0050	1	01/28/2016 15:34	
Chloroethane	ND	0.0050	1	01/28/2016 15:34	
Chloroform	ND	0.0050	1	01/28/2016 15:34	
Chloromethane	ND	0.0050	1	01/28/2016 15:34	
2-Chlorotoluene	ND	0.0050	1	01/28/2016 15:34	
4-Chlorotoluene	ND	0.0050	1	01/28/2016 15:34	
Dibromochloromethane	ND	0.0050	1	01/28/2016 15:34	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/28/2016 15:34	
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/28/2016 15:34	
Dibromomethane	ND	0.0050	1	01/28/2016 15:34	
1,2-Dichlorobenzene	ND	0.0050	1	01/28/2016 15:34	
1,3-Dichlorobenzene	ND	0.0050	1	01/28/2016 15:34	
1,4-Dichlorobenzene	ND	0.0050	1	01/28/2016 15:34	
Dichlorodifluoromethane	ND	0.0050	1	01/28/2016 15:34	
1,1-Dichloroethane	ND	0.0050	1	01/28/2016 15:34	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/28/2016 15:34	
1,1-Dichloroethene	ND	0.0050	1	01/28/2016 15:34	
cis-1,2-Dichloroethene	ND	0.0050	1	01/28/2016 15:34	
trans-1,2-Dichloroethene	ND	0.0050	1	01/28/2016 15:34	
1,2-Dichloropropane	ND	0.0050	1	01/28/2016 15:34	
1,3-Dichloropropane	ND	0.0050	1	01/28/2016 15:34	
2,2-Dichloropropane	ND	0.0050	1	01/28/2016 15:34	
1,1-Dichloropropene	ND	0.0050	1	01/28/2016 15:34	
cis-1,3-Dichloropropene	ND	0.0050	1	01/28/2016 15:34	
trans-1,3-Dichloropropene	ND	0.0050	1	01/28/2016 15:34	
Freon 113	ND	0.0050	1	01/28/2016 15:34	
Hexachlorobutadiene	ND	0.0050	1	01/28/2016 15:34	
Hexachloroethane	ND	0.0050	1	01/28/2016 15:34	
Methylene chloride	ND	0.0050	1	01/28/2016 15:34	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/28/2016 15:34	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/28/2016 15:34	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-7'	1601A40-001A	Soil	01/27/2016 15:30	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/28/2016 15:34
1,2,3-Trichlorobenzene	ND	0.0050	1	01/28/2016 15:34
1,2,4-Trichlorobenzene	ND	0.0050	1	01/28/2016 15:34
1,1,1-Trichloroethane	ND	0.0050	1	01/28/2016 15:34
1,1,2-Trichloroethane	ND	0.0050	1	01/28/2016 15:34
Trichloroethene	ND	0.0050	1	01/28/2016 15:34
Trichlorofluoromethane	ND	0.0050	1	01/28/2016 15:34
1,2,3-Trichloropropane	ND	0.0050	1	01/28/2016 15:34
Vinyl Chloride	ND	0.0050	1	01/28/2016 15:34

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	88	70-130	01/28/2016 15:34
Toluene-d8	92	70-130	01/28/2016 15:34
4-BFB	93	70-130	01/28/2016 15:34
Benzene-d6	90	60-140	01/28/2016 15:34
Ethylbenzene-d10	96	60-140	01/28/2016 15:34
1,2-DCB-d4	72	60-140	01/28/2016 15:34

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-7'	1601A40-002A	Soil	01/27/2016 14:55	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Bromobenzene	ND	0.0050	1	01/28/2016 16:15
Bromochloromethane	ND	0.0050	1	01/28/2016 16:15
Bromodichloromethane	ND	0.0050	1	01/28/2016 16:15
Bromoform	ND	0.0050	1	01/28/2016 16:15
Bromomethane	ND	0.0050	1	01/28/2016 16:15
Carbon Tetrachloride	ND	0.0050	1	01/28/2016 16:15
Chlorobenzene	ND	0.0050	1	01/28/2016 16:15
Chloroethane	ND	0.0050	1	01/28/2016 16:15
Chloroform	ND	0.0050	1	01/28/2016 16:15
Chloromethane	ND	0.0050	1	01/28/2016 16:15
2-Chlorotoluene	ND	0.0050	1	01/28/2016 16:15
4-Chlorotoluene	ND	0.0050	1	01/28/2016 16:15
Dibromochloromethane	ND	0.0050	1	01/28/2016 16:15
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/28/2016 16:15
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/28/2016 16:15
Dibromomethane	ND	0.0050	1	01/28/2016 16:15
1,2-Dichlorobenzene	ND	0.0050	1	01/28/2016 16:15
1,3-Dichlorobenzene	ND	0.0050	1	01/28/2016 16:15
1,4-Dichlorobenzene	ND	0.0050	1	01/28/2016 16:15
Dichlorodifluoromethane	ND	0.0050	1	01/28/2016 16:15
1,1-Dichloroethane	ND	0.0050	1	01/28/2016 16:15
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/28/2016 16:15
1,1-Dichloroethene	ND	0.0050	1	01/28/2016 16:15
cis-1,2-Dichloroethene	ND	0.0050	1	01/28/2016 16:15
trans-1,2-Dichloroethene	ND	0.0050	1	01/28/2016 16:15
1,2-Dichloropropane	ND	0.0050	1	01/28/2016 16:15
1,3-Dichloropropane	ND	0.0050	1	01/28/2016 16:15
2,2-Dichloropropane	ND	0.0050	1	01/28/2016 16:15
1,1-Dichloropropene	ND	0.0050	1	01/28/2016 16:15
cis-1,3-Dichloropropene	ND	0.0050	1	01/28/2016 16:15
trans-1,3-Dichloropropene	ND	0.0050	1	01/28/2016 16:15
Freon 113	ND	0.0050	1	01/28/2016 16:15
Hexachlorobutadiene	ND	0.0050	1	01/28/2016 16:15
Hexachloroethane	ND	0.0050	1	01/28/2016 16:15
Methylene chloride	ND	0.0050	1	01/28/2016 16:15
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/28/2016 16:15
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/28/2016 16:15

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-7'	1601A40-002A	Soil	01/27/2016 14:55	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/28/2016 16:15
1,2,3-Trichlorobenzene	ND	0.0050	1	01/28/2016 16:15
1,2,4-Trichlorobenzene	ND	0.0050	1	01/28/2016 16:15
1,1,1-Trichloroethane	ND	0.0050	1	01/28/2016 16:15
1,1,2-Trichloroethane	ND	0.0050	1	01/28/2016 16:15
Trichloroethene	ND	0.0050	1	01/28/2016 16:15
Trichlorofluoromethane	ND	0.0050	1	01/28/2016 16:15
1,2,3-Trichloropropane	ND	0.0050	1	01/28/2016 16:15
Vinyl Chloride	ND	0.0050	1	01/28/2016 16:15

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	87	70-130	01/28/2016 16:15
Toluene-d8	90	70-130	01/28/2016 16:15
4-BFB	89	70-130	01/28/2016 16:15
Benzene-d6	89	60-140	01/28/2016 16:15
Ethylbenzene-d10	94	60-140	01/28/2016 16:15
1,2-DCB-d4	69	60-140	01/28/2016 16:15

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-8'	1601A40-003A	Soil	01/27/2016 13:50	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Bromobenzene	ND	0.0050	1	01/28/2016 16:56
Bromochloromethane	ND	0.0050	1	01/28/2016 16:56
Bromodichloromethane	ND	0.0050	1	01/28/2016 16:56
Bromoform	ND	0.0050	1	01/28/2016 16:56
Bromomethane	ND	0.0050	1	01/28/2016 16:56
Carbon Tetrachloride	ND	0.0050	1	01/28/2016 16:56
Chlorobenzene	ND	0.0050	1	01/28/2016 16:56
Chloroethane	ND	0.0050	1	01/28/2016 16:56
Chloroform	ND	0.0050	1	01/28/2016 16:56
Chloromethane	ND	0.0050	1	01/28/2016 16:56
2-Chlorotoluene	ND	0.0050	1	01/28/2016 16:56
4-Chlorotoluene	ND	0.0050	1	01/28/2016 16:56
Dibromochloromethane	ND	0.0050	1	01/28/2016 16:56
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/28/2016 16:56
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/28/2016 16:56
Dibromomethane	ND	0.0050	1	01/28/2016 16:56
1,2-Dichlorobenzene	ND	0.0050	1	01/28/2016 16:56
1,3-Dichlorobenzene	ND	0.0050	1	01/28/2016 16:56
1,4-Dichlorobenzene	ND	0.0050	1	01/28/2016 16:56
Dichlorodifluoromethane	ND	0.0050	1	01/28/2016 16:56
1,1-Dichloroethane	ND	0.0050	1	01/28/2016 16:56
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/28/2016 16:56
1,1-Dichloroethene	ND	0.0050	1	01/28/2016 16:56
cis-1,2-Dichloroethene	ND	0.0050	1	01/28/2016 16:56
trans-1,2-Dichloroethene	ND	0.0050	1	01/28/2016 16:56
1,2-Dichloropropane	ND	0.0050	1	01/28/2016 16:56
1,3-Dichloropropane	ND	0.0050	1	01/28/2016 16:56
2,2-Dichloropropane	ND	0.0050	1	01/28/2016 16:56
1,1-Dichloropropene	ND	0.0050	1	01/28/2016 16:56
cis-1,3-Dichloropropene	ND	0.0050	1	01/28/2016 16:56
trans-1,3-Dichloropropene	ND	0.0050	1	01/28/2016 16:56
Freon 113	ND	0.0050	1	01/28/2016 16:56
Hexachlorobutadiene	ND	0.0050	1	01/28/2016 16:56
Hexachloroethane	ND	0.0050	1	01/28/2016 16:56
Methylene chloride	ND	0.0050	1	01/28/2016 16:56
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/28/2016 16:56
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/28/2016 16:56

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-8'	1601A40-003A	Soil	01/27/2016 13:50	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/28/2016 16:56
1,2,3-Trichlorobenzene	ND	0.0050	1	01/28/2016 16:56
1,2,4-Trichlorobenzene	ND	0.0050	1	01/28/2016 16:56
1,1,1-Trichloroethane	ND	0.0050	1	01/28/2016 16:56
1,1,2-Trichloroethane	ND	0.0050	1	01/28/2016 16:56
Trichloroethene	ND	0.0050	1	01/28/2016 16:56
Trichlorofluoromethane	ND	0.0050	1	01/28/2016 16:56
1,2,3-Trichloropropane	ND	0.0050	1	01/28/2016 16:56
Vinyl Chloride	ND	0.0050	1	01/28/2016 16:56

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	88	70-130	01/28/2016 16:56
Toluene-d8	93	70-130	01/28/2016 16:56
4-BFB	88	70-130	01/28/2016 16:56
Benzene-d6	98	60-140	01/28/2016 16:56
Ethylbenzene-d10	99	60-140	01/28/2016 16:56
1,2-DCB-d4	76	60-140	01/28/2016 16:56

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-7'	1601A40-004A	Soil	01/27/2016 13:15	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Bromobenzene	ND	0.0050	1	01/28/2016 17:37
Bromochloromethane	ND	0.0050	1	01/28/2016 17:37
Bromodichloromethane	ND	0.0050	1	01/28/2016 17:37
Bromoform	ND	0.0050	1	01/28/2016 17:37
Bromomethane	ND	0.0050	1	01/28/2016 17:37
Carbon Tetrachloride	ND	0.0050	1	01/28/2016 17:37
Chlorobenzene	ND	0.0050	1	01/28/2016 17:37
Chloroethane	ND	0.0050	1	01/28/2016 17:37
Chloroform	ND	0.0050	1	01/28/2016 17:37
Chloromethane	ND	0.0050	1	01/28/2016 17:37
2-Chlorotoluene	ND	0.0050	1	01/28/2016 17:37
4-Chlorotoluene	ND	0.0050	1	01/28/2016 17:37
Dibromochloromethane	ND	0.0050	1	01/28/2016 17:37
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/28/2016 17:37
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/28/2016 17:37
Dibromomethane	ND	0.0050	1	01/28/2016 17:37
1,2-Dichlorobenzene	ND	0.0050	1	01/28/2016 17:37
1,3-Dichlorobenzene	ND	0.0050	1	01/28/2016 17:37
1,4-Dichlorobenzene	ND	0.0050	1	01/28/2016 17:37
Dichlorodifluoromethane	ND	0.0050	1	01/28/2016 17:37
1,1-Dichloroethane	ND	0.0050	1	01/28/2016 17:37
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/28/2016 17:37
1,1-Dichloroethene	ND	0.0050	1	01/28/2016 17:37
cis-1,2-Dichloroethene	ND	0.0050	1	01/28/2016 17:37
trans-1,2-Dichloroethene	ND	0.0050	1	01/28/2016 17:37
1,2-Dichloropropane	ND	0.0050	1	01/28/2016 17:37
1,3-Dichloropropane	ND	0.0050	1	01/28/2016 17:37
2,2-Dichloropropane	ND	0.0050	1	01/28/2016 17:37
1,1-Dichloropropene	ND	0.0050	1	01/28/2016 17:37
cis-1,3-Dichloropropene	ND	0.0050	1	01/28/2016 17:37
trans-1,3-Dichloropropene	ND	0.0050	1	01/28/2016 17:37
Freon 113	ND	0.0050	1	01/28/2016 17:37
Hexachlorobutadiene	ND	0.0050	1	01/28/2016 17:37
Hexachloroethane	ND	0.0050	1	01/28/2016 17:37
Methylene chloride	ND	0.0050	1	01/28/2016 17:37
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/28/2016 17:37
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/28/2016 17:37

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-7'	1601A40-004A	Soil	01/27/2016 13:15	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/28/2016 17:37
1,2,3-Trichlorobenzene	ND	0.0050	1	01/28/2016 17:37
1,2,4-Trichlorobenzene	ND	0.0050	1	01/28/2016 17:37
1,1,1-Trichloroethane	ND	0.0050	1	01/28/2016 17:37
1,1,2-Trichloroethane	ND	0.0050	1	01/28/2016 17:37
Trichloroethene	ND	0.0050	1	01/28/2016 17:37
Trichlorofluoromethane	ND	0.0050	1	01/28/2016 17:37
1,2,3-Trichloropropane	ND	0.0050	1	01/28/2016 17:37
Vinyl Chloride	ND	0.0050	1	01/28/2016 17:37

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	88	70-130	01/28/2016 17:37
Toluene-d8	89	70-130	01/28/2016 17:37
4-BFB	95	70-130	01/28/2016 17:37
Benzene-d6	98	60-140	01/28/2016 17:37
Ethylbenzene-d10	102	60-140	01/28/2016 17:37
1,2-DCB-d4	76	60-140	01/28/2016 17:37

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-7'	1601A40-001A	Soil	01/27/2016 15:30	GC7	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/27/2016 23:07
MTBE	---	0.050	1	01/27/2016 23:07
Benzene	---	0.0050	1	01/27/2016 23:07
Toluene	---	0.0050	1	01/27/2016 23:07
Ethylbenzene	---	0.0050	1	01/27/2016 23:07
Xylenes	---	0.015	1	01/27/2016 23:07
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	91	70-130		01/27/2016 23:07

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-7'	1601A40-002A	Soil	01/27/2016 14:55	GC7	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/27/2016 23:37
MTBE	---	0.050	1	01/27/2016 23:37
Benzene	---	0.0050	1	01/27/2016 23:37
Toluene	---	0.0050	1	01/27/2016 23:37
Ethylbenzene	---	0.0050	1	01/27/2016 23:37
Xylenes	---	0.015	1	01/27/2016 23:37
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	90	70-130		01/27/2016 23:37

Analyst(s): IA



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-8'	1601A40-003A	Soil	01/27/2016 13:50	GC7	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/28/2016 00:07
MTBE	---	0.050	1	01/28/2016 00:07
Benzene	---	0.0050	1	01/28/2016 00:07
Toluene	---	0.0050	1	01/28/2016 00:07
Ethylbenzene	---	0.0050	1	01/28/2016 00:07
Xylenes	---	0.015	1	01/28/2016 00:07
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	97	70-130		01/28/2016 00:07

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-7'	1601A40-004A	Soil	01/27/2016 13:15	GC7	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	20	1.0	1	01/28/2016 13:49
MTBE	---	0.050	1	01/28/2016 13:49
Benzene	---	0.0050	1	01/28/2016 13:49
Toluene	---	0.0050	1	01/28/2016 13:49
Ethylbenzene	---	0.0050	1	01/28/2016 13:49
Xylenes	---	0.015	1	01/28/2016 13:49
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	89	70-130		01/28/2016 13:49

Analyst(s): IA

Analytical Comments: d7



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-7'	1601A40-001A	Soil	01/27/2016 15:30	GC11B	115920
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		1.0	1	01/28/2016 01:58
TPH-Motor Oil (C18-C36)	11		5.0	1	01/28/2016 01:58
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	104		70-130		01/28/2016 01:58
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-7'	1601A40-002A	Soil	01/27/2016 14:55	GC6A	115920
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		1.0	1	01/28/2016 11:37
TPH-Motor Oil (C18-C36)	ND		5.0	1	01/28/2016 11:37
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	94		70-130		01/28/2016 11:37
<u>Analyst(s):</u> TK					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-8'	1601A40-003A	Soil	01/27/2016 13:50	GC6A	115920
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		1.0	1	01/28/2016 14:01
TPH-Motor Oil (C18-C36)	ND		5.0	1	01/28/2016 14:01
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	94		70-130		01/28/2016 14:01
<u>Analyst(s):</u> TK					

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:59
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A40
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-7'	1601A40-004A	Soil	01/27/2016 13:15	GC2B	115920

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	35	1.0	1	01/28/2016 02:22
TPH-Motor Oil (C18-C36)	160	5.0	1	01/28/2016 02:22

Surrogates	REC (%)	Limits	Date Analyzed
C9	96	70-130	01/28/2016 02:22

Analyst(s): TK

Analytical Comments: e7,e8



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/27/16
Date Analyzed: 1/28/16
Instrument: GC10
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A40
BatchID: 115915
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-115915
 1601A31-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0456	0.0050	0.050	-	91	77-121
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	0.0399	0.0040	0.050	-	80	67-119
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	0.0410	0.0040	0.050	-	82	58-135
1,1-Dichloroethene	ND	0.0417	0.0050	0.050	-	83	42-145
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	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/27/16
Date Analyzed: 1/28/16
Instrument: GC10
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A40
BatchID: 115915
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-115915
 1601A31-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	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	0.0470	0.0050	0.050	-	94	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	0.124	0.131		0.12	99	105	70-130
Toluene-d8	0.135	0.133		0.12	108	106	70-130
4-BFB	0.0144	0.0154		0.012	115	124	70-130
Benzene-d6	0.0980	0.110		0.10	98	110	60-140
Ethylbenzene-d10	0.110	0.121		0.10	110	121	60-140
1,2-DCB-d4	0.0956	0.0981		0.10	96	98	60-140

(Cont.)



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/27/16
Date Analyzed: 1/28/16
Instrument: GC10
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A40
BatchID: 115915
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-115915
 1601A31-003BMS/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
Chlorobenzene	0.0390	0.0416	0.050	ND	78	83	70-130	6.26	20
1,2-Dibromoethane (EDB)	0.0347	0.0378	0.050	ND	69,F1	76	70-130	8.57	20
1,2-Dichloroethane (1,2-DCA)	0.0359	0.0381	0.050	ND	72	76	70-130	5.84	20
1,1-Dichloroethene	0.0467	0.0408	0.050	ND	93	82	70-130	13.5	20
Trichloroethene	0.0774	0.0796	0.050	ND	155,F1	159,F1	70-130	2.79	20
Surrogate Recovery									
Dibromofluoromethane	0.132	0.132	0.12		105	106	70-130	0.323	20
Toluene-d8	0.130	0.131	0.12		104	104	70-130	0	20
4-BFB	0.0154	0.0156	0.012		123	124	70-130	0.966	20
Benzene-d6	0.0978	0.0998	0.10		98	100	60-140	2.01	20
Ethylbenzene-d10	0.106	0.108	0.10		106	108	60-140	1.59	20
1,2-DCB-d4	0.0891	0.0905	0.10		89	90	60-140	1.57	20



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/27/16
Date Analyzed: 1/28/16
Instrument: GC19
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A40
BatchID: 115921
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-115921
 1601A41-003AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.580	0.40	0.60	-	97	70-130
MTBE	ND	0.0782	0.050	0.10	-	78	70-130
Benzene	ND	0.0961	0.0050	0.10	-	96	70-130
Toluene	ND	0.104	0.0050	0.10	-	104	70-130
Ethylbenzene	ND	0.110	0.0050	0.10	-	110	70-130
Xylenes	ND	0.346	0.015	0.30	-	115	70-130

Surrogate Recovery

2-Fluorotoluene	0.115	0.122		0.10	115	122	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.511	0.531	0.60	ND	85	89	70-130	3.80	20
MTBE	0.0745	0.0717	0.10	ND	75	72	70-130	3.92	20
Benzene	0.0879	0.0808	0.10	ND	88	81	70-130	8.45	20
Toluene	0.0955	0.0887	0.10	ND	95	89	70-130	7.32	20
Ethylbenzene	0.102	0.0947	0.10	ND	102	95	70-130	7.83	20
Xylenes	0.323	0.298	0.30	ND	108	99	70-130	7.98	20

Surrogate Recovery

2-Fluorotoluene	0.112	0.101	0.10		112	101	70-130	10.3	20
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Quality Control Report

Client: Pangea Environmental Svcs., Inc.	WorkOrder: 1601A40
Date Prepared: 1/27/16	BatchID: 115920
Date Analyzed: 1/28/16	Extraction Method: SW3550B
Instrument: GC2B	Analytical Method: SW8015B
Matrix: Soil	Unit: mg/Kg
Project: 4901 Broadway	Sample ID: MB/LCS-115920 1601A41-010AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	44.9	1.0	40	-	112	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	24.1	24.3		25	96	97	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	47.1	45.8	40	ND	116	112	70-130	2.71	30
Surrogate Recovery									
C9	24.2	24.0	25		97	96	70-130	1.09	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1601A40

ClientCode: PEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: BRiddell@pangeaenv.com
cc/3rd Party:
PO:
ProjectNo: 4901 Broadway

Bill to:

Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 3 days;

Date Received: 01/27/2016
Date Logged: 01/27/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1601A40-001	PB-1-7'	Soil	1/27/2016 15:30	<input type="checkbox"/>	A	A	A										
1601A40-002	PB-2-7'	Soil	1/27/2016 14:55	<input type="checkbox"/>	A	A	A										
1601A40-003	PB-3-8'	Soil	1/27/2016 13:50	<input type="checkbox"/>	A	A	A										
1601A40-004	PB-4-7'	Soil	1/27/2016 13:15	<input type="checkbox"/>	A	A	A										

Test Legend:

1	8010BMS_S	2	G-MBTEX_S	3	TPH(DMO)_S	4	
5		6		7		8	
9		10		11		12	

The following SamplIDs: 001A, 002A, 003A, 004A contain testgroup.

Prepared by: Briana Cutino

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.



WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.

QC Level: LEVEL 2

Work Order: 1601A40

Project: 4901 Broadway

Client Contact: Bob Clark-Riddell

Date Logged: 1/27/2016

Comments:

Contact's Email: BRiddell@pangeaenv.com

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1601A40-001A	PB-1-7'	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	1/27/2016 15:30	3 days		<input type="checkbox"/>	
			SW8260B (HVOCs List)			<input type="checkbox"/>					
1601A40-002A	PB-2-7'	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	1/27/2016 14:55	3 days		<input type="checkbox"/>	
			SW8260B (HVOCs List)			<input type="checkbox"/>					
1601A40-003A	PB-3-8'	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	1/27/2016 13:50	3 days		<input type="checkbox"/>	
			SW8260B (HVOCs List)			<input type="checkbox"/>					
1601A40-004A	PB-4-7'	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	1/27/2016 13:15	3 days		<input type="checkbox"/>	
			SW8260B (HVOCs List)			<input type="checkbox"/>					

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McC Campbell Analytical, Inc

1534 Willow Pass Rd. / Pittsburg, Ca. 94565-1701
www.mcccampbell.com / main@mcccampbell.com
Telephone: (877) 252-9262 / Fax: (925) 252-9269

1601 A40

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH 1 DAY 2 DAY 3 DAY 5 DAY
Geo Tracker EDF PDF EDD Write On (DW) EQuIS 10 DAY

RUSH

Effluent Sample Requiring "J" flag UST Clean Up Fund Project ; Claim # _____

Report To: Bob Clark-Riddell Bill To: Pangea
Company: Pangea Env. Svs.
Tele: (510) 836-3700 E-Mail: briddell@pangeaenv.com
Project #: _____ Project Name: _____
Project Location: 4901 Broadway Purchase Order# _____
Sampler Signature: [Signature]

Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX											METHOD PRESERVED		BTEx & TPH as Gas (8021/ 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 505/ 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB's ; 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 (200.8 / 6020)***	LUFT 5 Metals (200.8 / 6020)***	Metals (200.8 / 6020)***	Lab to Filter sample for Dissolved metals analysis	TPH scan	8010
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO ₃	Other																			
PB-1-7'		1/27/16	1530	1						X																		X	X					
PB-2-7'		1/27/16	1455	1						X																		X	X					
PB-3-8'		1/27/16	1350	1						X																	X	X						
PB-4-7'		1/27/16	1315	1						X																	X	X						

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

*** If metals are requested for water samples and the water type is not specified on the chain of custody, then MAI will default to metals by E200.8.

Relinquished By: <u>[Signature]</u>	Date: <u>1/27/16</u>	Time: <u>1930</u>	Received By: <u>[Signature]</u>	ICE/t° _____	COMMENTS:
Relinquished By:	Date:	Time:	Received By:	GOOD CONDITION _____	
Relinquished By:	Date:	Time:	Received By:	HEAD SPACE ABSENT _____	
Relinquished By:	Date:	Time:	Received By:	DECHLORINATED IN LAB _____	
Relinquished By:	Date:	Time:	Received By:	APPROPRIATE CONTAINERS _____	HAZARDOUS:
Relinquished By:	Date:	Time:	Received By:	PRESERVED IN LAB _____	
Relinquished By:	Date:	Time:	Received By:	VOAS O&G METALS OTHER _____	
Relinquished By:	Date:	Time:	Received By:	PRESERVATION _____	pH<2 _____



Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
 Project Name: **4901 Broadway**
 WorkOrder №: **1601A40** Matrix: Soil
 Carrier: Client Drop-In

Date and Time Received: **1/27/2016 19:30**
 Date Logged: **1/27/2016**
 Received by: **Jena Alfaro**
 Logged by: **Briana Cutino**

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes 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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Sample/Temp Blank temperature Temp: NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

* NOTE: If the "No" box is checked, see comments below.

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1601A41 **Amended:** 02/03/2016

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: 4901 Broadway

Project Received: 01/27/2016

Analytical Report reviewed & approved for release on 02/01/2016 by:

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.





Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 4901 Broadway
WorkOrder: 1601A41

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
e8	kerosene/kerosene range/jet fuel range



Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 4901 Broadway
WorkOrder: 1601A41

Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-1'	1601A41-001A	Soil	01/27/2016 10:40	GC18	115915
Analytes	Result	RL	DF	Date Analyzed	
Bromobenzene	ND	0.0050	1	01/29/2016 14:14	
Bromochloromethane	ND	0.0050	1	01/29/2016 14:14	
Bromodichloromethane	ND	0.0050	1	01/29/2016 14:14	
Bromoform	ND	0.0050	1	01/29/2016 14:14	
Bromomethane	ND	0.0050	1	01/29/2016 14:14	
Carbon Tetrachloride	ND	0.0050	1	01/29/2016 14:14	
Chlorobenzene	ND	0.0050	1	01/29/2016 14:14	
Chloroethane	ND	0.0050	1	01/29/2016 14:14	
Chloroform	ND	0.0050	1	01/29/2016 14:14	
Chloromethane	ND	0.0050	1	01/29/2016 14:14	
2-Chlorotoluene	ND	0.0050	1	01/29/2016 14:14	
4-Chlorotoluene	ND	0.0050	1	01/29/2016 14:14	
Dibromochloromethane	ND	0.0050	1	01/29/2016 14:14	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/29/2016 14:14	
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/29/2016 14:14	
Dibromomethane	ND	0.0050	1	01/29/2016 14:14	
1,2-Dichlorobenzene	ND	0.0050	1	01/29/2016 14:14	
1,3-Dichlorobenzene	ND	0.0050	1	01/29/2016 14:14	
1,4-Dichlorobenzene	ND	0.0050	1	01/29/2016 14:14	
Dichlorodifluoromethane	ND	0.0050	1	01/29/2016 14:14	
1,1-Dichloroethane	ND	0.0050	1	01/29/2016 14:14	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/29/2016 14:14	
1,1-Dichloroethene	ND	0.0050	1	01/29/2016 14:14	
cis-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 14:14	
trans-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 14:14	
1,2-Dichloropropane	ND	0.0050	1	01/29/2016 14:14	
1,3-Dichloropropane	ND	0.0050	1	01/29/2016 14:14	
2,2-Dichloropropane	ND	0.0050	1	01/29/2016 14:14	
1,1-Dichloropropene	ND	0.0050	1	01/29/2016 14:14	
cis-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 14:14	
trans-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 14:14	
Freon 113	ND	0.0050	1	01/29/2016 14:14	
Hexachlorobutadiene	ND	0.0050	1	01/29/2016 14:14	
Hexachloroethane	ND	0.0050	1	01/29/2016 14:14	
Methylene chloride	ND	0.0050	1	01/29/2016 14:14	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 14:14	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 14:14	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-1'	1601A41-001A	Soil	01/27/2016 10:40	GC18	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/29/2016 14:14
1,2,3-Trichlorobenzene	ND	0.0050	1	01/29/2016 14:14
1,2,4-Trichlorobenzene	ND	0.0050	1	01/29/2016 14:14
1,1,1-Trichloroethane	ND	0.0050	1	01/29/2016 14:14
1,1,2-Trichloroethane	ND	0.0050	1	01/29/2016 14:14
Trichloroethene	ND	0.0050	1	01/29/2016 14:14
Trichlorofluoromethane	ND	0.0050	1	01/29/2016 14:14
1,2,3-Trichloropropane	ND	0.0050	1	01/29/2016 14:14
Vinyl Chloride	ND	0.0050	1	01/29/2016 14:14

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	120	70-130	01/29/2016 14:14
Toluene-d8	119	70-130	01/29/2016 14:14
4-BFB	89	70-130	01/29/2016 14:14
Benzene-d6	122	60-140	01/29/2016 14:14
Ethylbenzene-d10	110	60-140	01/29/2016 14:14
1,2-DCB-d4	106	60-140	01/29/2016 14:14

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-3'	1601A41-002A	Soil	01/27/2016 10:45	GC18	116033
Analytes	Result	RL	DF	Date Analyzed	
Bromobenzene	ND	0.0050	1	01/30/2016 13:39	
Bromochloromethane	ND	0.0050	1	01/30/2016 13:39	
Bromodichloromethane	ND	0.0050	1	01/30/2016 13:39	
Bromoform	ND	0.0050	1	01/30/2016 13:39	
Bromomethane	ND	0.0050	1	01/30/2016 13:39	
Carbon Tetrachloride	ND	0.0050	1	01/30/2016 13:39	
Chlorobenzene	ND	0.0050	1	01/30/2016 13:39	
Chloroethane	ND	0.0050	1	01/30/2016 13:39	
Chloroform	ND	0.0050	1	01/30/2016 13:39	
Chloromethane	ND	0.0050	1	01/30/2016 13:39	
2-Chlorotoluene	ND	0.0050	1	01/30/2016 13:39	
4-Chlorotoluene	ND	0.0050	1	01/30/2016 13:39	
Dibromochloromethane	ND	0.0050	1	01/30/2016 13:39	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/30/2016 13:39	
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/30/2016 13:39	
Dibromomethane	ND	0.0050	1	01/30/2016 13:39	
1,2-Dichlorobenzene	ND	0.0050	1	01/30/2016 13:39	
1,3-Dichlorobenzene	ND	0.0050	1	01/30/2016 13:39	
1,4-Dichlorobenzene	ND	0.0050	1	01/30/2016 13:39	
Dichlorodifluoromethane	ND	0.0050	1	01/30/2016 13:39	
1,1-Dichloroethane	ND	0.0050	1	01/30/2016 13:39	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/30/2016 13:39	
1,1-Dichloroethene	ND	0.0050	1	01/30/2016 13:39	
cis-1,2-Dichloroethene	ND	0.0050	1	01/30/2016 13:39	
trans-1,2-Dichloroethene	ND	0.0050	1	01/30/2016 13:39	
1,2-Dichloropropane	ND	0.0050	1	01/30/2016 13:39	
1,3-Dichloropropane	ND	0.0050	1	01/30/2016 13:39	
2,2-Dichloropropane	ND	0.0050	1	01/30/2016 13:39	
1,1-Dichloropropene	ND	0.0050	1	01/30/2016 13:39	
cis-1,3-Dichloropropene	ND	0.0050	1	01/30/2016 13:39	
trans-1,3-Dichloropropene	ND	0.0050	1	01/30/2016 13:39	
Freon 113	ND	0.0050	1	01/30/2016 13:39	
Hexachlorobutadiene	ND	0.0050	1	01/30/2016 13:39	
Hexachloroethane	ND	0.0050	1	01/30/2016 13:39	
Methylene chloride	ND	0.0050	1	01/30/2016 13:39	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/30/2016 13:39	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/30/2016 13:39	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-3'	1601A41-002A	Soil	01/27/2016 10:45	GC18	116033

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/30/2016 13:39
1,2,3-Trichlorobenzene	ND	0.0050	1	01/30/2016 13:39
1,2,4-Trichlorobenzene	ND	0.0050	1	01/30/2016 13:39
1,1,1-Trichloroethane	ND	0.0050	1	01/30/2016 13:39
1,1,2-Trichloroethane	ND	0.0050	1	01/30/2016 13:39
Trichloroethene	ND	0.0050	1	01/30/2016 13:39
Trichlorofluoromethane	ND	0.0050	1	01/30/2016 13:39
1,2,3-Trichloropropane	ND	0.0050	1	01/30/2016 13:39
Vinyl Chloride	ND	0.0050	1	01/30/2016 13:39
Surrogates	REC (%)	Limits		
Dibromofluoromethane	116	70-130		01/30/2016 13:39
Toluene-d8	117	70-130		01/30/2016 13:39
4-BFB	87	70-130		01/30/2016 13:39
Benzene-d6	116	60-140		01/30/2016 13:39
Ethylbenzene-d10	109	60-140		01/30/2016 13:39
1,2-DCB-d4	109	60-140		01/30/2016 13:39

Analyst(s): KF



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-5;	1601A41-003A	Soil	01/27/2016 15:15	GC18	115915
Analytes	Result	RL	DF	Date Analyzed	
Bromobenzene	ND	0.0050	1	01/29/2016 15:31	
Bromochloromethane	ND	0.0050	1	01/29/2016 15:31	
Bromodichloromethane	ND	0.0050	1	01/29/2016 15:31	
Bromoform	ND	0.0050	1	01/29/2016 15:31	
Bromomethane	ND	0.0050	1	01/29/2016 15:31	
Carbon Tetrachloride	ND	0.0050	1	01/29/2016 15:31	
Chlorobenzene	ND	0.0050	1	01/29/2016 15:31	
Chloroethane	ND	0.0050	1	01/29/2016 15:31	
Chloroform	ND	0.0050	1	01/29/2016 15:31	
Chloromethane	ND	0.0050	1	01/29/2016 15:31	
2-Chlorotoluene	ND	0.0050	1	01/29/2016 15:31	
4-Chlorotoluene	ND	0.0050	1	01/29/2016 15:31	
Dibromochloromethane	ND	0.0050	1	01/29/2016 15:31	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/29/2016 15:31	
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/29/2016 15:31	
Dibromomethane	ND	0.0050	1	01/29/2016 15:31	
1,2-Dichlorobenzene	ND	0.0050	1	01/29/2016 15:31	
1,3-Dichlorobenzene	ND	0.0050	1	01/29/2016 15:31	
1,4-Dichlorobenzene	ND	0.0050	1	01/29/2016 15:31	
Dichlorodifluoromethane	ND	0.0050	1	01/29/2016 15:31	
1,1-Dichloroethane	ND	0.0050	1	01/29/2016 15:31	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/29/2016 15:31	
1,1-Dichloroethene	ND	0.0050	1	01/29/2016 15:31	
cis-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 15:31	
trans-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 15:31	
1,2-Dichloropropane	ND	0.0050	1	01/29/2016 15:31	
1,3-Dichloropropane	ND	0.0050	1	01/29/2016 15:31	
2,2-Dichloropropane	ND	0.0050	1	01/29/2016 15:31	
1,1-Dichloropropene	ND	0.0050	1	01/29/2016 15:31	
cis-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 15:31	
trans-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 15:31	
Freon 113	ND	0.0050	1	01/29/2016 15:31	
Hexachlorobutadiene	ND	0.0050	1	01/29/2016 15:31	
Hexachloroethane	ND	0.0050	1	01/29/2016 15:31	
Methylene chloride	ND	0.0050	1	01/29/2016 15:31	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 15:31	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 15:31	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-5;	1601A41-003A	Soil	01/27/2016 15:15	GC18	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/29/2016 15:31
1,2,3-Trichlorobenzene	ND	0.0050	1	01/29/2016 15:31
1,2,4-Trichlorobenzene	ND	0.0050	1	01/29/2016 15:31
1,1,1-Trichloroethane	ND	0.0050	1	01/29/2016 15:31
1,1,2-Trichloroethane	ND	0.0050	1	01/29/2016 15:31
Trichloroethene	ND	0.0050	1	01/29/2016 15:31
Trichlorofluoromethane	ND	0.0050	1	01/29/2016 15:31
1,2,3-Trichloropropane	ND	0.0050	1	01/29/2016 15:31
Vinyl Chloride	ND	0.0050	1	01/29/2016 15:31

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	120	70-130	01/29/2016 15:31
Toluene-d8	117	70-130	01/29/2016 15:31
4-BFB	89	70-130	01/29/2016 15:31
Benzene-d6	107	60-140	01/29/2016 15:31
Ethylbenzene-d10	100	60-140	01/29/2016 15:31
1,2-DCB-d4	102	60-140	01/29/2016 15:31

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-1'	1601A41-004A	Soil	01/27/2016 11:15	GC18	115915
Analytes	Result	RL	DF	Date Analyzed	
Bromobenzene	ND	0.0050	1	01/29/2016 16:09	
Bromochloromethane	ND	0.0050	1	01/29/2016 16:09	
Bromodichloromethane	ND	0.0050	1	01/29/2016 16:09	
Bromoform	ND	0.0050	1	01/29/2016 16:09	
Bromomethane	ND	0.0050	1	01/29/2016 16:09	
Carbon Tetrachloride	ND	0.0050	1	01/29/2016 16:09	
Chlorobenzene	ND	0.0050	1	01/29/2016 16:09	
Chloroethane	ND	0.0050	1	01/29/2016 16:09	
Chloroform	ND	0.0050	1	01/29/2016 16:09	
Chloromethane	ND	0.0050	1	01/29/2016 16:09	
2-Chlorotoluene	ND	0.0050	1	01/29/2016 16:09	
4-Chlorotoluene	ND	0.0050	1	01/29/2016 16:09	
Dibromochloromethane	ND	0.0050	1	01/29/2016 16:09	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/29/2016 16:09	
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/29/2016 16:09	
Dibromomethane	ND	0.0050	1	01/29/2016 16:09	
1,2-Dichlorobenzene	ND	0.0050	1	01/29/2016 16:09	
1,3-Dichlorobenzene	ND	0.0050	1	01/29/2016 16:09	
1,4-Dichlorobenzene	ND	0.0050	1	01/29/2016 16:09	
Dichlorodifluoromethane	ND	0.0050	1	01/29/2016 16:09	
1,1-Dichloroethane	ND	0.0050	1	01/29/2016 16:09	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/29/2016 16:09	
1,1-Dichloroethene	ND	0.0050	1	01/29/2016 16:09	
cis-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 16:09	
trans-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 16:09	
1,2-Dichloropropane	ND	0.0050	1	01/29/2016 16:09	
1,3-Dichloropropane	ND	0.0050	1	01/29/2016 16:09	
2,2-Dichloropropane	ND	0.0050	1	01/29/2016 16:09	
1,1-Dichloropropene	ND	0.0050	1	01/29/2016 16:09	
cis-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 16:09	
trans-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 16:09	
Freon 113	ND	0.0050	1	01/29/2016 16:09	
Hexachlorobutadiene	ND	0.0050	1	01/29/2016 16:09	
Hexachloroethane	ND	0.0050	1	01/29/2016 16:09	
Methylene chloride	ND	0.0050	1	01/29/2016 16:09	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 16:09	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 16:09	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-1'	1601A41-004A	Soil	01/27/2016 11:15	GC18	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/29/2016 16:09
1,2,3-Trichlorobenzene	ND	0.0050	1	01/29/2016 16:09
1,2,4-Trichlorobenzene	ND	0.0050	1	01/29/2016 16:09
1,1,1-Trichloroethane	ND	0.0050	1	01/29/2016 16:09
1,1,2-Trichloroethane	ND	0.0050	1	01/29/2016 16:09
Trichloroethene	ND	0.0050	1	01/29/2016 16:09
Trichlorofluoromethane	ND	0.0050	1	01/29/2016 16:09
1,2,3-Trichloropropane	ND	0.0050	1	01/29/2016 16:09
Vinyl Chloride	ND	0.0050	1	01/29/2016 16:09

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	119	70-130	01/29/2016 16:09
Toluene-d8	117	70-130	01/29/2016 16:09
4-BFB	88	70-130	01/29/2016 16:09
Benzene-d6	115	60-140	01/29/2016 16:09
Ethylbenzene-d10	104	60-140	01/29/2016 16:09
1,2-DCB-d4	104	60-140	01/29/2016 16:09

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-3'	1601A41-005A	Soil	01/27/2016 11:20	GC18	115915
Analytes	Result	RL	DF	Date Analyzed	
Bromobenzene	ND	0.0050	1	01/30/2016 11:43	
Bromochloromethane	ND	0.0050	1	01/30/2016 11:43	
Bromodichloromethane	ND	0.0050	1	01/30/2016 11:43	
Bromoform	ND	0.0050	1	01/30/2016 11:43	
Bromomethane	ND	0.0050	1	01/30/2016 11:43	
Carbon Tetrachloride	ND	0.0050	1	01/30/2016 11:43	
Chlorobenzene	ND	0.0050	1	01/30/2016 11:43	
Chloroethane	ND	0.0050	1	01/30/2016 11:43	
Chloroform	ND	0.0050	1	01/30/2016 11:43	
Chloromethane	ND	0.0050	1	01/30/2016 11:43	
2-Chlorotoluene	ND	0.0050	1	01/30/2016 11:43	
4-Chlorotoluene	ND	0.0050	1	01/30/2016 11:43	
Dibromochloromethane	ND	0.0050	1	01/30/2016 11:43	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/30/2016 11:43	
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/30/2016 11:43	
Dibromomethane	ND	0.0050	1	01/30/2016 11:43	
1,2-Dichlorobenzene	ND	0.0050	1	01/30/2016 11:43	
1,3-Dichlorobenzene	ND	0.0050	1	01/30/2016 11:43	
1,4-Dichlorobenzene	ND	0.0050	1	01/30/2016 11:43	
Dichlorodifluoromethane	ND	0.0050	1	01/30/2016 11:43	
1,1-Dichloroethane	ND	0.0050	1	01/30/2016 11:43	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/30/2016 11:43	
1,1-Dichloroethene	ND	0.0050	1	01/30/2016 11:43	
cis-1,2-Dichloroethene	ND	0.0050	1	01/30/2016 11:43	
trans-1,2-Dichloroethene	ND	0.0050	1	01/30/2016 11:43	
1,2-Dichloropropane	ND	0.0050	1	01/30/2016 11:43	
1,3-Dichloropropane	ND	0.0050	1	01/30/2016 11:43	
2,2-Dichloropropane	ND	0.0050	1	01/30/2016 11:43	
1,1-Dichloropropene	ND	0.0050	1	01/30/2016 11:43	
cis-1,3-Dichloropropene	ND	0.0050	1	01/30/2016 11:43	
trans-1,3-Dichloropropene	ND	0.0050	1	01/30/2016 11:43	
Freon 113	ND	0.0050	1	01/30/2016 11:43	
Hexachlorobutadiene	ND	0.0050	1	01/30/2016 11:43	
Hexachloroethane	ND	0.0050	1	01/30/2016 11:43	
Methylene chloride	ND	0.0050	1	01/30/2016 11:43	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/30/2016 11:43	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/30/2016 11:43	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-3'	1601A41-005A	Soil	01/27/2016 11:20	GC18	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/30/2016 11:43
1,2,3-Trichlorobenzene	ND	0.0050	1	01/30/2016 11:43
1,2,4-Trichlorobenzene	ND	0.0050	1	01/30/2016 11:43
1,1,1-Trichloroethane	ND	0.0050	1	01/30/2016 11:43
1,1,2-Trichloroethane	ND	0.0050	1	01/30/2016 11:43
Trichloroethene	ND	0.0050	1	01/30/2016 11:43
Trichlorofluoromethane	ND	0.0050	1	01/30/2016 11:43
1,2,3-Trichloropropane	ND	0.0050	1	01/30/2016 11:43
Vinyl Chloride	ND	0.0050	1	01/30/2016 11:43

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	117	70-130	01/30/2016 11:43
Toluene-d8	114	70-130	01/30/2016 11:43
4-BFB	89	70-130	01/30/2016 11:43
Benzene-d6	117	60-140	01/30/2016 11:43
Ethylbenzene-d10	108	60-140	01/30/2016 11:43
1,2-DCB-d4	112	60-140	01/30/2016 11:43

Analyst(s): KF



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-5'	1601A41-006A	Soil	01/27/2016 14:35	GC18	115915
Analytes	Result	RL	DF	Date Analyzed	
Bromobenzene	ND	0.0050	1	01/30/2016 12:22	
Bromochloromethane	ND	0.0050	1	01/30/2016 12:22	
Bromodichloromethane	ND	0.0050	1	01/30/2016 12:22	
Bromoform	ND	0.0050	1	01/30/2016 12:22	
Bromomethane	ND	0.0050	1	01/30/2016 12:22	
Carbon Tetrachloride	ND	0.0050	1	01/30/2016 12:22	
Chlorobenzene	ND	0.0050	1	01/30/2016 12:22	
Chloroethane	ND	0.0050	1	01/30/2016 12:22	
Chloroform	ND	0.0050	1	01/30/2016 12:22	
Chloromethane	ND	0.0050	1	01/30/2016 12:22	
2-Chlorotoluene	ND	0.0050	1	01/30/2016 12:22	
4-Chlorotoluene	ND	0.0050	1	01/30/2016 12:22	
Dibromochloromethane	ND	0.0050	1	01/30/2016 12:22	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/30/2016 12:22	
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/30/2016 12:22	
Dibromomethane	ND	0.0050	1	01/30/2016 12:22	
1,2-Dichlorobenzene	ND	0.0050	1	01/30/2016 12:22	
1,3-Dichlorobenzene	ND	0.0050	1	01/30/2016 12:22	
1,4-Dichlorobenzene	ND	0.0050	1	01/30/2016 12:22	
Dichlorodifluoromethane	ND	0.0050	1	01/30/2016 12:22	
1,1-Dichloroethane	ND	0.0050	1	01/30/2016 12:22	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/30/2016 12:22	
1,1-Dichloroethene	ND	0.0050	1	01/30/2016 12:22	
cis-1,2-Dichloroethene	ND	0.0050	1	01/30/2016 12:22	
trans-1,2-Dichloroethene	ND	0.0050	1	01/30/2016 12:22	
1,2-Dichloropropane	ND	0.0050	1	01/30/2016 12:22	
1,3-Dichloropropane	ND	0.0050	1	01/30/2016 12:22	
2,2-Dichloropropane	ND	0.0050	1	01/30/2016 12:22	
1,1-Dichloropropene	ND	0.0050	1	01/30/2016 12:22	
cis-1,3-Dichloropropene	ND	0.0050	1	01/30/2016 12:22	
trans-1,3-Dichloropropene	ND	0.0050	1	01/30/2016 12:22	
Freon 113	ND	0.0050	1	01/30/2016 12:22	
Hexachlorobutadiene	ND	0.0050	1	01/30/2016 12:22	
Hexachloroethane	ND	0.0050	1	01/30/2016 12:22	
Methylene chloride	ND	0.0050	1	01/30/2016 12:22	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/30/2016 12:22	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/30/2016 12:22	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-5'	1601A41-006A	Soil	01/27/2016 14:35	GC18	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/30/2016 12:22
1,2,3-Trichlorobenzene	ND	0.0050	1	01/30/2016 12:22
1,2,4-Trichlorobenzene	ND	0.0050	1	01/30/2016 12:22
1,1,1-Trichloroethane	ND	0.0050	1	01/30/2016 12:22
1,1,2-Trichloroethane	ND	0.0050	1	01/30/2016 12:22
Trichloroethene	ND	0.0050	1	01/30/2016 12:22
Trichlorofluoromethane	ND	0.0050	1	01/30/2016 12:22
1,2,3-Trichloropropane	ND	0.0050	1	01/30/2016 12:22
Vinyl Chloride	ND	0.0050	1	01/30/2016 12:22

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	117	70-130	01/30/2016 12:22
Toluene-d8	116	70-130	01/30/2016 12:22
4-BFB	88	70-130	01/30/2016 12:22
Benzene-d6	117	60-140	01/30/2016 12:22
Ethylbenzene-d10	109	60-140	01/30/2016 12:22
1,2-DCB-d4	109	60-140	01/30/2016 12:22

Analyst(s): KF



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-1'	1601A41-007A	Soil	01/27/2016 13:00	GC18	115915

Analytes	Result	RL	DF	Date Analyzed
Bromobenzene	ND	0.0050	1	01/30/2016 13:01
Bromochloromethane	ND	0.0050	1	01/30/2016 13:01
Bromodichloromethane	ND	0.0050	1	01/30/2016 13:01
Bromoform	ND	0.0050	1	01/30/2016 13:01
Bromomethane	ND	0.0050	1	01/30/2016 13:01
Carbon Tetrachloride	ND	0.0050	1	01/30/2016 13:01
Chlorobenzene	ND	0.0050	1	01/30/2016 13:01
Chloroethane	ND	0.0050	1	01/30/2016 13:01
Chloroform	ND	0.0050	1	01/30/2016 13:01
Chloromethane	ND	0.0050	1	01/30/2016 13:01
2-Chlorotoluene	ND	0.0050	1	01/30/2016 13:01
4-Chlorotoluene	ND	0.0050	1	01/30/2016 13:01
Dibromochloromethane	ND	0.0050	1	01/30/2016 13:01
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/30/2016 13:01
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/30/2016 13:01
Dibromomethane	ND	0.0050	1	01/30/2016 13:01
1,2-Dichlorobenzene	ND	0.0050	1	01/30/2016 13:01
1,3-Dichlorobenzene	ND	0.0050	1	01/30/2016 13:01
1,4-Dichlorobenzene	ND	0.0050	1	01/30/2016 13:01
Dichlorodifluoromethane	ND	0.0050	1	01/30/2016 13:01
1,1-Dichloroethane	ND	0.0050	1	01/30/2016 13:01
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/30/2016 13:01
1,1-Dichloroethene	ND	0.0050	1	01/30/2016 13:01
cis-1,2-Dichloroethene	ND	0.0050	1	01/30/2016 13:01
trans-1,2-Dichloroethene	ND	0.0050	1	01/30/2016 13:01
1,2-Dichloropropane	ND	0.0050	1	01/30/2016 13:01
1,3-Dichloropropane	ND	0.0050	1	01/30/2016 13:01
2,2-Dichloropropane	ND	0.0050	1	01/30/2016 13:01
1,1-Dichloropropene	ND	0.0050	1	01/30/2016 13:01
cis-1,3-Dichloropropene	ND	0.0050	1	01/30/2016 13:01
trans-1,3-Dichloropropene	ND	0.0050	1	01/30/2016 13:01
Freon 113	ND	0.0050	1	01/30/2016 13:01
Hexachlorobutadiene	ND	0.0050	1	01/30/2016 13:01
Hexachloroethane	ND	0.0050	1	01/30/2016 13:01
Methylene chloride	ND	0.0050	1	01/30/2016 13:01
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/30/2016 13:01
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/30/2016 13:01

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-1'	1601A41-007A	Soil	01/27/2016 13:00	GC18	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/30/2016 13:01
1,2,3-Trichlorobenzene	ND	0.0050	1	01/30/2016 13:01
1,2,4-Trichlorobenzene	ND	0.0050	1	01/30/2016 13:01
1,1,1-Trichloroethane	ND	0.0050	1	01/30/2016 13:01
1,1,2-Trichloroethane	ND	0.0050	1	01/30/2016 13:01
Trichloroethene	ND	0.0050	1	01/30/2016 13:01
Trichlorofluoromethane	ND	0.0050	1	01/30/2016 13:01
1,2,3-Trichloropropane	ND	0.0050	1	01/30/2016 13:01
Vinyl Chloride	ND	0.0050	1	01/30/2016 13:01
Surrogates	REC (%)	Limits		
Dibromofluoromethane	118	70-130		01/30/2016 13:01
Toluene-d8	114	70-130		01/30/2016 13:01
4-BFB	87	70-130		01/30/2016 13:01
Benzene-d6	123	60-140		01/30/2016 13:01
Ethylbenzene-d10	112	60-140		01/30/2016 13:01
1,2-DCB-d4	117	60-140		01/30/2016 13:01
Analyst(s): KF				



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-3'	1601A41-008A	Soil	01/27/2016 13:10	GC16	115915
Analytes	Result	RL	DF	Date Analyzed	
Bromobenzene	ND	0.0050	1	01/29/2016 15:16	
Bromochloromethane	ND	0.0050	1	01/29/2016 15:16	
Bromodichloromethane	ND	0.0050	1	01/29/2016 15:16	
Bromoform	ND	0.0050	1	01/29/2016 15:16	
Bromomethane	ND	0.0050	1	01/29/2016 15:16	
Carbon Tetrachloride	ND	0.0050	1	01/29/2016 15:16	
Chlorobenzene	ND	0.0050	1	01/29/2016 15:16	
Chloroethane	ND	0.0050	1	01/29/2016 15:16	
Chloroform	ND	0.0050	1	01/29/2016 15:16	
Chloromethane	ND	0.0050	1	01/29/2016 15:16	
2-Chlorotoluene	ND	0.0050	1	01/29/2016 15:16	
4-Chlorotoluene	ND	0.0050	1	01/29/2016 15:16	
Dibromochloromethane	ND	0.0050	1	01/29/2016 15:16	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/29/2016 15:16	
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/29/2016 15:16	
Dibromomethane	ND	0.0050	1	01/29/2016 15:16	
1,2-Dichlorobenzene	ND	0.0050	1	01/29/2016 15:16	
1,3-Dichlorobenzene	ND	0.0050	1	01/29/2016 15:16	
1,4-Dichlorobenzene	ND	0.0050	1	01/29/2016 15:16	
Dichlorodifluoromethane	ND	0.0050	1	01/29/2016 15:16	
1,1-Dichloroethane	ND	0.0050	1	01/29/2016 15:16	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/29/2016 15:16	
1,1-Dichloroethene	ND	0.0050	1	01/29/2016 15:16	
cis-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 15:16	
trans-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 15:16	
1,2-Dichloropropane	ND	0.0050	1	01/29/2016 15:16	
1,3-Dichloropropane	ND	0.0050	1	01/29/2016 15:16	
2,2-Dichloropropane	ND	0.0050	1	01/29/2016 15:16	
1,1-Dichloropropene	ND	0.0050	1	01/29/2016 15:16	
cis-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 15:16	
trans-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 15:16	
Freon 113	ND	0.0050	1	01/29/2016 15:16	
Hexachlorobutadiene	ND	0.0050	1	01/29/2016 15:16	
Hexachloroethane	ND	0.0050	1	01/29/2016 15:16	
Methylene chloride	ND	0.0050	1	01/29/2016 15:16	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 15:16	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 15:16	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-3'	1601A41-008A	Soil	01/27/2016 13:10	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/29/2016 15:16
1,2,3-Trichlorobenzene	ND	0.0050	1	01/29/2016 15:16
1,2,4-Trichlorobenzene	ND	0.0050	1	01/29/2016 15:16
1,1,1-Trichloroethane	ND	0.0050	1	01/29/2016 15:16
1,1,2-Trichloroethane	ND	0.0050	1	01/29/2016 15:16
Trichloroethene	ND	0.0050	1	01/29/2016 15:16
Trichlorofluoromethane	ND	0.0050	1	01/29/2016 15:16
1,2,3-Trichloropropane	ND	0.0050	1	01/29/2016 15:16
Vinyl Chloride	ND	0.0050	1	01/29/2016 15:16

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	90	70-130	01/29/2016 15:16
Toluene-d8	93	70-130	01/29/2016 15:16
4-BFB	78	70-130	01/29/2016 15:16
Benzene-d6	98	60-140	01/29/2016 15:16
Ethylbenzene-d10	101	60-140	01/29/2016 15:16
1,2-DCB-d4	77	60-140	01/29/2016 15:16

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-5'	1601A41-009A	Soil	01/27/2016 13:30	GC16	115915
Analytes	Result	RL	DF	Date Analyzed	
Bromobenzene	ND	0.0050	1	01/29/2016 15:56	
Bromochloromethane	ND	0.0050	1	01/29/2016 15:56	
Bromodichloromethane	ND	0.0050	1	01/29/2016 15:56	
Bromoform	ND	0.0050	1	01/29/2016 15:56	
Bromomethane	ND	0.0050	1	01/29/2016 15:56	
Carbon Tetrachloride	ND	0.0050	1	01/29/2016 15:56	
Chlorobenzene	ND	0.0050	1	01/29/2016 15:56	
Chloroethane	ND	0.0050	1	01/29/2016 15:56	
Chloroform	ND	0.0050	1	01/29/2016 15:56	
Chloromethane	ND	0.0050	1	01/29/2016 15:56	
2-Chlorotoluene	ND	0.0050	1	01/29/2016 15:56	
4-Chlorotoluene	ND	0.0050	1	01/29/2016 15:56	
Dibromochloromethane	ND	0.0050	1	01/29/2016 15:56	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/29/2016 15:56	
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/29/2016 15:56	
Dibromomethane	ND	0.0050	1	01/29/2016 15:56	
1,2-Dichlorobenzene	ND	0.0050	1	01/29/2016 15:56	
1,3-Dichlorobenzene	ND	0.0050	1	01/29/2016 15:56	
1,4-Dichlorobenzene	ND	0.0050	1	01/29/2016 15:56	
Dichlorodifluoromethane	ND	0.0050	1	01/29/2016 15:56	
1,1-Dichloroethane	ND	0.0050	1	01/29/2016 15:56	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/29/2016 15:56	
1,1-Dichloroethene	ND	0.0050	1	01/29/2016 15:56	
cis-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 15:56	
trans-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 15:56	
1,2-Dichloropropane	ND	0.0050	1	01/29/2016 15:56	
1,3-Dichloropropane	ND	0.0050	1	01/29/2016 15:56	
2,2-Dichloropropane	ND	0.0050	1	01/29/2016 15:56	
1,1-Dichloropropene	ND	0.0050	1	01/29/2016 15:56	
cis-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 15:56	
trans-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 15:56	
Freon 113	ND	0.0050	1	01/29/2016 15:56	
Hexachlorobutadiene	ND	0.0050	1	01/29/2016 15:56	
Hexachloroethane	ND	0.0050	1	01/29/2016 15:56	
Methylene chloride	ND	0.0050	1	01/29/2016 15:56	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 15:56	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 15:56	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.	WorkOrder: 1601A41
Date Received: 1/27/16 19:52	Extraction Method: SW5030B
Date Prepared: 1/27/16-1/30/16	Analytical Method: SW8260B
Project: 4901 Broadway	Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-5'	1601A41-009A	Soil	01/27/2016 13:30	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/29/2016 15:56
1,2,3-Trichlorobenzene	ND	0.0050	1	01/29/2016 15:56
1,2,4-Trichlorobenzene	ND	0.0050	1	01/29/2016 15:56
1,1,1-Trichloroethane	ND	0.0050	1	01/29/2016 15:56
1,1,2-Trichloroethane	ND	0.0050	1	01/29/2016 15:56
Trichloroethene	ND	0.0050	1	01/29/2016 15:56
Trichlorofluoromethane	ND	0.0050	1	01/29/2016 15:56
1,2,3-Trichloropropane	ND	0.0050	1	01/29/2016 15:56
Vinyl Chloride	ND	0.0050	1	01/29/2016 15:56
Surrogates	REC (%)	Limits		Date Analyzed
Dibromofluoromethane	89	70-130		01/29/2016 15:56
Toluene-d8	94	70-130		01/29/2016 15:56
4-BFB	75	70-130		01/29/2016 15:56
Benzene-d6	99	60-140		01/29/2016 15:56
Ethylbenzene-d10	101	60-140		01/29/2016 15:56
1,2-DCB-d4	79	60-140		01/29/2016 15:56
Analyst(s): AK				



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-1'	1601A41-010A	Soil	01/27/2016 12:15	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Bromobenzene	ND	0.0050	1	01/29/2016 16:35
Bromochloromethane	ND	0.0050	1	01/29/2016 16:35
Bromodichloromethane	ND	0.0050	1	01/29/2016 16:35
Bromoform	ND	0.0050	1	01/29/2016 16:35
Bromomethane	ND	0.0050	1	01/29/2016 16:35
Carbon Tetrachloride	ND	0.0050	1	01/29/2016 16:35
Chlorobenzene	ND	0.0050	1	01/29/2016 16:35
Chloroethane	ND	0.0050	1	01/29/2016 16:35
Chloroform	ND	0.0050	1	01/29/2016 16:35
Chloromethane	ND	0.0050	1	01/29/2016 16:35
2-Chlorotoluene	ND	0.0050	1	01/29/2016 16:35
4-Chlorotoluene	ND	0.0050	1	01/29/2016 16:35
Dibromochloromethane	ND	0.0050	1	01/29/2016 16:35
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/29/2016 16:35
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/29/2016 16:35
Dibromomethane	ND	0.0050	1	01/29/2016 16:35
1,2-Dichlorobenzene	ND	0.0050	1	01/29/2016 16:35
1,3-Dichlorobenzene	ND	0.0050	1	01/29/2016 16:35
1,4-Dichlorobenzene	ND	0.0050	1	01/29/2016 16:35
Dichlorodifluoromethane	ND	0.0050	1	01/29/2016 16:35
1,1-Dichloroethane	ND	0.0050	1	01/29/2016 16:35
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/29/2016 16:35
1,1-Dichloroethene	ND	0.0050	1	01/29/2016 16:35
cis-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 16:35
trans-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 16:35
1,2-Dichloropropane	ND	0.0050	1	01/29/2016 16:35
1,3-Dichloropropane	ND	0.0050	1	01/29/2016 16:35
2,2-Dichloropropane	ND	0.0050	1	01/29/2016 16:35
1,1-Dichloropropene	ND	0.0050	1	01/29/2016 16:35
cis-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 16:35
trans-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 16:35
Freon 113	ND	0.0050	1	01/29/2016 16:35
Hexachlorobutadiene	ND	0.0050	1	01/29/2016 16:35
Hexachloroethane	ND	0.0050	1	01/29/2016 16:35
Methylene chloride	ND	0.0050	1	01/29/2016 16:35
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 16:35
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 16:35

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-1'	1601A41-010A	Soil	01/27/2016 12:15	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/29/2016 16:35
1,2,3-Trichlorobenzene	ND	0.0050	1	01/29/2016 16:35
1,2,4-Trichlorobenzene	ND	0.0050	1	01/29/2016 16:35
1,1,1-Trichloroethane	ND	0.0050	1	01/29/2016 16:35
1,1,2-Trichloroethane	ND	0.0050	1	01/29/2016 16:35
Trichloroethene	ND	0.0050	1	01/29/2016 16:35
Trichlorofluoromethane	ND	0.0050	1	01/29/2016 16:35
1,2,3-Trichloropropane	ND	0.0050	1	01/29/2016 16:35
Vinyl Chloride	ND	0.0050	1	01/29/2016 16:35

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	89	70-130	01/29/2016 16:35
Toluene-d8	94	70-130	01/29/2016 16:35
4-BFB	78	70-130	01/29/2016 16:35
Benzene-d6	99	60-140	01/29/2016 16:35
Ethylbenzene-d10	103	60-140	01/29/2016 16:35
1,2-DCB-d4	80	60-140	01/29/2016 16:35

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-3'	1601A41-011A	Soil	01/27/2016 12:25	GC16	115915
Analytes	Result	RL	DF	Date Analyzed	
Bromobenzene	ND	0.0050	1	01/29/2016 17:15	
Bromochloromethane	ND	0.0050	1	01/29/2016 17:15	
Bromodichloromethane	ND	0.0050	1	01/29/2016 17:15	
Bromoform	ND	0.0050	1	01/29/2016 17:15	
Bromomethane	ND	0.0050	1	01/29/2016 17:15	
Carbon Tetrachloride	ND	0.0050	1	01/29/2016 17:15	
Chlorobenzene	ND	0.0050	1	01/29/2016 17:15	
Chloroethane	ND	0.0050	1	01/29/2016 17:15	
Chloroform	ND	0.0050	1	01/29/2016 17:15	
Chloromethane	ND	0.0050	1	01/29/2016 17:15	
2-Chlorotoluene	ND	0.0050	1	01/29/2016 17:15	
4-Chlorotoluene	ND	0.0050	1	01/29/2016 17:15	
Dibromochloromethane	ND	0.0050	1	01/29/2016 17:15	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/29/2016 17:15	
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/29/2016 17:15	
Dibromomethane	ND	0.0050	1	01/29/2016 17:15	
1,2-Dichlorobenzene	ND	0.0050	1	01/29/2016 17:15	
1,3-Dichlorobenzene	ND	0.0050	1	01/29/2016 17:15	
1,4-Dichlorobenzene	ND	0.0050	1	01/29/2016 17:15	
Dichlorodifluoromethane	ND	0.0050	1	01/29/2016 17:15	
1,1-Dichloroethane	ND	0.0050	1	01/29/2016 17:15	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/29/2016 17:15	
1,1-Dichloroethene	ND	0.0050	1	01/29/2016 17:15	
cis-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 17:15	
trans-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 17:15	
1,2-Dichloropropane	ND	0.0050	1	01/29/2016 17:15	
1,3-Dichloropropane	ND	0.0050	1	01/29/2016 17:15	
2,2-Dichloropropane	ND	0.0050	1	01/29/2016 17:15	
1,1-Dichloropropene	ND	0.0050	1	01/29/2016 17:15	
cis-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 17:15	
trans-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 17:15	
Freon 113	ND	0.0050	1	01/29/2016 17:15	
Hexachlorobutadiene	ND	0.0050	1	01/29/2016 17:15	
Hexachloroethane	ND	0.0050	1	01/29/2016 17:15	
Methylene chloride	ND	0.0050	1	01/29/2016 17:15	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 17:15	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 17:15	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/30/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-3'	1601A41-011A	Soil	01/27/2016 12:25	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.0050	1	01/29/2016 17:15
1,2,3-Trichlorobenzene	ND	0.0050	1	01/29/2016 17:15
1,2,4-Trichlorobenzene	ND	0.0050	1	01/29/2016 17:15
1,1,1-Trichloroethane	ND	0.0050	1	01/29/2016 17:15
1,1,2-Trichloroethane	ND	0.0050	1	01/29/2016 17:15
Trichloroethene	ND	0.0050	1	01/29/2016 17:15
Trichlorofluoromethane	ND	0.0050	1	01/29/2016 17:15
1,2,3-Trichloropropane	ND	0.0050	1	01/29/2016 17:15
Vinyl Chloride	ND	0.0050	1	01/29/2016 17:15

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	89	70-130	01/29/2016 17:15
Toluene-d8	95	70-130	01/29/2016 17:15
4-BFB	75	70-130	01/29/2016 17:15
Benzene-d6	95	60-140	01/29/2016 17:15
Ethylbenzene-d10	98	60-140	01/29/2016 17:15
1,2-DCB-d4	79	60-140	01/29/2016 17:15

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-5'	1601A41-012A	Soil	01/27/2016 12:55	GC16	115915
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	01/29/2016 17:55	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	01/29/2016 17:55	
Benzene	ND	0.0050	1	01/29/2016 17:55	
Bromobenzene	ND	0.0050	1	01/29/2016 17:55	
Bromochloromethane	ND	0.0050	1	01/29/2016 17:55	
Bromodichloromethane	ND	0.0050	1	01/29/2016 17:55	
Bromoform	ND	0.0050	1	01/29/2016 17:55	
Bromomethane	ND	0.0050	1	01/29/2016 17:55	
2-Butanone (MEK)	ND	0.020	1	01/29/2016 17:55	
t-Butyl alcohol (TBA)	ND	0.050	1	01/29/2016 17:55	
n-Butyl benzene	ND	0.0050	1	01/29/2016 17:55	
sec-Butyl benzene	ND	0.0050	1	01/29/2016 17:55	
tert-Butyl benzene	ND	0.0050	1	01/29/2016 17:55	
Carbon Disulfide	ND	0.0050	1	01/29/2016 17:55	
Carbon Tetrachloride	ND	0.0050	1	01/29/2016 17:55	
Chlorobenzene	ND	0.0050	1	01/29/2016 17:55	
Chloroethane	ND	0.0050	1	01/29/2016 17:55	
Chloroform	ND	0.0050	1	01/29/2016 17:55	
Chloromethane	ND	0.0050	1	01/29/2016 17:55	
2-Chlorotoluene	ND	0.0050	1	01/29/2016 17:55	
4-Chlorotoluene	ND	0.0050	1	01/29/2016 17:55	
Dibromochloromethane	ND	0.0050	1	01/29/2016 17:55	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	01/29/2016 17:55	
1,2-Dibromoethane (EDB)	ND	0.0040	1	01/29/2016 17:55	
Dibromomethane	ND	0.0050	1	01/29/2016 17:55	
1,2-Dichlorobenzene	ND	0.0050	1	01/29/2016 17:55	
1,3-Dichlorobenzene	ND	0.0050	1	01/29/2016 17:55	
1,4-Dichlorobenzene	ND	0.0050	1	01/29/2016 17:55	
Dichlorodifluoromethane	ND	0.0050	1	01/29/2016 17:55	
1,1-Dichloroethane	ND	0.0050	1	01/29/2016 17:55	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	01/29/2016 17:55	
1,1-Dichloroethene	ND	0.0050	1	01/29/2016 17:55	
cis-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 17:55	
trans-1,2-Dichloroethene	ND	0.0050	1	01/29/2016 17:55	
1,2-Dichloropropane	ND	0.0050	1	01/29/2016 17:55	
1,3-Dichloropropane	ND	0.0050	1	01/29/2016 17:55	
2,2-Dichloropropane	ND	0.0050	1	01/29/2016 17:55	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-45'	1601A41-012A	Soil	01/27/2016 12:55	GC16	115915
Analytes	Result	RL	DF	Date Analyzed	
1,1-Dichloropropene	ND	0.0050	1	01/29/2016 17:55	
cis-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 17:55	
trans-1,3-Dichloropropene	ND	0.0050	1	01/29/2016 17:55	
Diisopropyl ether (DIPE)	ND	0.0050	1	01/29/2016 17:55	
Ethylbenzene	ND	0.0050	1	01/29/2016 17:55	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	01/29/2016 17:55	
Freon 113	ND	0.0050	1	01/29/2016 17:55	
Hexachlorobutadiene	ND	0.0050	1	01/29/2016 17:55	
Hexachloroethane	ND	0.0050	1	01/29/2016 17:55	
2-Hexanone	ND	0.0050	1	01/29/2016 17:55	
Isopropylbenzene	ND	0.0050	1	01/29/2016 17:55	
4-Isopropyl toluene	ND	0.0050	1	01/29/2016 17:55	
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	01/29/2016 17:55	
Methylene chloride	ND	0.0050	1	01/29/2016 17:55	
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	01/29/2016 17:55	
Naphthalene	ND	0.0050	1	01/29/2016 17:55	
n-Propyl benzene	ND	0.0050	1	01/29/2016 17:55	
Styrene	ND	0.0050	1	01/29/2016 17:55	
1,1,1,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 17:55	
1,1,2,2-Tetrachloroethane	ND	0.0050	1	01/29/2016 17:55	
Tetrachloroethene	ND	0.0050	1	01/29/2016 17:55	
Toluene	ND	0.0050	1	01/29/2016 17:55	
1,2,3-Trichlorobenzene	ND	0.0050	1	01/29/2016 17:55	
1,2,4-Trichlorobenzene	ND	0.0050	1	01/29/2016 17:55	
1,1,1-Trichloroethane	ND	0.0050	1	01/29/2016 17:55	
1,1,2-Trichloroethane	ND	0.0050	1	01/29/2016 17:55	
Trichloroethene	ND	0.0050	1	01/29/2016 17:55	
Trichlorofluoromethane	ND	0.0050	1	01/29/2016 17:55	
1,2,3-Trichloropropane	ND	0.0050	1	01/29/2016 17:55	
1,2,4-Trimethylbenzene	ND	0.0050	1	01/29/2016 17:55	
1,3,5-Trimethylbenzene	ND	0.0050	1	01/29/2016 17:55	
Vinyl Chloride	ND	0.0050	1	01/29/2016 17:55	
Xylenes, Total	ND	0.0050	1	01/29/2016 17:55	

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Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-5'	1601A41-012A	Soil	01/27/2016 12:55	GC16	115915

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	89	70-130		01/29/2016 17:55
Toluene-d8	93	70-130		01/29/2016 17:55
4-BFB	83	70-130		01/29/2016 17:55
Benzene-d6	100	60-140		01/29/2016 17:55
Ethylbenzene-d10	102	60-140		01/29/2016 17:55
1,2-DCB-d4	80	60-140		01/29/2016 17:55

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.	WorkOrder: 1601A41
Date Received: 1/27/16 19:52	Extraction Method: SW5030B
Date Prepared: 1/27/16-1/29/16	Analytical Method: SW8021B/8015Bm
Project: 4901 Broadway	Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-1'	1601A41-001A	Soil	01/27/2016 10:40	GC7	115911

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/28/2016 14:19
MTBE	---	0.050	1	01/28/2016 14:19
Benzene	---	0.0050	1	01/28/2016 14:19
Toluene	---	0.0050	1	01/28/2016 14:19
Ethylbenzene	---	0.0050	1	01/28/2016 14:19
Xylenes	---	0.015	1	01/28/2016 14:19
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	91	70-130		01/28/2016 14:19

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-3'	1601A41-002A	Soil	01/27/2016 10:45	GC7	115911

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/28/2016 14:49
MTBE	---	0.050	1	01/28/2016 14:49
Benzene	---	0.0050	1	01/28/2016 14:49
Toluene	---	0.0050	1	01/28/2016 14:49
Ethylbenzene	---	0.0050	1	01/28/2016 14:49
Xylenes	---	0.015	1	01/28/2016 14:49
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	93	70-130		01/28/2016 14:49

Analyst(s): IA



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/29/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-5;	1601A41-003A	Soil	01/27/2016 15:15	GC7	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/28/2016 01:06
MTBE	---	0.050	1	01/28/2016 01:06
Benzene	---	0.0050	1	01/28/2016 01:06
Toluene	---	0.0050	1	01/28/2016 01:06
Ethylbenzene	---	0.0050	1	01/28/2016 01:06
Xylenes	---	0.015	1	01/28/2016 01:06
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	95	70-130		01/28/2016 01:06

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-1'	1601A41-004A	Soil	01/27/2016 11:15	GC19	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/28/2016 18:50
MTBE	---	0.050	1	01/28/2016 18:50
Benzene	---	0.0050	1	01/28/2016 18:50
Toluene	---	0.0050	1	01/28/2016 18:50
Ethylbenzene	---	0.0050	1	01/28/2016 18:50
Xylenes	---	0.015	1	01/28/2016 18:50
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	104	70-130		01/28/2016 18:50

Analyst(s): SS



Analytical Report

Client: Pangea Environmental Svcs., Inc.	WorkOrder: 1601A41
Date Received: 1/27/16 19:52	Extraction Method: SW5030B
Date Prepared: 1/27/16-1/29/16	Analytical Method: SW8021B/8015Bm
Project: 4901 Broadway	Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-3'	1601A41-005A	Soil	01/27/2016 11:20	GC7	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/28/2016 15:20
MTBE	---	0.050	1	01/28/2016 15:20
Benzene	---	0.0050	1	01/28/2016 15:20
Toluene	---	0.0050	1	01/28/2016 15:20
Ethylbenzene	---	0.0050	1	01/28/2016 15:20
Xylenes	---	0.015	1	01/28/2016 15:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	84	70-130		01/28/2016 15:20

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-5'	1601A41-006A	Soil	01/27/2016 14:35	GC19	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/28/2016 17:19
MTBE	---	0.050	1	01/28/2016 17:19
Benzene	---	0.0050	1	01/28/2016 17:19
Toluene	---	0.0050	1	01/28/2016 17:19
Ethylbenzene	---	0.0050	1	01/28/2016 17:19
Xylenes	---	0.015	1	01/28/2016 17:19
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	103	70-130		01/28/2016 17:19

Analyst(s): SS

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/29/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-1'	1601A41-007A	Soil	01/27/2016 13:00	GC7	116021

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/30/2016 02:20
MTBE	---	0.050	1	01/30/2016 02:20
Benzene	---	0.0050	1	01/30/2016 02:20
Toluene	---	0.0050	1	01/30/2016 02:20
Ethylbenzene	---	0.0050	1	01/30/2016 02:20
Xylenes	---	0.015	1	01/30/2016 02:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	99	70-130		01/30/2016 02:20

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-3'	1601A41-008A	Soil	01/27/2016 13:10	GC7	116021

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/30/2016 03:21
MTBE	---	0.050	1	01/30/2016 03:21
Benzene	---	0.0050	1	01/30/2016 03:21
Toluene	---	0.0050	1	01/30/2016 03:21
Ethylbenzene	---	0.0050	1	01/30/2016 03:21
Xylenes	---	0.015	1	01/30/2016 03:21
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	98	70-130		01/30/2016 03:21

Analyst(s): TD

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.	WorkOrder: 1601A41
Date Received: 1/27/16 19:52	Extraction Method: SW5030B
Date Prepared: 1/27/16-1/29/16	Analytical Method: SW8021B/8015Bm
Project: 4901 Broadway	Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-5'	1601A41-009A	Soil	01/27/2016 13:30	GC19	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/28/2016 20:52
MTBE	---	0.050	1	01/28/2016 20:52
Benzene	---	0.0050	1	01/28/2016 20:52
Toluene	---	0.0050	1	01/28/2016 20:52
Ethylbenzene	---	0.0050	1	01/28/2016 20:52
Xylenes	---	0.015	1	01/28/2016 20:52
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	113	70-130		01/28/2016 20:52

Analyst(s): SS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-1'	1601A41-010A	Soil	01/27/2016 12:15	GC19	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/28/2016 21:22
MTBE	---	0.050	1	01/28/2016 21:22
Benzene	---	0.0050	1	01/28/2016 21:22
Toluene	---	0.0050	1	01/28/2016 21:22
Ethylbenzene	---	0.0050	1	01/28/2016 21:22
Xylenes	---	0.015	1	01/28/2016 21:22
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	110	70-130		01/28/2016 21:22

Analyst(s): SS

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16-1/29/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-3'	1601A41-011A	Soil	01/27/2016 12:25	GC19	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	01/28/2016 22:23
MTBE	---	0.050	1	01/28/2016 22:23
Benzene	---	0.0050	1	01/28/2016 22:23
Toluene	---	0.0050	1	01/28/2016 22:23
Ethylbenzene	---	0.0050	1	01/28/2016 22:23
Xylenes	---	0.015	1	01/28/2016 22:23
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	107	70-130		01/28/2016 22:23

Analyst(s): SS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-5'	1601A41-012A	Soil	01/27/2016 12:55	GC19	115921

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	20	1.0	1	01/28/2016 23:23
MTBE	---	0.050	1	01/28/2016 23:23
Benzene	---	0.0050	1	01/28/2016 23:23
Toluene	---	0.0050	1	01/28/2016 23:23
Ethylbenzene	---	0.0050	1	01/28/2016 23:23
Xylenes	---	0.015	1	01/28/2016 23:23
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	105	70-130		01/28/2016 23:23

Analyst(s): SS

Analytical Comments: d7



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-1'	1601A41-001A	Soil	01/27/2016 10:40	GC11A	115861
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	4.2		1.0	1	01/28/2016 03:07
TPH-Motor Oil (C18-C36)	62		5.0	1	01/28/2016 03:07
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	87		70-130		01/28/2016 03:07
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e2		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-3'	1601A41-002A	Soil	01/27/2016 10:45	GC6B	115861
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	3.2		1.0	1	01/28/2016 06:51
TPH-Motor Oil (C18-C36)	79		5.0	1	01/28/2016 06:51
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	95		70-130		01/28/2016 06:51
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e2		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-5;	1601A41-003A	Soil	01/27/2016 15:15	GC6B	115861
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	2.0		1.0	1	01/28/2016 04:29
TPH-Motor Oil (C18-C36)	28		5.0	1	01/28/2016 04:29
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	97		70-130		01/28/2016 04:29
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e2		

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-1'	1601A41-004A	Soil	01/27/2016 11:15	GC6A	115861
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	3.6		2.0	2	01/28/2016 05:40
TPH-Motor Oil (C18-C36)	61		10	2	01/28/2016 05:40
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	91		70-130		01/28/2016 05:40
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7,e2		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-3'	1601A41-005A	Soil	01/27/2016 11:20	GC39A	115861
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		1.0	1	01/28/2016 13:59
TPH-Motor Oil (C18-C36)	5.9		5.0	1	01/28/2016 13:59
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	98		70-130		01/28/2016 13:59
<u>Analyst(s):</u> TK			<u>Analytical Comments:</u> e7		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-5'	1601A41-006A	Soil	01/27/2016 14:35	GC39A	115861
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND		1.0	1	01/28/2016 12:02
TPH-Motor Oil (C18-C36)	ND		5.0	1	01/28/2016 12:02
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
C9	99		70-130		01/28/2016 12:02
<u>Analyst(s):</u> TK					

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-1'	1601A41-007A	Soil	01/27/2016 13:00	GC39A	115861

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	01/28/2016 12:41
TPH-Motor Oil (C18-C36)	ND	5.0	1	01/28/2016 12:41
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
C9	99	70-130		01/28/2016 12:41

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-3'	1601A41-008A	Soil	01/27/2016 13:10	GC39A	115861

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	01/28/2016 13:20
TPH-Motor Oil (C18-C36)	ND	5.0	1	01/28/2016 13:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
C9	99	70-130		01/28/2016 13:20

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-5'	1601A41-009A	Soil	01/27/2016 13:30	GC11A	115861

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1.0	1.0	1	01/28/2016 07:41
TPH-Motor Oil (C18-C36)	13	5.0	1	01/28/2016 07:41
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
C9	87	70-130		01/28/2016 07:41

Analyst(s): TK Analytical Comments: e7,e2



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/27/16 19:52
Date Prepared: 1/27/16
Project: 4901 Broadway

WorkOrder: 1601A41
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-1'	1601A41-010A	Soil	01/27/2016 12:15	GC11A	115920

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	01/28/2016 08:50
TPH-Motor Oil (C18-C36)	9.5	5.0	1	01/28/2016 08:50
Surrogates	REC (%)	Limits		
C9	87	70-130		01/28/2016 08:50
Analyst(s): TK		Analytical Comments: e7		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-3'	1601A41-011A	Soil	01/27/2016 12:25	GC39B	115920

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	01/28/2016 13:20
TPH-Motor Oil (C18-C36)	ND	5.0	1	01/28/2016 13:20
Surrogates	REC (%)	Limits		
C9	100	70-130		01/28/2016 13:20
Analyst(s): TK				

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-5'	1601A41-012A	Soil	01/27/2016 12:55	GC39B	115920

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	110	20	20	01/28/2016 13:59
TPH-Motor Oil (C18-C36)	490	100	20	01/28/2016 13:59
Surrogates	REC (%)	Limits		
C9	100	70-130		01/28/2016 13:59
Analyst(s): TK		Analytical Comments: e7,e8		



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/27/16
Date Analyzed: 1/28/16
Instrument: GC10
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A41
BatchID: 115915
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-115915
 1601A31-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0456	0.0050	0.050	-	91	77-121
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	0.0399	0.0040	0.050	-	80	67-119
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	0.0410	0.0040	0.050	-	82	58-135
1,1-Dichloroethene	ND	0.0417	0.0050	0.050	-	83	42-145
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	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-

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Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/27/16
Date Analyzed: 1/28/16
Instrument: GC10
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A41
BatchID: 115915
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-115915
 1601A31-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	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	0.0470	0.0050	0.050	-	94	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	0.124	0.131		0.12	99	105	70-130
Toluene-d8	0.135	0.133		0.12	108	106	70-130
4-BFB	0.0144	0.0154		0.012	115	124	70-130
Benzene-d6	0.0980	0.110		0.10	98	110	60-140
Ethylbenzene-d10	0.110	0.121		0.10	110	121	60-140
1,2-DCB-d4	0.0956	0.0981		0.10	96	98	60-140

(Cont.)



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/27/16
Date Analyzed: 1/28/16
Instrument: GC10
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A41
BatchID: 115915
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-115915
 1601A31-003BMS/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
Chlorobenzene	0.0390	0.0416	0.050	ND	78	83	70-130	6.26	20
1,2-Dibromoethane (EDB)	0.0347	0.0378	0.050	ND	69,F1	76	70-130	8.57	20
1,2-Dichloroethane (1,2-DCA)	0.0359	0.0381	0.050	ND	72	76	70-130	5.84	20
1,1-Dichloroethene	0.0467	0.0408	0.050	ND	93	82	70-130	13.5	20
Trichloroethene	0.0774	0.0796	0.050	ND	155,F1	159,F1	70-130	2.79	20
Surrogate Recovery									
Dibromofluoromethane	0.132	0.132	0.12		105	106	70-130	0.323	20
Toluene-d8	0.130	0.131	0.12		104	104	70-130	0	20
4-BFB	0.0154	0.0156	0.012		123	124	70-130	0.966	20
Benzene-d6	0.0978	0.0998	0.10		98	100	60-140	2.01	20
Ethylbenzene-d10	0.106	0.108	0.10		106	108	60-140	1.59	20
1,2-DCB-d4	0.0891	0.0905	0.10		89	90	60-140	1.57	20

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Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/29/16
Date Analyzed: 1/30/16
Instrument: GC16
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A41
BatchID: 116033
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-116033

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0510	0.0050	0.050	-	102	77-121
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	0.0485	0.0040	0.050	-	97	67-119
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	0.0478	0.0040	0.050	-	96	58-135
1,1-Dichloroethene	ND	0.0443	0.0050	0.050	-	89	42-145
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	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
Methylene chloride	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-

(Cont.)



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/29/16
Date Analyzed: 1/30/16
Instrument: GC16
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A41
BatchID: 116033
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/Kg
Sample ID: MB/LCS-116033

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	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	0.0558	0.0050	0.050	-	112	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	0.110	0.109		0.12	88	87	70-130
Toluene-d8	0.118	0.117		0.12	95	94	70-130
4-BFB	0.0119	0.0124		0.012	96	99	70-130
Benzene-d6	0.102	0.110		0.10	102	110	60-140
Ethylbenzene-d10	0.109	0.121		0.10	109	121	60-140
1,2-DCB-d4	0.0769	0.0900		0.10	77	90	60-140



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/26/16
Date Analyzed: 1/26/16 - 1/27/16
Instrument: GC11A, GC39A
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A41
BatchID: 115861
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-115861
 1601985-001AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	36.9	1.0	40	-	92	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	25.2	22.6		25	101	90	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	40.1	41.6	40	2.116	95	99	70-130	3.83	30
Surrogate Recovery									
C9	22.8	22.9	25		91	92	70-130	0.644	30



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/27/16
Date Analyzed: 1/27/16
Instrument: GC7
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A41
BatchID: 115911
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-115911
 1601A13-010AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.518	0.40	0.60	-	86	70-130
MTBE	ND	0.0717	0.050	0.10	-	72	70-130
Benzene	ND	0.0875	0.0050	0.10	-	88	70-130
Toluene	ND	0.0906	0.0050	0.10	-	91	70-130
Ethylbenzene	ND	0.0950	0.0050	0.10	-	95	70-130
Xylenes	ND	0.302	0.015	0.30	-	101	70-130

Surrogate Recovery

2-Fluorotoluene	0.106	0.113		0.10	106	113	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.544	0.534	0.60	ND	91	89	70-130	1.84	20
MTBE	0.0764	0.0776	0.10	ND	76	78	70-130	1.53	20
Benzene	0.0916	0.0910	0.10	ND	92	91	70-130	0.653	20
Toluene	0.0938	0.0928	0.10	ND	94	93	70-130	1.07	20
Ethylbenzene	0.0963	0.0959	0.10	ND	96	96	70-130	0	20
Xylenes	0.303	0.304	0.30	ND	101	101	70-130	0	20

Surrogate Recovery

2-Fluorotoluene	0.108	0.107	0.10		108	107	70-130	0.684	20
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Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/27/16
Date Analyzed: 1/28/16
Instrument: GC2B
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A41
BatchID: 115920
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-115920
 1601A41-010AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	44.9	1.0	40	-	112	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	24.1	24.3		25	96	97	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	47.1	45.8	40	ND	116	112	70-130	2.71	30
Surrogate Recovery									
C9	24.2	24.0	25		97	96	70-130	1.09	30



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/27/16
Date Analyzed: 1/28/16
Instrument: GC19
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A41
BatchID: 115921
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-115921
 1601A41-003AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.580	0.40	0.60	-	97	70-130
MTBE	ND	0.0782	0.050	0.10	-	78	70-130
Benzene	ND	0.0961	0.0050	0.10	-	96	70-130
Toluene	ND	0.104	0.0050	0.10	-	104	70-130
Ethylbenzene	ND	0.110	0.0050	0.10	-	110	70-130
Xylenes	ND	0.346	0.015	0.30	-	115	70-130

Surrogate Recovery

2-Fluorotoluene	0.115	0.122		0.10	115	122	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.511	0.531	0.60	ND	85	89	70-130	3.80	20
MTBE	0.0745	0.0717	0.10	ND	75	72	70-130	3.92	20
Benzene	0.0879	0.0808	0.10	ND	88	81	70-130	8.45	20
Toluene	0.0955	0.0887	0.10	ND	95	89	70-130	7.32	20
Ethylbenzene	0.102	0.0947	0.10	ND	102	95	70-130	7.83	20
Xylenes	0.323	0.298	0.30	ND	108	99	70-130	7.98	20

Surrogate Recovery

2-Fluorotoluene	0.112	0.101	0.10		112	101	70-130	10.3	20
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Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/29/16
Date Analyzed: 1/30/16
Instrument: GC3
Matrix: Soil
Project: 4901 Broadway

WorkOrder: 1601A41
BatchID: 116021
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-116021
 1601B53-010AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.605	0.40	0.60	-	101	70-130
MTBE	ND	0.0915	0.050	0.10	-	91	70-130
Benzene	ND	0.0968	0.0050	0.10	-	97	70-130
Toluene	ND	0.100	0.0050	0.10	-	100	70-130
Ethylbenzene	ND	0.0998	0.0050	0.10	-	100	70-130
Xylenes	ND	0.305	0.015	0.30	-	102	70-130

Surrogate Recovery

2-Fluorotoluene	0.104	0.102		0.10	104	102	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.579	0.563	0.60	ND	96	94	70-130	2.77	20
MTBE	0.0698	0.0731	0.10	ND	70	73	70-130	4.65	20
Benzene	0.0877	0.0899	0.10	ND	88	90	70-130	2.51	20
Toluene	0.0908	0.0927	0.10	ND	91	93	70-130	2.09	20
Ethylbenzene	0.0914	0.0927	0.10	ND	91	93	70-130	1.35	20
Xylenes	0.275	0.281	0.30	ND	92	94	70-130	2.29	20

Surrogate Recovery

2-Fluorotoluene	0.0932	0.0951	0.10		93	95	70-130	2.03	20
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1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1601A41

ClientCode: PEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: BRiddell@pangeaenv.com
cc/3rd Party:
PO:
ProjectNo: 4901 Broadway

Bill to:

Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 3 days;

Date Received: 01/27/2016

Date Logged: 01/27/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1601A41-001	PB-1-1'	Soil	1/27/2016 10:40	<input type="checkbox"/>	A		A	A								
1601A41-002	PB-1-3'	Soil	1/27/2016 10:45	<input type="checkbox"/>	A		A	A								
1601A41-003	PB-1-5;	Soil	1/27/2016 15:15	<input type="checkbox"/>	A		A	A								
1601A41-004	PB-2-1'	Soil	1/27/2016 11:15	<input type="checkbox"/>	A		A	A								
1601A41-005	PB-2-3'	Soil	1/27/2016 11:20	<input type="checkbox"/>	A		A	A								
1601A41-006	PB-2-5'	Soil	1/27/2016 14:35	<input type="checkbox"/>	A		A	A								
1601A41-007	PB-3-1'	Soil	1/27/2016 13:00	<input type="checkbox"/>	A		A	A								
1601A41-008	PB-3-3'	Soil	1/27/2016 13:10	<input type="checkbox"/>	A		A	A								
1601A41-009	PB-3-5'	Soil	1/27/2016 13:30	<input type="checkbox"/>	A		A	A								
1601A41-010	PB-4-1'	Soil	1/27/2016 12:15	<input type="checkbox"/>	A		A	A								
1601A41-011	PB-4-3'	Soil	1/27/2016 12:25	<input type="checkbox"/>	A		A	A								
1601A41-012	PB-4-5'	Soil	1/27/2016 12:55	<input type="checkbox"/>		A	A	A								

Test Legend:

1	8010BMS_S	2	8260B_S	3	G-MBTX_S	4	TPH(DMO)_S
5		6		7		8	
9		10		11		12	

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A contain testgroup.

Prepared by: Briana Cutino

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.



WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.

QC Level: LEVEL 2

Work Order: 1601A41

Project: 4901 Broadway

Client Contact: Bob Clark-Riddell

Date Logged: 1/27/2016

Comments:

Contact's Email: BRiddell@pangeaenv.com

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1601A41-001A	PB-1-1'	Soil	Multi-Range TPH(g,d,mo) SW8260B (HVOCs List)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/> <input type="checkbox"/>	1/27/2016 10:40	3 days 3 days		<input type="checkbox"/> <input type="checkbox"/>	
1601A41-002A	PB-1-3'	Soil	Multi-Range TPH(g,d,mo) SW8260B (HVOCs List)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/> <input type="checkbox"/>	1/27/2016 10:45	3 days 3 days		<input type="checkbox"/> <input type="checkbox"/>	
1601A41-003A	PB-1-5;	Soil	Multi-Range TPH(g,d,mo) SW8260B (HVOCs List)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/> <input type="checkbox"/>	1/27/2016 15:15	3 days 3 days		<input type="checkbox"/> <input type="checkbox"/>	
1601A41-004A	PB-2-1'	Soil	Multi-Range TPH(g,d,mo) SW8260B (HVOCs List)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/> <input type="checkbox"/>	1/27/2016 11:15	3 days 3 days		<input type="checkbox"/> <input type="checkbox"/>	
1601A41-005A	PB-2-3'	Soil	Multi-Range TPH(g,d,mo) SW8260B (HVOCs List)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/> <input type="checkbox"/>	1/27/2016 11:20	3 days 3 days		<input type="checkbox"/> <input type="checkbox"/>	
1601A41-006A	PB-2-5'	Soil	Multi-Range TPH(g,d,mo) SW8260B (HVOCs List)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/> <input type="checkbox"/>	1/27/2016 14:35	3 days 3 days		<input type="checkbox"/> <input type="checkbox"/>	
1601A41-007A	PB-3-1'	Soil	Multi-Range TPH(g,d,mo) SW8260B (HVOCs List)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/> <input type="checkbox"/>	1/27/2016 13:00	3 days 3 days		<input type="checkbox"/> <input type="checkbox"/>	
1601A41-008A	PB-3-3'	Soil	Multi-Range TPH(g,d,mo) SW8260B (HVOCs List)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/> <input type="checkbox"/>	1/27/2016 13:10	3 days 3 days		<input type="checkbox"/> <input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.

QC Level: LEVEL 2

Work Order: 1601A41

Project: 4901 Broadway

Client Contact: Bob Clark-Riddell

Date Logged: 1/27/2016

Comments:

Contact's Email: BRiddell@pangeaenv.com

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1601A41-009A	PB-3-5'	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	1/27/2016 13:30	3 days		<input type="checkbox"/>	
			SW8260B (HVOCs List)			<input type="checkbox"/>					
1601A41-010A	PB-4-1'	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	1/27/2016 12:15	3 days		<input type="checkbox"/>	
			SW8260B (HVOCs List)			<input type="checkbox"/>					
1601A41-011A	PB-4-3'	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	1/27/2016 12:25	3 days		<input type="checkbox"/>	
			SW8260B (HVOCs List)			<input type="checkbox"/>					
1601A41-012A	PB-4-5'	Soil	Multi-Range TPH(g,d,mo)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	1/27/2016 12:55	3 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>					

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



McC Campbell Analytical, Inc.

1534 Willow Pass Rd. / Pittsburg, Ca. 94565-1701
www.mcccampbell.com / main@mcccampbell.com
Telephone: (877) 252-9262 / Fax: (925) 252-9269

1601AAI

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH 1 DAY 2 DAY 3 DAY 5 DAY
GeoTracker EDF PDF EDD Write On (DW) EQuIS 10 DAY
Effluent Sample Requiring "J" flag UST Clean Up Fund Project ; Claim # _____

Report To: Bob Clark-Riddell Bill To: Pangea
Company: Pangea Env. Sys

Tele: (510) 836-3700 E-Mail: briddell@pangeaenv.com
Project #: _____ Project Name: _____
Project Location: 4901 Broadway Purchase Order# _____
Sampler Signature: [Signature]

Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX								METHOD PRESERVED			BTEX & TPH as Gas (8021/8015) MMBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664/5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 505/608/8081 (CI Pesticides)	EPA 608/8082 PCB's; Aroclors / Congeners	EPA 507/8141 (NP Pesticides)	EPA 515/8151 (Acidic CI Herbicides)	EPA 524.2/624/8260 (VOCs)	EPA 525.2/625/8270 (SYOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.8 / 6020)***	LUFT 5 Metals (200.8 / 6020)***	Metals (200.8 / 6020)***	Lab to Filter sample for Dissolved metals analysis					
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO ₃	Other																				
PB-1-1'		1/27/16	1040	1						X																								X	X
PB-1-3'		1	1045	1						X																							X	X	
PB-1-5'		1	1055	1						X																							X	X	
PB-2-1'		1/15	1100	1						X																							X	X	
PB-2-3'		1	1120	1						X																							X	X	
PB-2-5'		1	1435	1						X																							X	X	
PB-3-1'		1	1300	1						X																							X	X	
PB-3-3'		1	1310	1						X																							X	X	
PB-3-5'		1	1330	1						X																							X	X	
PB-4-1'		1/27/16	1215	1						X																							X	X	
PB-4-3'		1/27/16	1225	1						X																							X	X	

TPHscan
8010

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

*** If metals are requested for water samples and the water type is not specified on the chain of custody, then MAI will default to metals by E200.8.

Relinquished By: <u>[Signature]</u>	Date: <u>1/27/16</u>	Time: <u>1930</u>	Received By: <u>[Signature]</u>
Relinquished By: _____	Date: _____	Time: _____	Received By: _____
Relinquished By: _____	Date: _____	Time: _____	Received By: _____

ICE/° _____ COMMENTS:
 GOOD CONDITION _____
 HEAD SPACE ABSENT _____
 DECHLORINATED IN LAB _____
 APPROPRIATE CONTAINERS _____
 PRESERVED IN LAB _____
 VOAS O&G METALS OTHER HAZARDOUS:
 PRESERVATION _____ pH<2 _____



McC Campbell Analytical, Inc.

1534 Willow Pass Rd. / Pittsburg, Ca. 94565-1701
www.mccampbell.com / main@mccampbell.com
Telephone: (877) 252-9262 / Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH 1 DAY 2 DAY 3 DAY 5 DAY
GeoTracker EDF PDF EDD Write On (DW) EQUIS 10 DAY
Effluent Sample Requiring "J" flag UST Clean Up Fund Project ; Claim # _____

Report To: Bob Clark-Riddell Bill To: Pangea
Company: Pangea Env. Svs.

Tele: (510) 836-3700 E-Mail: briddell@pangeaenv.com
Project #: _____ Project Name: _____
Project Location: 4901 Broadway Purchase Order# _____
Sampler Signature: _____

Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX											METHOD PRESERVED																		
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO ₃	Other	BTEX & TPH as Gas (8021/8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664/5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 505/608/8081 (CI Pesticides)	EPA 608/8082 PCB's; 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 (200.8/6020)***	LUFT 5 Metals (200.8/6020)***	Metals (200.8/6020)***	Lab to Filter sample for Dissolved metals analysis	TPH scan	8010		
<u>PB-4-5</u>		<u>1/27/16</u>	<u>1255</u>	<u>1</u>						<u>X</u>																							<u>X</u>	<u>X</u>

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

*** If metals are requested for water samples and the water type is not specified on the chain of custody, then MAI will default to metals by E200.8.

Relinquished By: _____	Date: _____	Time: _____	Received By: _____	ICE/r ^e _____	COMMENTS:
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	GOOD CONDITION _____	
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	HEAD SPACE ABSENT _____	
				DECHLORINATED IN LAB _____	
				APPROPRIATE CONTAINERS _____	
				PRESERVED IN LAB _____	
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	VOAS _____	HAZARDOUS: _____
				O&G _____	
				METALS _____	
				OTHER _____	
				pH<2 _____	



Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
 Project Name: **4901 Broadway**
 WorkOrder No: **1601A41** Matrix: Soil
 Carrier: Client Drop-In

Date and Time Received: **1/27/2016 19:30**
 Date Logged: **1/27/2016**
 Received by: **Jena Alfaro**
 Logged by: **Briana Cutino**

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes 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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Sample/Temp Blank temperature Temp: NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

* NOTE: If the "No" box is checked, see comments below.

 Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1601A90 **Amended:** 02/03/2016

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: 4901 Broadway

Project Received: 01/28/2016

Analytical Report reviewed & approved for release on 02/01/2016 by:

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.





Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 4901 Broadway
WorkOrder: 1601A90

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)

Analytical Qualifiers

d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant
e8	kerosene/kerosene range/jet fuel range



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/29/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-W	1601A90-001B	Water	01/28/2016 10:45	GC16	115990
Analytes	Result	RL	DF	Date Analyzed	
Bromobenzene	ND	0.50	1	01/29/2016 01:22	
Bromochloromethane	ND	0.50	1	01/29/2016 01:22	
Bromodichloromethane	ND	0.50	1	01/29/2016 01:22	
Bromoform	ND	0.50	1	01/29/2016 01:22	
Bromomethane	ND	0.50	1	01/29/2016 01:22	
Carbon Tetrachloride	ND	0.50	1	01/29/2016 01:22	
Chlorobenzene	ND	0.50	1	01/29/2016 01:22	
Chloroethane	ND	0.50	1	01/29/2016 01:22	
Chloroform	ND	0.50	1	01/29/2016 01:22	
Chloromethane	ND	0.50	1	01/29/2016 01:22	
2-Chlorotoluene	ND	0.50	1	01/29/2016 01:22	
4-Chlorotoluene	ND	0.50	1	01/29/2016 01:22	
Dibromochloromethane	ND	0.50	1	01/29/2016 01:22	
1,2-Dibromo-3-chloropropane	ND	0.20	1	01/29/2016 01:22	
1,2-Dibromoethane (EDB)	ND	0.50	1	01/29/2016 01:22	
Dibromomethane	ND	0.50	1	01/29/2016 01:22	
1,2-Dichlorobenzene	ND	0.50	1	01/29/2016 01:22	
1,3-Dichlorobenzene	ND	0.50	1	01/29/2016 01:22	
1,4-Dichlorobenzene	ND	0.50	1	01/29/2016 01:22	
Dichlorodifluoromethane	ND	0.50	1	01/29/2016 01:22	
1,1-Dichloroethane	ND	0.50	1	01/29/2016 01:22	
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	01/29/2016 01:22	
1,1-Dichloroethene	ND	0.50	1	01/29/2016 01:22	
cis-1,2-Dichloroethene	ND	0.50	1	01/29/2016 01:22	
trans-1,2-Dichloroethene	ND	0.50	1	01/29/2016 01:22	
1,2-Dichloropropane	ND	0.50	1	01/29/2016 01:22	
1,3-Dichloropropane	ND	0.50	1	01/29/2016 01:22	
2,2-Dichloropropane	ND	0.50	1	01/29/2016 01:22	
1,1-Dichloropropene	ND	0.50	1	01/29/2016 01:22	
cis-1,3-Dichloropropene	ND	0.50	1	01/29/2016 01:22	
trans-1,3-Dichloropropene	ND	0.50	1	01/29/2016 01:22	
Freon 113	ND	0.50	1	01/29/2016 01:22	
Hexachlorobutadiene	ND	0.50	1	01/29/2016 01:22	
Hexachloroethane	ND	0.50	1	01/29/2016 01:22	
Methylene chloride	ND	0.50	1	01/29/2016 01:22	
1,1,1,2-Tetrachloroethane	ND	0.50	1	01/29/2016 01:22	
1,1,2,2-Tetrachloroethane	ND	0.50	1	01/29/2016 01:22	

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/29/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-W	1601A90-001B	Water	01/28/2016 10:45	GC16	115990

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.50	1	01/29/2016 01:22
1,2,3-Trichlorobenzene	ND	0.50	1	01/29/2016 01:22
1,2,4-Trichlorobenzene	ND	0.50	1	01/29/2016 01:22
1,1,1-Trichloroethane	ND	0.50	1	01/29/2016 01:22
1,1,2-Trichloroethane	ND	0.50	1	01/29/2016 01:22
Trichloroethene	ND	0.50	1	01/29/2016 01:22
Trichlorofluoromethane	ND	0.50	1	01/29/2016 01:22
1,2,3-Trichloropropane	ND	0.50	1	01/29/2016 01:22
Vinyl Chloride	ND	0.50	1	01/29/2016 01:22
Surrogates	REC (%)	Limits		
Dibromofluoromethane	93	70-130		01/29/2016 01:22
Toluene-d8	83	70-130		01/29/2016 01:22
4-BFB	82	70-130		01/29/2016 01:22

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/29/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-W	1601A90-002B	Water	01/28/2016 11:15	GC16	115990

Analytes	Result	RL	DF	Date Analyzed
Bromobenzene	ND	0.50	1	01/29/2016 02:01
Bromochloromethane	ND	0.50	1	01/29/2016 02:01
Bromodichloromethane	ND	0.50	1	01/29/2016 02:01
Bromoform	ND	0.50	1	01/29/2016 02:01
Bromomethane	ND	0.50	1	01/29/2016 02:01
Carbon Tetrachloride	ND	0.50	1	01/29/2016 02:01
Chlorobenzene	ND	0.50	1	01/29/2016 02:01
Chloroethane	ND	0.50	1	01/29/2016 02:01
Chloroform	ND	0.50	1	01/29/2016 02:01
Chloromethane	ND	0.50	1	01/29/2016 02:01
2-Chlorotoluene	ND	0.50	1	01/29/2016 02:01
4-Chlorotoluene	ND	0.50	1	01/29/2016 02:01
Dibromochloromethane	ND	0.50	1	01/29/2016 02:01
1,2-Dibromo-3-chloropropane	ND	0.20	1	01/29/2016 02:01
1,2-Dibromoethane (EDB)	ND	0.50	1	01/29/2016 02:01
Dibromomethane	ND	0.50	1	01/29/2016 02:01
1,2-Dichlorobenzene	ND	0.50	1	01/29/2016 02:01
1,3-Dichlorobenzene	ND	0.50	1	01/29/2016 02:01
1,4-Dichlorobenzene	ND	0.50	1	01/29/2016 02:01
Dichlorodifluoromethane	ND	0.50	1	01/29/2016 02:01
1,1-Dichloroethane	ND	0.50	1	01/29/2016 02:01
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	01/29/2016 02:01
1,1-Dichloroethene	ND	0.50	1	01/29/2016 02:01
cis-1,2-Dichloroethene	ND	0.50	1	01/29/2016 02:01
trans-1,2-Dichloroethene	ND	0.50	1	01/29/2016 02:01
1,2-Dichloropropane	ND	0.50	1	01/29/2016 02:01
1,3-Dichloropropane	ND	0.50	1	01/29/2016 02:01
2,2-Dichloropropane	ND	0.50	1	01/29/2016 02:01
1,1-Dichloropropene	ND	0.50	1	01/29/2016 02:01
cis-1,3-Dichloropropene	ND	0.50	1	01/29/2016 02:01
trans-1,3-Dichloropropene	ND	0.50	1	01/29/2016 02:01
Freon 113	ND	0.50	1	01/29/2016 02:01
Hexachlorobutadiene	ND	0.50	1	01/29/2016 02:01
Hexachloroethane	ND	0.50	1	01/29/2016 02:01
Methylene chloride	ND	0.50	1	01/29/2016 02:01
1,1,1,2-Tetrachloroethane	ND	0.50	1	01/29/2016 02:01
1,1,2,2-Tetrachloroethane	ND	0.50	1	01/29/2016 02:01

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/29/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-W	1601A90-002B	Water	01/28/2016 11:15	GC16	115990

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.50	1	01/29/2016 02:01
1,2,3-Trichlorobenzene	ND	0.50	1	01/29/2016 02:01
1,2,4-Trichlorobenzene	ND	0.50	1	01/29/2016 02:01
1,1,1-Trichloroethane	ND	0.50	1	01/29/2016 02:01
1,1,2-Trichloroethane	ND	0.50	1	01/29/2016 02:01
Trichloroethene	ND	0.50	1	01/29/2016 02:01
Trichlorofluoromethane	ND	0.50	1	01/29/2016 02:01
1,2,3-Trichloropropane	ND	0.50	1	01/29/2016 02:01
Vinyl Chloride	ND	0.50	1	01/29/2016 02:01
Surrogates	REC (%)	Limits		
Dibromofluoromethane	91	70-130		01/29/2016 02:01
Toluene-d8	83	70-130		01/29/2016 02:01
4-BFB	83	70-130		01/29/2016 02:01

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/29/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-W	1601A90-003B	Water	01/28/2016 11:00	GC16	115990

Analytes	Result	RL	DF	Date Analyzed
Bromobenzene	ND	0.50	1	01/29/2016 02:41
Bromochloromethane	ND	0.50	1	01/29/2016 02:41
Bromodichloromethane	ND	0.50	1	01/29/2016 02:41
Bromoform	ND	0.50	1	01/29/2016 02:41
Bromomethane	ND	0.50	1	01/29/2016 02:41
Carbon Tetrachloride	ND	0.50	1	01/29/2016 02:41
Chlorobenzene	ND	0.50	1	01/29/2016 02:41
Chloroethane	ND	0.50	1	01/29/2016 02:41
Chloroform	ND	0.50	1	01/29/2016 02:41
Chloromethane	ND	0.50	1	01/29/2016 02:41
2-Chlorotoluene	ND	0.50	1	01/29/2016 02:41
4-Chlorotoluene	ND	0.50	1	01/29/2016 02:41
Dibromochloromethane	ND	0.50	1	01/29/2016 02:41
1,2-Dibromo-3-chloropropane	ND	0.20	1	01/29/2016 02:41
1,2-Dibromoethane (EDB)	ND	0.50	1	01/29/2016 02:41
Dibromomethane	ND	0.50	1	01/29/2016 02:41
1,2-Dichlorobenzene	ND	0.50	1	01/29/2016 02:41
1,3-Dichlorobenzene	ND	0.50	1	01/29/2016 02:41
1,4-Dichlorobenzene	ND	0.50	1	01/29/2016 02:41
Dichlorodifluoromethane	ND	0.50	1	01/29/2016 02:41
1,1-Dichloroethane	ND	0.50	1	01/29/2016 02:41
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	01/29/2016 02:41
1,1-Dichloroethene	ND	0.50	1	01/29/2016 02:41
cis-1,2-Dichloroethene	ND	0.50	1	01/29/2016 02:41
trans-1,2-Dichloroethene	ND	0.50	1	01/29/2016 02:41
1,2-Dichloropropane	ND	0.50	1	01/29/2016 02:41
1,3-Dichloropropane	ND	0.50	1	01/29/2016 02:41
2,2-Dichloropropane	ND	0.50	1	01/29/2016 02:41
1,1-Dichloropropene	ND	0.50	1	01/29/2016 02:41
cis-1,3-Dichloropropene	ND	0.50	1	01/29/2016 02:41
trans-1,3-Dichloropropene	ND	0.50	1	01/29/2016 02:41
Freon 113	ND	0.50	1	01/29/2016 02:41
Hexachlorobutadiene	ND	0.50	1	01/29/2016 02:41
Hexachloroethane	ND	0.50	1	01/29/2016 02:41
Methylene chloride	ND	0.50	1	01/29/2016 02:41
1,1,1,2-Tetrachloroethane	ND	0.50	1	01/29/2016 02:41
1,1,2,2-Tetrachloroethane	ND	0.50	1	01/29/2016 02:41

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/29/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-W	1601A90-003B	Water	01/28/2016 11:00	GC16	115990

Analytes	Result	RL	DF	Date Analyzed
Tetrachloroethene	ND	0.50	1	01/29/2016 02:41
1,2,3-Trichlorobenzene	ND	0.50	1	01/29/2016 02:41
1,2,4-Trichlorobenzene	ND	0.50	1	01/29/2016 02:41
1,1,1-Trichloroethane	ND	0.50	1	01/29/2016 02:41
1,1,2-Trichloroethane	ND	0.50	1	01/29/2016 02:41
Trichloroethene	ND	0.50	1	01/29/2016 02:41
Trichlorofluoromethane	ND	0.50	1	01/29/2016 02:41
1,2,3-Trichloropropane	ND	0.50	1	01/29/2016 02:41
Vinyl Chloride	ND	0.50	1	01/29/2016 02:41
Surrogates	REC (%)	Limits		
Dibromofluoromethane	91	70-130		01/29/2016 02:41
Toluene-d8	85	70-130		01/29/2016 02:41
4-BFB	78	70-130		01/29/2016 02:41

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/29/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-W	1601A90-004B	Water	01/28/2016 10:30	GC16	115990
Analytes	Result	RL	DF	Date Analyzed	
Acetone	13	10	1	01/29/2016 03:21	
tert-Amyl methyl ether (TAME)	ND	0.50	1	01/29/2016 03:21	
Benzene	ND	0.50	1	01/29/2016 03:21	
Bromobenzene	ND	0.50	1	01/29/2016 03:21	
Bromochloromethane	ND	0.50	1	01/29/2016 03:21	
Bromodichloromethane	ND	0.50	1	01/29/2016 03:21	
Bromoform	ND	0.50	1	01/29/2016 03:21	
Bromomethane	ND	0.50	1	01/29/2016 03:21	
2-Butanone (MEK)	ND	2.0	1	01/29/2016 03:21	
t-Butyl alcohol (TBA)	5.0	2.0	1	01/29/2016 03:21	
n-Butyl benzene	ND	0.50	1	01/29/2016 03:21	
sec-Butyl benzene	ND	0.50	1	01/29/2016 03:21	
tert-Butyl benzene	ND	0.50	1	01/29/2016 03:21	
Carbon Disulfide	ND	0.50	1	01/29/2016 03:21	
Carbon Tetrachloride	ND	0.50	1	01/29/2016 03:21	
Chlorobenzene	ND	0.50	1	01/29/2016 03:21	
Chloroethane	ND	0.50	1	01/29/2016 03:21	
Chloroform	ND	0.50	1	01/29/2016 03:21	
Chloromethane	ND	0.50	1	01/29/2016 03:21	
2-Chlorotoluene	ND	0.50	1	01/29/2016 03:21	
4-Chlorotoluene	ND	0.50	1	01/29/2016 03:21	
Dibromochloromethane	ND	0.50	1	01/29/2016 03:21	
1,2-Dibromo-3-chloropropane	ND	0.20	1	01/29/2016 03:21	
1,2-Dibromoethane (EDB)	ND	0.50	1	01/29/2016 03:21	
Dibromomethane	ND	0.50	1	01/29/2016 03:21	
1,2-Dichlorobenzene	ND	0.50	1	01/29/2016 03:21	
1,3-Dichlorobenzene	ND	0.50	1	01/29/2016 03:21	
1,4-Dichlorobenzene	ND	0.50	1	01/29/2016 03:21	
Dichlorodifluoromethane	ND	0.50	1	01/29/2016 03:21	
1,1-Dichloroethane	ND	0.50	1	01/29/2016 03:21	
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	01/29/2016 03:21	
1,1-Dichloroethene	ND	0.50	1	01/29/2016 03:21	
cis-1,2-Dichloroethene	ND	0.50	1	01/29/2016 03:21	
trans-1,2-Dichloroethene	ND	0.50	1	01/29/2016 03:21	
1,2-Dichloropropane	ND	0.50	1	01/29/2016 03:21	
1,3-Dichloropropane	ND	0.50	1	01/29/2016 03:21	
2,2-Dichloropropane	ND	0.50	1	01/29/2016 03:21	

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/29/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-W	1601A90-004B	Water	01/28/2016 10:30	GC16	115990
Analytes	Result	RL	DF	Date Analyzed	
1,1-Dichloropropene	ND	0.50	1	01/29/2016 03:21	
cis-1,3-Dichloropropene	ND	0.50	1	01/29/2016 03:21	
trans-1,3-Dichloropropene	ND	0.50	1	01/29/2016 03:21	
Diisopropyl ether (DIPE)	ND	0.50	1	01/29/2016 03:21	
Ethylbenzene	ND	0.50	1	01/29/2016 03:21	
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	01/29/2016 03:21	
Freon 113	ND	0.50	1	01/29/2016 03:21	
Hexachlorobutadiene	ND	0.50	1	01/29/2016 03:21	
Hexachloroethane	ND	0.50	1	01/29/2016 03:21	
2-Hexanone	ND	0.50	1	01/29/2016 03:21	
Isopropylbenzene	ND	0.50	1	01/29/2016 03:21	
4-Isopropyl toluene	ND	0.50	1	01/29/2016 03:21	
Methyl-t-butyl ether (MTBE)	ND	0.50	1	01/29/2016 03:21	
Methylene chloride	ND	0.50	1	01/29/2016 03:21	
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	01/29/2016 03:21	
Naphthalene	ND	0.50	1	01/29/2016 03:21	
n-Propyl benzene	ND	0.50	1	01/29/2016 03:21	
Styrene	ND	0.50	1	01/29/2016 03:21	
1,1,1,2-Tetrachloroethane	ND	0.50	1	01/29/2016 03:21	
1,1,2,2-Tetrachloroethane	ND	0.50	1	01/29/2016 03:21	
Tetrachloroethene	ND	0.50	1	01/29/2016 03:21	
Toluene	ND	0.50	1	01/29/2016 03:21	
1,2,3-Trichlorobenzene	ND	0.50	1	01/29/2016 03:21	
1,2,4-Trichlorobenzene	ND	0.50	1	01/29/2016 03:21	
1,1,1-Trichloroethane	ND	0.50	1	01/29/2016 03:21	
1,1,2-Trichloroethane	ND	0.50	1	01/29/2016 03:21	
Trichloroethene	ND	0.50	1	01/29/2016 03:21	
Trichlorofluoromethane	ND	0.50	1	01/29/2016 03:21	
1,2,3-Trichloropropane	ND	0.50	1	01/29/2016 03:21	
1,2,4-Trimethylbenzene	ND	0.50	1	01/29/2016 03:21	
1,3,5-Trimethylbenzene	ND	0.50	1	01/29/2016 03:21	
Vinyl Chloride	ND	0.50	1	01/29/2016 03:21	
Xylenes, Total	ND	0.50	1	01/29/2016 03:21	

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/29/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-W	1601A90-004B	Water	01/28/2016 10:30	GC16	115990

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	91	70-130		01/29/2016 03:21
Toluene-d8	85	70-130		01/29/2016 03:21
4-BFB	81	70-130		01/29/2016 03:21

Analyst(s): AK



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/29/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-W	1601A90-001A	Water	01/28/2016 10:45	GC3	115943

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	01/29/2016 03:42
MTBE	ND	5.0	1	01/29/2016 03:42
Benzene	ND	0.50	1	01/29/2016 03:42
Toluene	ND	0.50	1	01/29/2016 03:42
Ethylbenzene	ND	0.50	1	01/29/2016 03:42
Xylenes	ND	1.5	1	01/29/2016 03:42
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
aaa-TFT	102	70-130		01/29/2016 03:42

Analyst(s): SS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-W	1601A90-002A	Water	01/28/2016 11:15	GC3	115943

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	01/29/2016 04:12
MTBE	ND	5.0	1	01/29/2016 04:12
Benzene	ND	0.50	1	01/29/2016 04:12
Toluene	ND	0.50	1	01/29/2016 04:12
Ethylbenzene	ND	0.50	1	01/29/2016 04:12
Xylenes	ND	1.5	1	01/29/2016 04:12
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
aaa-TFT	107	70-130		01/29/2016 04:12

Analyst(s): SS



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/29/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-W	1601A90-003A	Water	01/28/2016 11:00	GC3	115943

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	01/29/2016 05:41
MTBE	ND	5.0	1	01/29/2016 05:41
Benzene	ND	0.50	1	01/29/2016 05:41
Toluene	ND	0.50	1	01/29/2016 05:41
Ethylbenzene	ND	0.50	1	01/29/2016 05:41
Xylenes	ND	1.5	1	01/29/2016 05:41

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	98	70-130	01/29/2016 05:41

Analyst(s): SS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-W	1601A90-004A	Water	01/28/2016 10:30	GC3	115943

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	54	50	1	01/29/2016 14:30
MTBE	ND	5.0	1	01/29/2016 14:30
Benzene	ND	0.50	1	01/29/2016 14:30
Toluene	ND	0.50	1	01/29/2016 14:30
Ethylbenzene	ND	0.50	1	01/29/2016 14:30
Xylenes	ND	1.5	1	01/29/2016 14:30

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	94	70-130	01/29/2016 14:30

Analyst(s): HD

Analytical Comments: d7



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/28/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-1-W	1601A90-001A	Water	01/28/2016 10:45	GC2A	115975

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	160	50	1	01/29/2016 12:29
TPH-Motor Oil (C18-C36)	ND	250	1	01/29/2016 12:29
Surrogates	REC (%)	Limits		
C9	90	70-130		01/29/2016 12:29
Analyst(s): TK		Analytical Comments: e2		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-2-W	1601A90-002A	Water	01/28/2016 11:15	GC2A	115975

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	190	50	1	01/29/2016 13:46
TPH-Motor Oil (C18-C36)	290	250	1	01/29/2016 13:46
Surrogates	REC (%)	Limits		
C9	91	70-130		01/29/2016 13:46
Analyst(s): TK		Analytical Comments: e7,e2		

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-3-W	1601A90-003A	Water	01/28/2016 11:00	GC2A	115975

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	180	50	1	01/29/2016 16:33
TPH-Motor Oil (C18-C36)	ND	250	1	01/29/2016 16:33
Surrogates	REC (%)	Limits		
C9	92	70-130		01/29/2016 16:33
Analyst(s): TK		Analytical Comments: e2		

(Cont.)



Analytical Report

Client: Pangea Environmental Svcs., Inc.
Date Received: 1/28/16 19:55
Date Prepared: 1/28/16
Project: 4901 Broadway

WorkOrder: 1601A90
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PB-4-W	1601A90-004A	Water	01/28/2016 10:30	GC6B	115975

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	5200	1000	20	02/01/2016 10:50
TPH-Motor Oil (C18-C36)	27,000	5000	20	02/01/2016 10:50

Surrogates	REC (%)	Limits	Date Analyzed
C9	126	70-130	02/01/2016 10:50

Analyst(s): TK

Analytical Comments: e7,e8



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/28/16
Date Analyzed: 1/28/16
Instrument: GC16
Matrix: Water
Project: 4901 Broadway

WorkOrder: 1601A90
BatchID: 115990
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-115990
 1601A72-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	8.88	0.50	10	-	89	43-157
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	8.63	0.50	10	-	86	44-155
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	8.61	0.50	10	-	86	66-125
1,1-Dichloroethene	ND	8.47	0.50	10	-	85	47-149
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	-	-	-	-
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
Methylene chloride	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-

(Cont.)



Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	WorkOrder:	1601A90
Date Prepared:	1/28/16	BatchID:	115990
Date Analyzed:	1/28/16	Extraction Method:	SW5030B
Instrument:	GC16	Analytical Method:	SW8260B
Matrix:	Water	Unit:	µg/L
Project:	4901 Broadway	Sample ID:	MB/LCS-115990 1601A72-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
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	9.10	0.50	10	-	91	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-

Surrogate Recovery

Dibromofluoromethane	22.8	23.2		25	91	93	70-130
Toluene-d8	21.6	21.3		25	86	85	70-130
4-BFB	2.09	2.34		2.5	84	93	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chlorobenzene	10.7	10.5	10	ND	107	105	77-120	2.00	20
1,2-Dibromoethane (EDB)	10.8	10.7	10	ND	108	107	76-135	0.751	20
1,2-Dichloroethane (1,2-DCA)	10.8	10.6	10	ND	108	106	73-139	2.35	20
1,1-Dichloroethene	10.1	9.79	10	ND	101	98	59-140	3.41	20
Trichloroethene	11.2	10.7	10	ND	112	107	64-132	4.78	20

Surrogate Recovery

Dibromofluoromethane	23.2	23.2	25		93	93	73-131	0	20
Toluene-d8	20.9	20.7	25		84	83	72-117	0.848	20
4-BFB	2.39	2.46	2.5		96	98	74-116	2.70	20



Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/27/16
Date Analyzed: 1/27/16
Instrument: GC3
Matrix: Water
Project: 4901 Broadway

WorkOrder: 1601A90
BatchID: 115943
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-115943
 1601A23-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	57.7	40	60	-	96	70-130
MTBE	ND	8.94	5.0	10	-	89	70-130
Benzene	ND	9.43	0.50	10	-	94	70-130
Toluene	ND	9.57	0.50	10	-	96	70-130
Ethylbenzene	ND	9.68	0.50	10	-	97	70-130
Xylenes	ND	29.2	1.5	30	-	97	70-130

Surrogate Recovery

aaa-TFT	9.67	9.38		10	97	94	70-130
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	62.3	59.5	60	ND	104	99	70-130	4.65	20
MTBE	7.93	8.17	10	ND	79	82	70-130	2.97	20
Benzene	9.57	9.41	10	ND	96	94	70-130	1.69	20
Toluene	9.71	9.61	10	ND	97	96	70-130	1.04	20
Ethylbenzene	9.95	9.89	10	ND	99	99	70-130	0	20
Xylenes	29.8	29.9	30	ND	99	100	70-130	0.478	20

Surrogate Recovery

aaa-TFT	9.53	9.30	10		95	93	70-130	2.46	20
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Quality Control Report

Client: Pangea Environmental Svcs., Inc.
Date Prepared: 1/28/16
Date Analyzed: 1/29/16
Instrument: GC11A, GC39A
Matrix: Water
Project: 4901 Broadway

WorkOrder: 1601A90
BatchID: 115975
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L
Sample ID: MB/LCS-115975

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	1010	50	1000	-	101	61-157
TPH-Motor Oil (C18-C36)	ND	-	250	-	-	-	-
Surrogate Recovery							
C9	611	567		625	98	91	65-122



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1601A90

ClientCode: PEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX: (510) 836-3709

Email: BRiddell@pangeaenv.com
cc/3rd Party:
PO:
ProjectNo: 4901 Broadway

Bill to:

Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 2 days;

Date Received: 01/28/2016

Date Logged: 01/28/2016

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1601A90-001	PB-1-W	Water	1/28/2016 10:45	<input type="checkbox"/>	B	A	A										
1601A90-002	PB-2-W	Water	1/28/2016 11:15	<input type="checkbox"/>	B	A	A										
1601A90-003	PB-3-W	Water	1/28/2016 11:00	<input type="checkbox"/>	B	A	A										
1601A90-004	PB-4-W	Water	1/28/2016 10:30	<input type="checkbox"/>	B	A	A										

Test Legend:

1	8010BMS_W	2	G-MBTEx_W	3	TPH(DMO)_W	4	
5		6		7		8	
9		10		11		12	

The following SamplIDs: 001A, 002A, 003A, 004A 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.



WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.

QC Level: LEVEL 2

Work Order: 1601A90

Project: 4901 Broadway

Client Contact: Bob Clark-Riddell

Date Logged: 1/28/2016

Comments:

Contact's Email: BRiddell@pangeaenv.com

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1601A90-001A	PB-1-W	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	<input type="checkbox"/>	1/28/2016 10:45	2 days	Present	<input type="checkbox"/>	
1601A90-001B	PB-1-W	Water	SW8260B (HVOCS List)	2	VOA w/ HCl	<input type="checkbox"/>	1/28/2016 10:45	2 days	Present	<input type="checkbox"/>	
1601A90-002A	PB-2-W	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	<input type="checkbox"/>	1/28/2016 11:15	2 days	Present	<input type="checkbox"/>	
1601A90-002B	PB-2-W	Water	SW8260B (HVOCS List)	2	VOA w/ HCl	<input type="checkbox"/>	1/28/2016 11:15	2 days	Present	<input type="checkbox"/>	
1601A90-003A	PB-3-W	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	<input type="checkbox"/>	1/28/2016 11:00	2 days	Present	<input type="checkbox"/>	
1601A90-003B	PB-3-W	Water	SW8260B (HVOCS List)	2	VOA w/ HCl	<input type="checkbox"/>	1/28/2016 11:00	2 days	Present	<input type="checkbox"/>	
1601A90-004A	PB-4-W	Water	Multi-Range TPH(g,d,mo)	4	VOA w/ HCl	<input type="checkbox"/>	1/28/2016 10:30	2 days	Present	<input type="checkbox"/>	
1601A90-004B	PB-4-W	Water	SW8260B (HVOCS List)	2	VOA w/ HCl	<input type="checkbox"/>	1/28/2016 10:30	2 days	Present	<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
 Project Name: **4901 Broadway**
 WorkOrder No: **1601A90** Matrix: Water
 Carrier: Client Drop-In

Date and Time Received: **1/28/2016 19:00**
 Date Logged: **1/28/2016**
 Received by: Jena Alfaro
 Logged by: Jena Alfaro

Chain of Custody (COC) Information

Chain of custody present? Yes No
 Chain of custody signed when relinquished and received? Yes No
 Chain of custody agrees with sample labels? Yes No
 Sample IDs noted by Client on COC? Yes No
 Date and Time of collection noted by Client on COC? Yes No
 Sampler's name noted on COC? Yes No

Sample Receipt Information

Custody seals intact on shipping container/cooler? Yes 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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes No
 Sample/Temp Blank temperature Temp: 3°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No NA
 Sample labels checked for correct preservation? Yes No
 pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes No NA
 Samples Received on Ice? Yes No

(Ice Type: WET ICE)

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522? Yes No NA
 Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes No NA

* NOTE: If the "No" box is checked, see comments below.

 Comments: