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By Alameda County Environmental Health 10:43 am, Jun 23, 2017

Project No. 2015-29
April 3, 2017

Mr. Dan Emerson
Vice President of Construction
Lennar Multifamily Communities
492 9th Street Suite 300
Oakland, California 94607

Subject: **SOIL MANAGEMENT PLAN**
Proposed Multifamily Development
1750 Webster Street, 1810 Webster Street, and 301 19th Street
Oakland, California

Dear Mr. Emerson:

At your request, *GeoSolve, Inc.* has prepared this Soil Management Plan (SMP) for the above referenced properties. The subject site consists of three properties located at 1750 Webster Street, 1810 Webster Street and 301 19th Street in Oakland, California with Alameda County Assessor Parcel Numbers (APNs) 008-625-017; 008-625-018; and 008-625-002-1.

A summary of the previous environmental activities conducted on the subject site are summarized in our Summary of Environmental Activities Report dated November 10, 2016 and is attached to Appendix A of this SMP. The purpose of the Summary of Environmental Activities Report was to summarize previous and current environmental conditions at the subject properties at the request of the Alameda County Health Care Services Agency (ACHCSA) to accommodate site closure activities of all three properties. The subject site has historic ACHCSA Voluntary Remediation Action Program (VRAP) Case Number RO0003229 and Former Site Cleanup Program (SCP) Number RO0002672.

The purpose of this SMP is to provide laboratory analytical results of composited soil samples collected from beneath the subject site to facilitate pre-landfill approval for disposal activities.

Subsurface Soil Characterization Activities

Prior to commencement of fieldwork, *GeoSolve, Inc.* visited the subject property, marked four locations with white paint, and contacted underground service alert (USA) 48-hours before drilling



activities. In addition, a Site-Specific Health and Safety Plan was prepared for the project, and was kept on site during fieldwork activities.

Fieldwork

Once USA was notified and the underground utilities were marked, a *GeoSolve, Inc.* field geologist observed Penecore Drilling, Inc., a State-licensed drilling contractor (C57-906899) of Woodland, California, advance four borings (SPB-1 through SPB-4) on February 22, 2017. Borings SPB-1 and SPB-2 were advanced on 1750 and 1810 Webster Streets and borings SPB-3 and SPB-4 were advanced on 301 19th Street to approximately 10-feet below ground surface (bgs). The locations of borings SPB-1 through SPB-4 are shown on Figure 2. The borings were advanced using a direct-push drilling rig, equipped with Enviro-Core (dual-tube) sampling system. Each sampling rod was lined with Acetate sample liners and each boring was continuously cored. Soil samples were hand-sawed at 2.5-feet, 5-feet, 7.5-feet, and 10-feet bgs. The soil sample ends were covered with Teflon tape, capped, labeled, and placed within a pre-chilled ice chest for temporary storage.

The soil samples were delivered under chain-of-custody to McCampbell Analytical, Inc. of Pittsburg, California, a State-licensed Hazardous Waste testing laboratory (Certification No. 1644) for analysis. Prior to analysis, the soil samples collected from the borings were composited by the laboratory from 4 discrete soil samples into one composited soil sample per boring and were analyzed for total petroleum hydrocarbons reported as gasoline (TPHg), gasoline constituents benzene, toluene, ethyl benzene, total xylenes (BTEX), MTBE, total recoverable petroleum hydrocarbons (TRPH) using silica gel cleanup, total extractable petroleum hydrocarbons reported as diesel and motor-oil (TEPHd and TEPHmo) using silica-gel cleanup, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), PCBs and pesticides and CAM 17 metals. In addition, lead and chromium were analyzed for soluble threshold leaching concentration (STLC) using Environmental Protection Agency (EPA) Methods SW846/8021, E418.1, SW8015m, SW5030B/SW8260B, SW3550B/SW8270C, SW8081A/8082, 6020B, and CA Title 22.

Once the soil samples were collected from each boring, the borings were backfilled with neat cement to grade.

Laboratory Results

The laboratory analytical results of detected compounds (with the exception of CAM 17 metals) from borings SPB-1 through SPB-4 are shown below on Table 1, Laboratory Analysis of



Composited Soil Samples and a copy of the March 2, 2017 McCampbell Analytical Laboratory Reports and Chain-of-Custody documents are attached to Appendix B.

The laboratory analytical results indicated no detectable concentrations for BTEX, MTBE, pesticides, PCBs, VOCs, or SVOCs. Metals were detected at background concentrations, with the exception of composited soil sample SPB3-A/B/C/D, which indicated an elevated lead concentration of 470 milligrams per kilogram (mg/Kg).

Table 1
Laboratory Analytical Results of Composited Soil Samples
 1750 Webster, 1810 Webster and 301 19th Streets
 Oakland, California
 February 22, 2017

Sample ID	TPHg (mg/Kg)	TEPHd (mg/Kg)	TEPHmo (mg/Kg)	Pesticides (mg/Kg)	VOCs (mg/Kg)	SVOCs (mg/Kg)	Lead (mg/Kg)	Chromium (mg/Kg)
SPB1-A/B/C/D	<1.0	<1.0	<5.0	<0.005 - <0.1	<0.005	<0.25 - <1.3	3.5	69
SPB2-A/B/C/D	1.8	<1.0	<5.0	<0.005 - <0.1	<0.005	<0.25 - <1.3	5.4	58
SPB3-A/B/C/D	<1.0	<1.0	13	<0.005 - <0.1	<0.005	<4 - <21	470	53
SPB4-A/B/C/D	<1.0	2.5	33	<0.005 - <0.1	<0.005	<2 - <10	4.2	52
ESLs	100	100	100	1.7	1.2	3	80	5

mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).

< = less than laboratory detection limit.

ESL = Environmental Screening Level (RWQCB – Region 2, December 2013, Table B)

Although background concentrations, chromium was detected above 50 milligrams per kilogram (mg/Kg) in all four composited soil samples and lead was detected above 50 mg/Kg in composited soil sample SPB3-A/B/C/D. Composited soil samples SPB1-A/B/C/D through SPB4-A/B/C/D were re-analyzed for STLC chromium and composited soil sample SPB3-A/B/C/D was re-analyzed for STLC lead. Furthermore, discrete soil samples SPB3-A through SPB3-D were also analyzed for total lead. STLC chromium was detected at concentrations ranging from not detected (less than 0.10 milligram per liter [mg/L]) to 0.21 mg/L and STLC lead was detected at 16 mg/L, which exceeded the California Hazardous Waste Level for lead. Composited soil sample SPB3-A/B/C/D was also re-analyzed for toxicity characteristic leaching procedure (TCLP) for lead using EPA Methods SW1311/SW3010/SW6020, which indicated at result of 0.82 mg/L. The laboratory analytical results are shown on Table 2 below and the McCampbell Analytical Inc. chain-of-custody documents and analytical reports are attached to Appendix C.



Table 2
Laboratory Analytical Results of STLC and TCLP Lead
 1750 Webster, 1810 Webster and 301 19th Streets
 Oakland, California
 February 22, 2017

Sample ID	STLP Chromium (mg/L)	STLC Lead (mg/L)	TCLP Lead (mg/L)	Total Lead (mg/Kg)
SPB1-A/B/C/D	<0.1	NA	NA	NA
SPB2-A/B/C/D	0.11	NA	NA	NA
SPB3-A/B/C/D	0.21	16	0.82	NA
SPB4-A/B/C/D	<0.1	NA	NA	NA
SPB3-A	NA	NA	NA	760
SPB3-B	NA	NA	NA	4.8
SPB3-C	NA	NA	NA	3.1
SPB3-D	NA	NA	NA	3.5
<i>ESLs</i>	5	5	5	80

mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).

mg/L = milligrams per liter, equivalent to ppm.

< = less than laboratory detection limit.

NA = not analyzed.

ESL = Environmental Screening Level (RWQCB – Region 2, December 2013, Table B).

Based on the laboratory analytical results, only a 10-foot by 10-foot area around soil profile boring SPB-3 was determined to be California Hazardous Waste to 5 feet bgs, but not Federal Hazardous Waste. The remainder of the subject property is considered Class II to Class III material depending on landfill requirements, and/or can be used as off-site fill material. Details of soil management are further discussed below.

SOIL MANAGEMENT PLAN

Prior to excavation activities at the site, a storm water pollution prevention plan (SWPPP) will be prepared and a notice of intent (NOI) will be filed with the California Regional Water Quality Control Board – Region 2 (RWQCB) to obtain a storm water construction permit. The SWPPP will recommend best management practices (BMPs) to be deployed at the site to prevent and/or retard erosion and sediment loss from the site to Webster Street, 19th Street and Harrison Street. The BMPs will most likely be biodegradable wattles and/or silt fencing around the property, storm drain control devices along Webster Street, 19th Street and Harrison Street, and rumble racks along the entrance and exit to and from the subject property. A grading permit will also be obtained by LMC from the City of Oakland to perform sub-excavation activities.



Once the SWPPP and NOI are approved, a grading permit is obtained from the City of Oakland, and the BMPs are installed at the site, soil excavation activities will commence. All of the soil beneath the subject property will be excavated up to approximately 5 feet bgs as stated in the building plans for the new development to accommodate the proposed development. The California Hazardous Waste material around boring SPB-3 will be separated from the remainder of the excavated soil at the site.

Excavation of Soil Activities

Traffic control activities will be placed along Webster Street, 19th Street, and Harrison Street in order to protect public safety and allow ingress and egress to the subject property. Soil will be excavated from around boring SPB-3 in a 10-foot by 10-foot square from the center of the boring location, down to 5 feet bgs and soil will be excavated around boring B-6 in a 10-foot by 10-foot square from the center of the boring down to 6 feet bgs and the excavated soil will be placed within 18-cubic yard dump trucks. The excavated soil within the dump trucks will be covered and the wheels of the trucks will be hand-brushed to remove excess soil prior to leaving the property. The soil will be transported to an accepting and State-licensed Class I landfill under property owner signed Hazardous Waste manifests.

Water will be sprayed into the excavation during excavation activities to suppress dust, and if required, dust monitoring equipment will be installed on the property boundaries by a Certified Industrial Hygienist (C.I.H.) during the course of excavation and disposal activities (refer to the Site-Specific Health and Safety Plan).

We estimate approximately **43 tons of California Hazardous Waste Class I material** will be generated from the excavation around boring SPB-3 and beneath the subject property. We estimate approximately 45 tons of Class II material will be generated from the excavation around boring B-6.

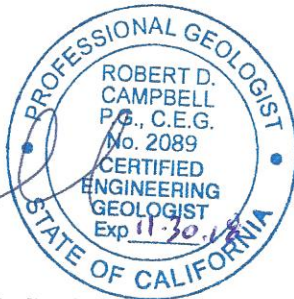
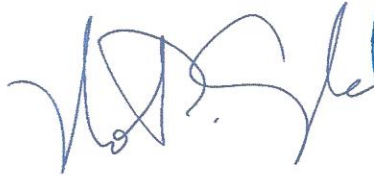
A letter report will be prepared detailing the excavation and disposal of the California Hazardous Waste Class I soil, which will include a copy of all the signed manifests and will be sealed and signed by a California licensed C.E.G.



Please contact us at your convenience if you have any questions regarding this Soil Management Plan or if you require additional information.

Sincerely,

GeoSolve, Inc.



Robert D. Campbell, M.S., P.G., C.E.G., Q.S.D.
Principal Engineering Geologist

Attachments: Figure A, Site Plan

Appendix A – Summary of Environmental Activities Report by *GeoSolve, Inc.* dated November 10, 2016

Appendix B – McCampbell Laboratory Analytical Report and Chain-of-Custody Document for March 2, 2017

Appendix C – McCampbell Analytical Reports and Chain-of-Custody Documents for March 6 and March 8, 2017



REFERENCE

GeoSolve, Inc., November 10, 2016. *Summary of Environmental Activities at 1750 Webster Street, 1810 Webster Street and 301 19th Street in Oakland, California.* **GeoSolve, Inc.** Project No. 2015-29.





GeoSolve, Inc.
Geoscience solutions rather than Status-Quo
 Address: 1807 Santa Rita Rd, Suite D-165
 Pleasanton, California 94566

SOIL MANAGEMENT PLAN

LENNAR MULTIFAMILY COMMUNITIES
 SUMMARY OF ENVIRONMENTAL ACTIVITIES
 1750 and 1810 WEBSTER STREET and 301 19TH STREET
 OAKLAND, CALIFORNIA

Project No.

2015-29

Scale:

AS SHOWN

Drawn by:

GC

Date:

04/2017

Figure No.

A

APPENDIX A

**SUMMARY OF ENVIRONMENTAL ACTIVITIES REPORT
DATED NOVEMBER 10, 2016**





A Lennar Company

November 16, 2016

Ms. Karel Detterman, PG
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

Subject: Proposed Multifamily Development - 1750 Webster Street, 1810 Webster Street and 301 19th Street (APNs 008-625-017; 008-625-018; and 008-625-002-1) Oakland, California

VRAP Case No. RO0003229

SCP No. RO0002672

COVER LETTER FOR SUMMARY OF ENVIRONMENTAL ACTIVITIES
REPORT

Dear Ms. Detterman:

At your request, attached is the GeoSolve, Inc. Summary of Environmental Activities for the above referenced properties located at 1750 Webster Street, 1810 Webster Street and 301 19th Street in Oakland, California with Alameda County Assessor Parcel Numbers (APNs) 008-625-017; 008-625-018; and 008-625-002-1.

Perjury Statement

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

If you have any questions or need further information regarding this project, please call us at (415) 975-4991.

Sincerely,

Lennar Multifamily Communities
Tyler Wood.
Development Associate

MAKE IT YOURS



Project No. 2015-29
November 10, 2016

Mr. Tyler Wood
Lennar Multifamily Communities, Inc.
492 9th Street Suite 300
Oakland, California 94607

Subject: Proposed Multifamily Development
1750 Webster Street, 1810 Webster Street and 301 19th Street
APNs 008-625-017; 008-625-018; and 008-625-002-1
Oakland, California
VRAP Case No. RO0003229
SCP No. RO0002672
SUMMARY OF ENVIRONMENTAL ACTIVITIES REPORT

Dear Mr. Wood:

At your request, *GeoSolve, Inc.* has prepared a Summary of Environmental Activities for the above referenced properties. The subject site consists of three properties located at 1750 Webster Street, 1810 Webster Street and 301 19th Street in Oakland, California with Alameda County Assessor Parcel Numbers (APNs) 008-625-017; 008-625-018; and 008-625-002-1.

The purpose of this report is to summarize previous and current environmental conditions at the subject properties at the request of the Alameda County Health Care Services Agency (ACHCSA) to accommodate site closure activities of all three properties. The subject site has historic ACHCSA Voluntary Remediation Action Program (VRAP) Case Number RO0003229 and Former Site Cleanup Program (SCP) Number RO0002672.

Site Geology and Hydrogeology

The materials underlying the site are mapped as the Late Pleistocene Merritt Sand (Qps) by Helley and Lajoie (1979), which consists of beach and eolian (dune) sand deposits, which are loose, well-sorted, fine- to medium-grained sand with silt. The Merritt Sand is approximately 50 feet in thickness. The Merritt Sand was deposited by wind eroding and transporting steam sediments during the lower stands of sea level, which occurred approximately 40,000 years ago and may have been reworked by shoreline processes as sea levels rose. The Late Pleistocene Merritt Sand is underlain by Bay Mud and alternating layers of older alluvial deposits to approximately 1 to 2 kilometers (km). The older alluvial deposits are underlain by Cenozoic marine bedrock units.



The active trace of the Hayward Fault is situated approximately 3.4-miles northeast of the site and the Hayward Fault is considered active by the Alquist-Priolo Earthquake Fault Zoning Act (AP-Zone) of 1994, and is listed as a strike-slip fault with right-lateral movement (http://gmw.consrv.ca.gov/shmp/download/quad/OAKLAND_EAST/maps/OKLND_E.PDF).

Furthermore, the subject site is not situated within a mapped zone for liquefaction during a moderate to violent earthquake event

(http://gmw.consrv.ca.gov/shmp/download/quad/OAKLAND_WEST/maps/ozn_oakw.pdf).

Based on previous and current environmental work conducted at the site, depth to groundwater varies from 17 feet to 22 feet below ground surface (bgs) and flows toward the northeast along topography.

The subsurface geology is depicted on Geologic Cross-Sections A-A' and B-B', which are attached to this report and are shown on Figure 1. Geologic Cross-Sections A-A' and B-B' also depict previous groundwater wells, borings, proposed foundations, and proposed elevator pits. Subsurface geology consists of the Merritt Sand and silty clay units, which are discontinuous. The subsurface soil is mostly highly permeable, with the exception of the discontinuous silty clay units.

Previous Environmental Work

GeoSolve, Inc. reviewed previous environmental reports for each property associated with the subject site, which are summarized below.

301 19th Street (1833 Harrison Street)

One 5,000-gallon gasoline and one 550-gallon motor-oil USTs were removed from this property on September 10, 1991. Approximately 250 cubic yards of soil was over-excavated from the USTs and properly disposed. Analytical results indicated no detectable concentrations of petroleum hydrocarbons from the tank bottom samples collected (JM-01 through JM-06), as reported in the Environmental Assessment for Three Parcels located in Oakland, California (Applied GeoSciences, Inc., January 6, 1993). No other investigations have been conducted to date on this parcel. The location of the former gasoline service station is shown on Figure 1, Proposed Development Footprint.

On February 7 and 17, 1998, Norcal Geophysical Consultants, Inc. conducted a magnetometer survey of Parcels 008-0625-002-1 and 008-0625-004, which identified a metallic anomaly on the south-central portion of parcel 008-0625-002-1. No other information was revealed during this survey (Norcal Geophysical Consultants, Inc., March 2, 1998).

1750 Webster Street

Multiple environmental investigations were conducted on the 1750 Webster Street property, which identified elevated concentrations of petroleum hydrocarbons reported as gasoline (TPHg) and benzene, toluene, ethyl benzene and total xylenes (BTEX) in groundwater (Applied GeoSciences, Inc., April 1, 1993). Up to 200,000 micrograms per liter (µg/L) of TPHg were



detected. The geophysical survey of the property indicated metallic utility lines only. Further investigations included drilling up to twelve borings to groundwater (ATC Associates, Inc. March 19, 1998), in which TPHg was detected up to 760,000 µg/L and trichloroethylene (TCE) was detected up to 13 µg/L in borings G-3 and G-6, which are located on the southern and central portions of the property. No USTs were identified on the subject property; therefore, the TPHg, TCE and BTEX originated from an off-site and up-gradient source.

ATC Associates, Inc. drilled and installed three groundwater monitoring wells (A-1 through A-3, later renamed MW-1 through MW-3) in April 1998 (ATC Associates, Inc., September 25, 1998) on the subject property. The groundwater gradient was determined to be toward the northeast at 0.01 foot per foot (ft/ft) and TPHg was detected up to 84,000 µg/L and benzene was detected up to 12,000 µg/L in wells A-2 and A-1, which were installed on the northern and southern portion of the property. Depth to groundwater was measured at 18 feet to 20 feet bgs. The locations of wells MW-1 through MW-3 are shown on Figure 1 and the laboratory analytical results of soil samples collected from borings A-1 through A-3 are shown on Table 1 below. Groundwater analytical data is not included in this summary since the data is over 15 years old.

Current Environmental Work

1750 Webster Street, 1810 Webster Street and 301 19th Street

In October through November 2015, *GeoSolve, Inc.* conducted a Phase I Environmental Site Assessment (ESA) for all nine parcels at 1732-1734 Webster Street, 1750 Webster Street, 1801 Webster Street, 301 19th Street, 1711 Harrison Street, 1801 Harrison Street, 1805 Harrison Street, 1811 Harrison Street, and 1817-1839 Harrison Street in Oakland, California with APNs 008-0625-016; 008-0625-017; 008-0625-018; 008-0625-002-1; 008-0625-004; 008-0625-005; 008-0625-006; 008-0625-007; and 008-0625-008. The Recognized Environmental Conditions (RECs) identified at the subject property included:

- elevated concentrations of TPHg, BTEX and TCE in groundwater beneath the 1750 Webster Street property;
- the existence of a historic gasoline service station at 1833 and/or 1839 Harrison Street and a third UST maybe present on the south-central portion of the 301 19th Street property;
- possible elevated concentrations of lead and/or ACMs in the surficial soil based on the historical residences which used to occupy every parcel at the site until the late 1940s to early 1950s; and;
- up-gradient sources of TPHg, BTEX and other volatile organic compounds (VOCs) from historical uses as gasoline stations and dry cleaner facilities.



Based on the findings in the Phase I ESA, elevated concentrations of total petroleum hydrocarbons reported as gasoline (TPHg) and benzene were detected in groundwater up to 200,000 micrograms per liter ($\mu\text{g/L}$) and 14,000 $\mu\text{g/L}$ on the southern portion of the property along Webster Street, which were determined to have originated from 1721 Webster Street, which is situated approximately 300 feet northwest of the subject property and immediately up-gradient.

Phase II ESA – 1750 Webster Street and 301 19th Street – November 2015

In November 2015, **GeoSolve, Inc.** observed the advancement of three borings (B-1 through B-3) on the subject site to evaluate the concentrations of petroleum hydrocarbons in subsurface soil and groundwater in our Phase II ESA (**GeoSolve, Inc.**, November 7, 2015). The locations of borings B-1 through B-3 are shown on Figure 1. Based on the laboratory analytical results of soil samples, concentrations of TPHg, BTEX, or MTBE were not detected in all soil samples analyzed from borings B-1 through B-3 as shown on Table 2, with the exception of total xylenes. Total xylenes was the only chemical constituent detected in soil sample B1-25 at 0.016 mg/Kg, which is significantly below the California Regional Water Quality Control Board – Region 2 (RWQCB) Environmental Screening Level (ESL) of 111 mg/Kg for residential development (Table B, December 2013).

Lead was detected at 170 mg/Kg in soil sample B1-5, which exceeded the residential ESL of 80 mg/Kg and lead was detected below the residential ESL in all other soil samples analyzed from borings B-1 through B-3.

TPHg, BTEX, MTBE and lead were not detected in groundwater samples collected from borings B-2 or B-3 and the groundwater samples are shown on Table 3. MTBE was not detected in groundwater sample B-1. Lead was detected up to 0.54 $\mu\text{g/L}$ in groundwater sample B-1. An elevated concentration of TPHg was detected at 26,000 $\mu\text{g/L}$, which exceed the residential ESL of 500 $\mu\text{g/L}$ in groundwater sample B-1. Benzene, toluene, ethyl benzene and total xylenes exceeded residential ESLs of 27 $\mu\text{g/L}$, 130 $\mu\text{g/L}$ and 100 $\mu\text{g/L}$, respectively.

Additional Phase II ESA – 1750 Webster Street and 301 19th Street – December 2015

In December 2015, **GeoSolve, Inc.** conducted an Additional Phase II ESA at 1750 Webster and 301 19th Streets by observing the advancement of borings B-4 through B-6 to groundwater to evaluate the lateral and vertical extent of the petroleum hydrocarbons and VOCs in the subsurface soil and groundwater beneath the site (**GeoSolve, Inc.**, December 23, 2015). The locations of borings B-4 through B-6 are shown on Figure 1. Based on the laboratory analytical results of the soil and groundwater samples collected from borings B-4 through B-6, no detectable concentrations of TPHg or BTEX were reported in soil samples analyzed from 10 feet and 20 feet bgs; however, minor concentrations of TPHg or BTEX were detected in the soil samples collected from 25 feet bgs in borings B-4 and B-5. Furthermore, no detectable concentrations of chlorinated hydrocarbons or MTBE were detected in any soil and/or groundwater sample collected from borings B-4 through B-6. This data is summarized in Tables



4 and 5. Elevated concentrations of TPHg and BTEX were detected in soil sample B6-25 and in groundwater from borings B-4 through B-6, with the greatest concentration detected in groundwater from boring B-6. These elevated concentrations of TPHg and BTEX are most likely from the up-gradient and off-site source property at 1721 Webster Street.

No elevated concentrations lead were detected in any soil sample analyzed from borings B-4 through B-6.

Phase II ESA – 1810 Webster Street – February 2016

In February 2016, **GeoSolve, Inc.** conducted a Phase II ESA on 1810 Webster Street and observed the advancement of borings B-1 through B-3 on 301 19th Street to groundwater (**GeoSolve, Inc.**, February 11, 2016). The locations of borings B-1 through B-3 are shown on Figure 1. Based on the laboratory analytical results of soil samples, concentrations of TPHg, BTEX, or MTBE were not detected in soil samples analyzed from borings B-1 through B-3 at 15 feet and 20 feet bgs as shown on Table 6, with the exception of a minor detection of ethyl benzene at 0.12 mg/Kg at 20 feet in boring B-2. TPHg was detected above the RWQCB's ESLs for residential development (December 2013) of 100 mg/Kg. Lead was detected above the ESL of 80 mg/Kg in soil sample B2-1 at one foot at 130 mg/Kg. Lead was detected below the ESL in all other soil samples analyzed. Benzene or MTBE were not detected in any soil sample analyzed from borings B-1 through B-3.

TPHg and benzene were detected above the residential ESLs of 500 µg/L and 27 µg/L in groundwater samples B-1, B-2, and B-3. The groundwater analytical results are shown on Table 7. Elevated concentrations of toluene, ethyl benzene and total xylenes were detected in groundwater sample B-3, which exceeded the residential ESLs of 130 µg/L, 43 µg/L and 100 µg/L, respectively. MTBE was not detected in any groundwater sample analyzed.

Chlorinated volatile compounds were not detected in any of the soil or groundwater samples.

Soil-Gas Survey – 1750 Webster Street, 1810 Webster Street and 301 19th Street – February 2016

In February 2016, **GeoSolve, Inc.** observed the soil-gas sampling and mobile laboratory analysis of six soil-vapor probes (SG-1 through SG-6) at the subject site (**GeoSolve, Inc.** February 22, 2016). The location of soil-gas probes SG-1 through SG-6 are shown on Figure 1. No detectable concentrations of VOCs were reported in most soil-gas samples collected from the vadose zone. A low concentration of tetrachloroethylene (PCE) was detected in soil-gas samples SG5-15 and duplicate soil-gas sample SG5-15D at 150 micrograms per cubic meter (µg/m³) and 160 µg/m³, respectively. A moderate concentration of benzene was detected in soil-gas sample SG5-5 at 120 µg/m³. PCE was detected below the ESL of 210 µg/m³ for residential development in soil-gas (December 2013 – Table E). Benzene was detected slightly above the ESL of 42 µg/m³ in soil-gas sample SG5-5. The concentration of PCE and benzene detected in



vapor samples at SG5-15 and SG5-15D are very low and do not indicate the presence of an ongoing residual source. . The soil-gas analytical results are shown on Table 8.

Additional Phase II ESA – 301 19th Street – July 2016

In July 2016, **GeoSolve, Inc.** conducted an Additional Phase II ESA and observed the advancement of borings B-7 through B-9 on 301 19th Street to groundwater (**GeoSolve, Inc.**, August 8, 2016). The locations of borings B-7 through B-9 are shown on Figure 1. Based on the laboratory analytical results of soil samples, concentrations of TPHg, BTEX, or MTBE were not detected in all soil samples analyzed from borings B-7 through B-9 at 1 foot, 10 feet or 15 feet bgs, as shown on Table 1 and were detected below the RWQCB's ESLs listed at the base of Table 8. Lead was detected at concentrations ranging from 1.7 mg/Kg to 9.7 mg/Kg, which were below the residential soil ESL of 80 mg/Kg. In addition, MTBE was not detected in any soil sample analyzed from borings B-7 through B-9.

No detectable concentrations of TPHg (less than 50 µg/L, BTEX (less than 0.50 µg/L) or MTBE (less than 0.05 µg/L) were measured in groundwater grab samples B-7 through B-9, with the exception of a very low concentration of toluene of 0.77 µg/L in groundwater grab sample B-9. TPHg, BTEX and MTBE were detected below residential ESLs for groundwater as listed at the base of Table 9.

Lead was detected above the residential ESL of 2.5 µg/L at concentrations ranging from 34 µg/L to 440 µg/L.

Additional Soil-Gas Survey – 1750 and 1810 Webster Streets, and 301 19th Street – August 2016

In August 2016, **GeoSolve, Inc.** observed the additional soil-gas sampling and mobile laboratory analysis of six soil-vapor probes (SG-1 through SG-6) at the subject site (**GeoSolve, Inc.** August 31, 2016). The location of soil-gas probes SG-1 through SG-6 are shown on Figure 1 and were advanced in the same locations as in February 2016.

Based on the laboratory analytical results of the soil-gas samples collected from vapor-probes SG-1 through SG-6, no detectable concentrations of VOCs were reported in most soil-gas samples collected from the vadose zone. A low concentration of PCE was detected in soil-gas sample SG6-10 at 120 µg/m³. Low concentrations of benzene were also detected in soil-gas samples SG5-5 at 160 µg/m³ and in SG5-10 at 88 µg/m³. PCE detected in soil-gas sample SG6-10 was detected below the ESL of 240 µg/m³ for residential development in soil-gas. Benzene was detected slightly above the screening level of 48 µg/m³, but well below the commercial screening level of 420 µg/m³ in soil-gas sample SG5-5. The concentrations measured do not indicate a significant source for either of these constituents. Although TPHg was not analyzed during this Additional Soil-Gas Survey, TEG or Northern California, Inc. stated their results support no TPHg concentrations greater than 10,000 µg/m³ were indicated in all soil-gas samples analyzed, exactly like in the initial soil-gas survey conducted in February 2016. The PCE and benzene detected in soil-gas were below the commercial ESLs of 420 µg/m³ for benzene and



4,200 $\mu\text{g}/\text{m}^3$ for PCE. As underground parking and/or first-level residential occupation are not planned for the development at the site, commercial ESLs are the recommended screening criteria for the site. Therefore, the low concentrations of benzene and PCE detected in soil-gas samples SG5-5, SG5-10, and SG6-10 are not a concern for the subject development at the site. The additional soil-gas analytical results are shown on Table 11.

Oxygen Soil-Gas Survey – 1750 and 1810 Webster Streets, and 301 19th Street – October 21, 2016

On October 21, 2016, **GeoSolve, Inc.** observed the installation of five oxygen soil-gas probes (OG-1 through OG-5) to five feet bgs. Laboratory analytical results of the subsurface soil-gas oxygen samples are shown on Table 12 and oxygen concentrations ranged from 13% to 14%. The location of oxygen soil-gas samples OG-1 through OG-5 are shown on Figure 1.

Summary of Environmental Results

Based on the conclusions of the multiple Phase II ESAs conducted on the subject property, no detectable concentrations of TPHg, BTEX or MTBE or VOCs were reported in soil samples in any boring from ground surface to 20 feet below ground surface (bgs). TPHg was detected at slightly elevated concentrations at 22 feet bgs and represents the groundwater capillary fringe zone derived from dissolved TPHg concentrations in groundwater.

Elevated concentrations of dissolved TPHg and BTEX were detected in groundwater samples collected boring borings B-1, and B-4 through B-6 and borings B-1 through B-3 (1810 Webster Street) at concentrations up to 130,000 $\mu\text{g}/\text{L}$ and 610 $\mu\text{g}/\text{L}$ in boring B-6.

Lead was mostly not detected in any soil sample analyzed from the subject site, with the exception of two samples, which were detected at 170 mg/Kg in sample B1-5 (October 2015) and at 130 mg/Kg in B2-1 (February 2016). These were detected slightly above the ESL of 80 mg/Kg for residential development and will either be removed during excavation of the fill material to accommodate development of the property, or located under the parking garage slab. Moderate concentrations of dissolved lead were detected in all groundwater samples collected from borings B-1 through B-9. These moderately elevated dissolved lead concentrations detected in groundwater grab samples B-1 through B-9 do not pose a significant risk to the property since groundwater is not potable and the groundwater will not be used in the proposed development.

VOCs in soil-gas were determined not to be a concern beneath the subject site and oxygen concentrations in soil-gas were detected at 13% to 14%. Although detection limits for the soil vapor samples exceeded residential screening levels, the detection limits were below commercial screening levels, which are recommended to be used for the site.

Based on the data, the former gasoline service station situated along Harrison Street did not significantly impact the subject property and the existing petroleum-hydrocarbon groundwater



plume detected on 1750 Webster Street has not impacted groundwater under the southern portion of the 301 19th Street property.

The source of the TPHg and BTEX contamination at 1721 Webster Street is under County oversight and residual dissolved petroleum hydrocarbons are expected to continue to naturally attenuate over time. Results of two soil gas sampling events at the site indicate that soil vapor from the underlying dissolved petroleum-hydrocarbon plume is attenuated at depth and vapors measured at the 5-foot depth are not a potential source of vapor intrusion risk for the proposed development.

Based on the findings and results presented in this Summary, *GeoSolve, Inc.* recommends formal closure of ACHCSA VRAP Case No. RO0003229 and SCP No. RO0002672 in response to the ACHCSA comfort letter dated February 16, 2000. It is our understanding that such closure will require recordation of a land use covenant and approved soil management plan for the site.

If you have any questions or need further information regarding this Summary, please call us at (925) 963-1198.

Sincerely,

GeoSolve, Inc.



Robert D. Campbell, M.S., P.G., C.E.G., Q.S.D.
Principal Engineering Geologist

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
Prentiss Properties LTD, Inc.
1750 Webster Street
Oakland, California
April 25, 1998
October 28, 2015

Sample ID	Sample Depth (feet)	TPHg (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)
A-1-10.5	10.5	<1	<5	<5	<5	<5	<20
A-1-15	15	<1	<5	<5	<5	<5	<20
A-2-11	11	<1	<5	<5	<5	<5	<20
A-2-16	16	<1	<5	<5	<5	<5	<20
A-3-11.5	11.5	<1	<5	<5	<5	<5	<20
A-3-17.5	17.5	<1	<5	<5	<5	<5	<20

mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).

TABLE 2
LABORATORY ANALYTICAL RESULTS OF SOIL SAMPLES
1750 Webster Street and 301 19th Street
Oakland, California
October 28, 2015

Sample ID	Sample Depth (feet)	TPHg (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)	Lead (mg/Kg)
B1-5	5	NA	NA	NA	NA	NA	NA	170
B1-10	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	5.8
B1-15	15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<5.0
B1-17.5	17.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<5.0
B1-22	22	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<5.0
B1-25	25	<1.0	<0.005	<0.005	<0.005	0.016	<0.05	<5.0
B1-30	30	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	6.8
B2-5	5	NA	NA	NA	NA	NA	NA	5.3
B2-10	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<5.0
B2-15	15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<5.0
B2-20	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<5.0
B2-25	25	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	9.8
B3-5	5	NA	NA	NA	NA	NA	NA	5.3
B3-10	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<5.0
B3-15	15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	6.7
B3-20	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<5.0
B3-20D	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	8.9
B3-25	25	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	7.3
ESLs	---	100	0.74	9.3	4.7	111	8.4	80

mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).

NA = not analyzed.

ESLs = Environmental Screening Levels, RWQCB – Region 2 (December 2013, Table B)



TABLE 3
LABORATORY ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
1750 Webster Street and 301 19th Street
Oakland, California
October 28, 2015

Sample ID	Sample Depth (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Lead (µg/L)
B-1	22	26,000	140	1,300	1,100	4,900	<250	0.54
B-2	17	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
B-3	17	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ESLs	---	500	27	130	43	100	1,800	80

µg/L = micrograms per liter, equivalent to parts per billion (ppb).

TABLE 4
LABORATORY ANALYTICAL RESULTS OF SOIL SAMPLES
1750 Webster Street
Oakland, California
December 11, 2015

Sample ID	Sample Depth (feet)	TPHg (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)	VOCs (mg/Kg)	Lead (mg/Kg)
B4-1	1	NA	NA	NA	NA	NA	NA	NA	<5.0
B4-2	2	NA	NA	NA	NA	NA	NA	NA	<5.0
B4-3	3	NA	NA	NA	NA	NA	NA	NA	<5.0
B4-4	4	NA	NA	NA	NA	NA	NA	NA	<5.0
B4-5	5	NA	NA	NA	NA	NA	NA	NA	<5.0
B4-10	10	<1.0	<0.005	<0.005	<0.005	0.016	<0.05	<0.005 - <0.1	<5.0
B4-20	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005 - <0.1	<5.0
B4-25	25	1.3	0.074	0.0072	0.089	0.020	<0.050	0.038	<5.0
B5-1	1	NA	NA	NA	NA	NA	NA	NA	<5.0
B5-2	2	NA	NA	NA	NA	NA	NA	NA	<5.0
B5-3	3	NA	NA	NA	NA	NA	NA	NA	<5.0
B5-4	4	NA	NA	NA	NA	NA	NA	NA	<5.0
B5-5	5	NA	NA	NA	NA	NA	NA	NA	<5.0
B5-10	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005 - <0.1	<5.0
B5-20	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005 - <0.1	<5.0
B5-25	25	<1.0	0.011	<0.005	<0.005	<0.005	<0.05	0.01	<5.0
B6-1	NA	NA	NA	NA	NA	NA	NA	NA	6.2
B6-2	NA	NA	NA	NA	NA	NA	NA	NA	6.2
B6-3	NA	NA	NA	NA	NA	NA	NA	NA	6.3
B6-4	NA	NA	NA	NA	NA	NA	NA	NA	5.1
B6-5	NA	NA	NA	NA	NA	NA	NA	NA	6.7
B6-10	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005 - <0.1	<5.0
B6-20	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<0.005 - <0.1	<5.0
B6-25	25	800	0.68	4.7	10	45	<0.05	76 ^a	<5.0
ESLs	---	100	0.74	9.3	4.7	111	8.4	0.55 - 111	80



mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).
 NA = not analyzed.
 a = Total xylene concentration detected below ESL.

TABLE 5
LABORATORY ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
 1750 Webster Street
 Oakland, California
 December 11, 2015

Sample ID	Sample Depth (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	VOCs (µg/L)	Lead (µg/L)
B-4	21	8,100	1,000	77	580	200	<500	930 ^a	430
B-5	21	6,800	620	73	140	140	<300	490 ^a	550
B-6	22	130,000	610	12,000	3,000	13,000	<900	13,000 ^b	3,500
ESLs	---	500	27	130	43	100	1,800	27 - 130	2.5

µg/L = micrograms per liter, equivalent to parts per billion (ppb).
 a = Benzene concentration.
 b = Toluene concentration.

TABLE 6
LABORATORY ANALYTICAL RESULTS OF SOIL SAMPLES
 1810 Webster Street
 Oakland, California
 February 2, 2016

Sample ID	Sample Depth (feet)	TPHg (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)	VOCs (mg/Kg)	Lead (mg/Kg)
B1-1	1	NA	NA	NA	NA	NA	NA	NA	7.5
B1-15	15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<0.10	2.2
B1-20	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<0.10	1.9
B1-22.5	22.5	390	<0.005	<0.005	2.5	5.3	<0.05	17 ^a	2.6
B2-1	1	NA	NA	NA	NA	NA	NA	NA	130
B2-15	15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<0.10	2.2
B2-20	20	46	<0.005	<0.005	0.12	<0.005	<0.05	0.14 ^b	4.6
B2-22.5	22.5	660	<0.005	0.34	0.78	0.76	<0.05	8.1 ^c	3.0
B3-1	1	NA	NA	NA	NA	NA	NA	NA	16
B3-15	15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<0.10	2.2
B3-20	20	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	<0.10	2.3
B3-22.5	22.5	170	<0.005	0.30	0.39	1.7	<0.05	14 ^d	3.1
ESLs	---	100	0.74	9.3	4.7	111	8.4	100	80

mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).
 NA = not analyzed.
 a = 1,2,4-Trimethylbenzene and 4.9 mg/Kg of total xylenes.
 b = n-Propyl benzene.
 c = n-Propyl benzene and 4.1 mg/Kg n-Butyl benzene.
 d = 1,2,4-Trimethylbenzene and 3.4 mg/Kg of total xylenes.



TABLE 7
LABORATORY ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
1810 Webster Street
Oakland, California
February 2, 2016

Sample ID	Sample Depth (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	VOCs (µg/L)	Lead (µg/L)
B-1	20.5	7,500	28	14	45	46	<250	1,200 ^a	21
B-2	19	14,000	66	11	99	21	<0.50	270 ^b	13
B-3	20.5	4,700	110	450	110	300	<0.50	1,200 ^c	5.9
ESLs	---	500	27	130	43	100	1,800	100	80

µg/L = micrograms per liter, equivalent to parts per billion (ppb).

a = t-Butyl alcohol (TBA), 670 µg/L of 1,2,4-Trimethylbenzene and 460 µg/L of total xylenes.

b = n-Propyl benzene, 120 µg/L Naphthalene, and 110 µg/L of ethyl benzene.

c = 1,2,4-Trimethylbenzene, 280 µg/L of benzene, 1,100 µg/L of toluene, and 930 µg/L of total xylenes.

TABLE 8
LABORATORY ANALYTICAL RESULTS OF SOIL-GAS SAMPLES
1750 and 1810 Webster Streets and 301 19th Street
Oakland, California
February 3 and 4, 2016

Sample ID	Sample Depth (feet)	TPHg (µg/m ³)	Benzene (µg/m ³)	Toluene (µg/m ³)	Ethyl Benzene (µg/m ³)	Total Xylenes (µg/m ³)	PCE (µg/m ³)	TCE (µg/m ³)
SG1-5	5	<10,000	<80	<200	<100	<200	<100	<100
SG1-10	10	<10,000	<80	<200	<100	<200	<100	<100
SG1-15	15	<10,000	<80	<200	<100	<200	<100	<100
SG1-15D	15	<10,000	<80	<200	<100	<200	<100	<100
SG2-5	5	<10,000	<80	<200	<100	<200	<100	<100
SG2-10	10	<10,000	<80	<200	<100	<200	<100	<100
SG2-15	15	<10,000	<80	<200	<100	<200	<100	<100
SG3-5	5	<10,000	<80	<200	<100	<200	<100	<100
SG3-10	10	<10,000	<80	<200	<100	<200	<100	<100
SG3-15	15	<10,000	<80	<200	<100	<200	<100	<100
SG4-5	5	<10,000	<80	<200	<100	<200	<100	<100
SG4-10	10	<10,000	<80	<200	<100	<200	<100	<100
SG4-15	15	<10,000	<80	<200	<100	<200	<100	<100
SG5-5	5	<10,000	120	<200	<100	<200	<100	<100
SG5-10	10	<10,000	<80	<200	<100	<200	<100	<100
SG5-15	15	<10,000	<80	<200	<100	<200	150	<100
SG5-15D	15	<10,000	<80	<200	<100	<200	160	<100
SG6-5	5	<10,000	<80	<200	<100	<200	<100	<100
SG6-10	10	<10,000	<80	<200	<100	<200	<100	<100
SG6-15	15	<10,000	<80	<200	<100	<200	<100	<100
ESLs	---	30,000	42	16,000	490	52,000	210	3,000

µg/m³ = micrograms per cubic meter.

PCE = Tetrachloroethylene.



TCE = Trichloroethylene.
 ESLs = Environmental Screening Levels (RWQCB, December 2013 – Table E).
 SG1-1D = Duplicate soil-gas sample.

TABLE 9
LABORATORY ANALYTICAL RESULTS OF SOIL SAMPLES
301 19th Street
Oakland, California
July 14, 2016

Sample ID	Sample Depth (feet)	TPHg (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethyl Benzene (mg/Kg)	Total Xylenes (mg/Kg)	MTBE (mg/Kg)	Lead (mg/Kg)
B7-1	1	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	5.1
B7-10	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	1.7
B7-15	3	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	2.0
B8-1	1	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	9.7
B8-10	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	2.0
B8-15	15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	2.3
B9-1	1	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	NA
B9-10	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	1.6
B9-15	1	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05	2.5
ESLs	---	100	0.74	9.3	4.7	111	8.4	80

mg/Kg = milligrams per kilogram, equivalent to parts per million (ppm).

NA = not analyzed.

TABLE 10
LABORATORY ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
301 19th Street
Oakland, California
July 14, 2016

Sample ID	Sample Depth (feet)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	Lead (µg/L)
B-7	17.5	<50	<0.50	<0.50	<0.50	<0.050	<5	280
B-8	15	<50	<0.50	<0.50	<0.50	<0.050	<5	440
B-9	17.5	<50	<0.50	0.77	<0.50	<0.050	<5	34
ESLs	---	500	27	130	43	100	1,800	2.5

µg/L = micrograms per liter, equivalent to parts per billion (ppb).



TABLE 11
LABORATORY ANALYTICAL RESULTS OF SOIL-GAS SAMPLES
1750 and 1810 Webster Streets and 301 19th Street
Oakland, California
August 10, 2016

Sample ID	Sample Depth (feet)	Benzene ($\mu\text{g}/\text{m}^3$)	Toluene ($\mu\text{g}/\text{m}^3$)	Ethyl Benzene ($\mu\text{g}/\text{m}^3$)	Total Xylenes ($\mu\text{g}/\text{m}^3$)	PCE ($\mu\text{g}/\text{m}^3$)	TCE ($\mu\text{g}/\text{m}^3$)
SG1-5	5	<80	<200	<100	<200	<100	<100
SG1-10	10	<80	<200	<100	<200	<100	<100
SG1-10D	15	<80	<200	<100	<200	<100	<100
SG2-5	5	<80	<200	<100	<200	<100	<100
SG2-10	10	<80	<200	<100	<200	<100	<100
SG3-5	5	<80	<200	<100	<200	<100	<100
SG3-10	10	<80	<200	<100	<200	<100	<100
SG4-5	5	<80	<200	<100	<200	<100	<100
SG4-10	10	<80	<200	<100	<200	<100	<100
SG5-5	5	160	<200	<100	<200	<100	<100
SG5-10	10	88	<200	<100	<200	<100	<100
SG6-5	5	<80	<200	<100	<200	<100	<100
SG6-10	10	<80	<200	<100	<200	120	<100
ESL (res)*	---	97	310,000	1,100	100,000	480	480
ESL(com)*	---	840	2,600,000	9,800	880,000	4,200	6,000

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.

PCE = Tetrachloroethylene.

TCE = Trichloroethylene.

ESLs = Environmental Screening Levels – Residential (RWQCB, December 2013 – Table E).

SG1-10D= Duplicate soil-gas sample.

***Soil Vapor ESLs**

The SFRWQCB Tier 1 soil vapor ESLs are calculated by dividing the indoor air screening level by the DTSC default attenuation factors of 0.002 and 0.001 for existing residential and commercial building type, respectively (SFRWQCB, 2016; DTSC, 2011). Since, this project involves new commercial/retail on-grade buildings, the DTSC default attenuation factors of 0.001 for future residential building type and 0.0005 for future commercial building type are more appropriate (DTSC, 2011). The SFRWQCB soil vapor ESLs were estimated by dividing the indoor air ESL for residential and commercial land use by the DTSC default attenuation factors of 0.001 and 0.0005, respectively.

TABLE 12
LABORATORY ANALYTICAL RESULTS OF SOIL-GAS OXYGEN SAMPLES
1750 and 1810 Webster Streets and 301 19th Street
Oakland, California
October 21, 2016

Sample ID	Sample Depth (feet)	Oxygen ($\mu\text{L}/\text{L}$)
OG-1	5	130,000
OG-2	5	140,000
OG-3	5	140,000
OG-4	5	140,000
OG-5	5	140,000

$\mu\text{L}/\text{L}$ = microliters per liter.



REFERENCES

Alameda County Health Care Services Agency, February 16, 2000. *Comfort Letter for 1750 Webster Street in Oakland, California.*

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GeoSolve, Inc., February 11, 2016. *Phase II Environmental Site Assessment at 1810 Webster Street in Oakland, California.* **GeoSolve, Inc.** Project No. 2016-03.

GeoSolve, Inc., February 22, 2016. *Soil-Gas Survey at 1750 Webster Street, 1810 Webster Street and 301 19th Street in Oakland, California.* **GeoSolve, Inc.** Project No. 2016-04.

GeoSolve, Inc., August 8, 2016. *Additional Phase II Environmental Site Assessment at 301 19th Street in Oakland, California.* **GeoSolve, Inc.** Project No. 2015-29.

GeoSolve, Inc., August 31, 2016. *Additional Soil-Gas Survey at 1750 Webster Street, 1810 Webster Street and 301 19th Street in Oakland, California.* **GeoSolve, Inc.** Project No. 2016-04.

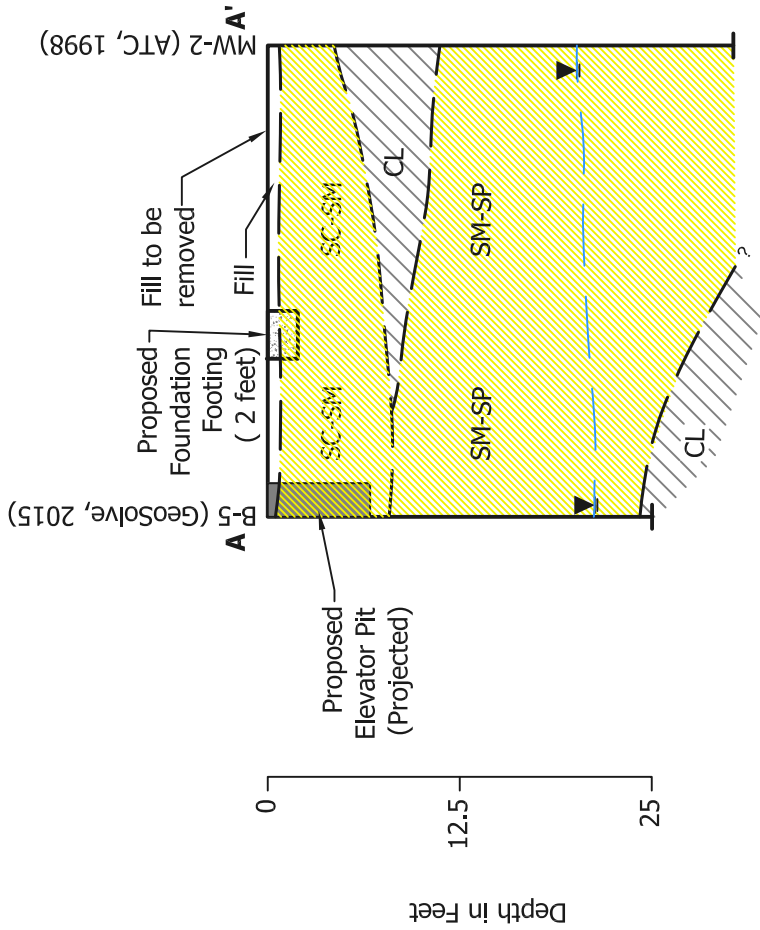


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USCS CLASSIFICATION:

CL	Silty Clay
SC	Clayey Sand
SM	Silty Sand
SP	Poorly Sorted Sand
	Less Permeable Units (Clay)
	More Permeable Units

GEOLOGIC CROSS SECTION A-A

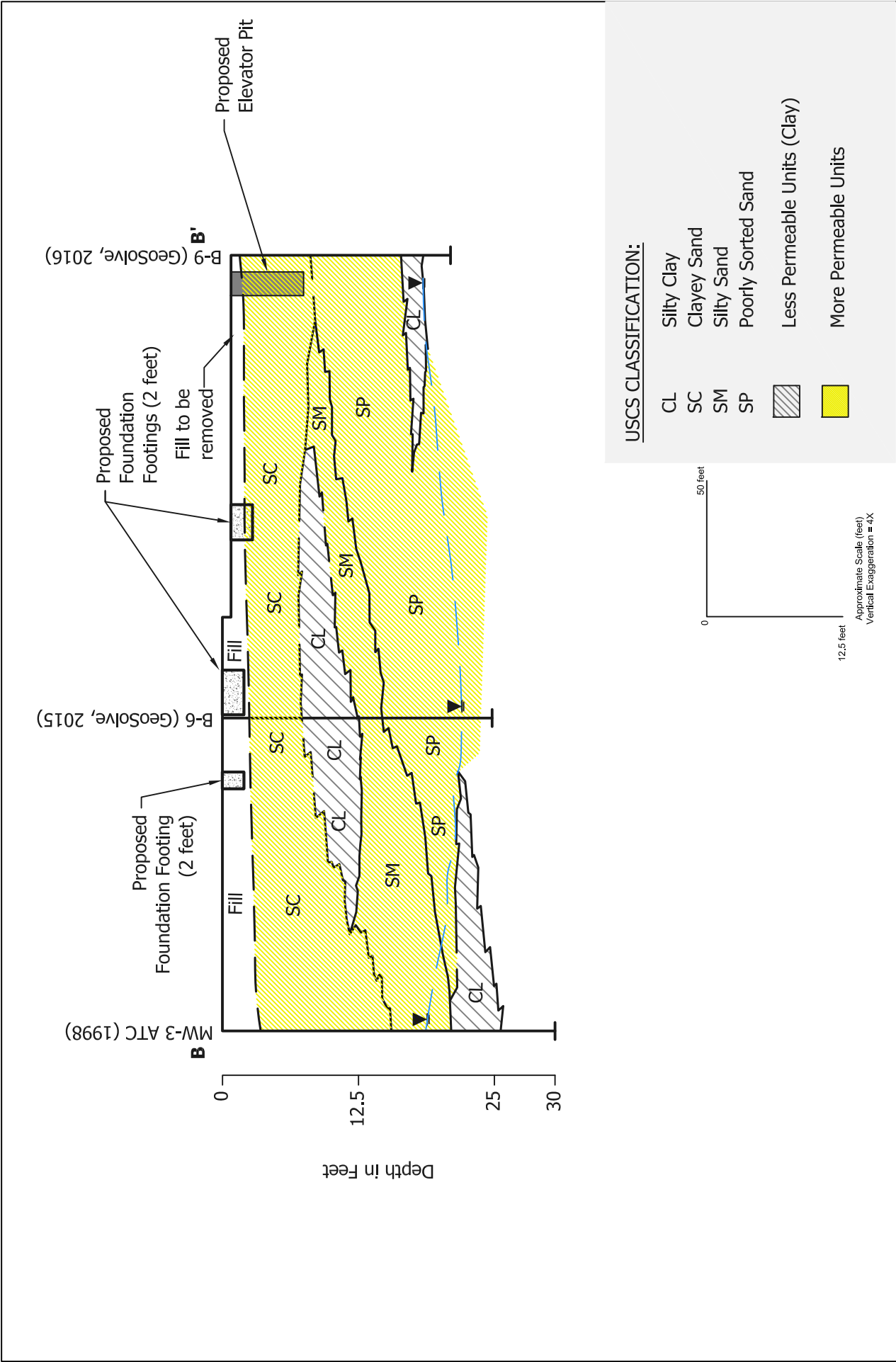
LENNAR MULTIFAMILY COMMUNITIES
ALAMEDA COUNTY HEALTHCARE SERVICES AGENCY CASE NO.2672
1750 and 1810 WEBSTER STREET and 301 19th STREET
OAKLAND, CALIFORNIA


Project No.
2016-04
Scale:
AS SHOWN

Drawn by:
GC
Date:
10/2016

Figure No.

2





GeoSolve, Inc.
Geoscience solutions rather than Status-Quo
 Address: 1807 Santa Rita Rd, Suite D-165
 Pleasanton, California 94566

GEOLOGIC CROSS SECTION B-B'

LENNAR MULTIFAMILY COMMUNITIES
 ALAMEDA COUNTY HEALTHCARE SERVICES AGENCY CASE NO.2672
 1750 and 1810 WEBSTER STREET and 301 19th STREET
 OAKLAND, CALIFORNIA

Project No. 2016-04	Drawn by: GC
Scale: AS SHOWN	Date: 10/2016

Figure No. **3**

APPENDIX B

**McCAMPBELL ANALYTICAL, INC. LABORATORY ANALYTICAL REPORT
AND CHAIN-OF-CUSTODY DOCUMENTS DATED MARCH 2, 2017**





McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1702B47

Report Created for: Geosolve, Inc.

1807 Santa Rita Road, Suite D-165
Pleasanton, CA 94566

Project Contact: Rob Campbell

Project P.O.: 2016-04

Project Name: 2016-04; 19th of Harrison

Project Received: 02/22/2017

Analytical Report reviewed & approved for release on 03/02/2017 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: Geosolve, Inc.
Project: 2016-04; 19th of Harrison
WorkOrder: 1702B47

Glossary Abbreviation

%D	Serial Dilution Percent Difference
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 (Serial Dilution)
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
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: Geosolve, Inc.
Project: 2016-04; 19th of Harrison
WorkOrder: 1702B47

Analytical Qualifiers

a3 sample diluted due to high organic content.
a4 reporting limits raised due to the sample's matrix prohibiting a full volume extraction.
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

Quality Control Qualifiers

F2 LCS/LCSD recovery and/or RPD is out of acceptance criteria.



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/23/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: E418.1
Analytical Method: E418.1
Unit: mg/kg

Total Recoverable Petroleum Hydrocarbons with Silica Gel Clean-Up by IR Spectrometry

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	O&G	134602

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TRPH	ND	15	1	02/23/2017 12:55

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
MAI-SS	110	70-130	02/23/2017 12:55

Analyst(s): HN

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	O&G	134602

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TRPH	ND	15	1	02/23/2017 13:00

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
MAI-SS	111	70-130	02/23/2017 13:00

Analyst(s): HN

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	O&G	134602

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TRPH	75	15	1	02/23/2017 13:05

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
MAI-SS	110	70-130	02/23/2017 13:05

Analyst(s): HN

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	O&G	134602

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TRPH	62	15	1	02/23/2017 13:10

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	
MAI-SS	108	70-130	02/23/2017 13:10

Analyst(s): HN



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	GC22	134574

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.0010	1	02/28/2017 17:41
a-BHC	ND	0.0010	1	02/28/2017 17:41
b-BHC	ND	0.0010	1	02/28/2017 17:41
d-BHC	ND	0.0010	1	02/28/2017 17:41
g-BHC	ND	0.0010	1	02/28/2017 17:41
Chlordane (Technical)	ND	0.025	1	02/28/2017 17:41
a-Chlordane	ND	0.0010	1	02/28/2017 17:41
g-Chlordane	ND	0.0010	1	02/28/2017 17:41
p,p-DDD	ND	0.0010	1	02/28/2017 17:41
p,p-DDE	ND	0.0010	1	02/28/2017 17:41
p,p-DDT	ND	0.0010	1	02/28/2017 17:41
Dieldrin	ND	0.0010	1	02/28/2017 17:41
Endosulfan I	ND	0.0010	1	02/28/2017 17:41
Endosulfan II	ND	0.0010	1	02/28/2017 17:41
Endosulfan sulfate	ND	0.0010	1	02/28/2017 17:41
Endrin	ND	0.0010	1	02/28/2017 17:41
Endrin aldehyde	ND	0.0010	1	02/28/2017 17:41
Endrin ketone	ND	0.0010	1	02/28/2017 17:41
Heptachlor	ND	0.0010	1	02/28/2017 17:41
Heptachlor epoxide	ND	0.0010	1	02/28/2017 17:41
Hexachlorobenzene	ND	0.010	1	02/28/2017 17:41
Hexachlorocyclopentadiene	ND	0.020	1	02/28/2017 17:41
Methoxychlor	ND	0.0010	1	02/28/2017 17:41
Toxaphene	ND	0.050	1	02/28/2017 17:41
Aroclor1016	ND	0.050	1	02/28/2017 17:41
Aroclor1221	ND	0.050	1	02/28/2017 17:41
Aroclor1232	ND	0.050	1	02/28/2017 17:41
Aroclor1242	ND	0.050	1	02/28/2017 17:41
Aroclor1248	ND	0.050	1	02/28/2017 17:41
Aroclor1254	ND	0.050	1	02/28/2017 17:41
Aroclor1260	ND	0.050	1	02/28/2017 17:41
PCBs, total	ND	0.050	1	02/28/2017 17:41

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	123	70-130	02/28/2017 17:41

Analyst(s): CK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	GC22	134574

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.0010	1	02/28/2017 19:23
a-BHC	ND	0.0010	1	02/28/2017 19:23
b-BHC	ND	0.0010	1	02/28/2017 19:23
d-BHC	ND	0.0010	1	02/28/2017 19:23
g-BHC	ND	0.0010	1	02/28/2017 19:23
Chlordane (Technical)	ND	0.025	1	02/28/2017 19:23
a-Chlordane	ND	0.0010	1	02/28/2017 19:23
g-Chlordane	ND	0.0010	1	02/28/2017 19:23
p,p-DDD	ND	0.0010	1	02/28/2017 19:23
p,p-DDE	ND	0.0010	1	02/28/2017 19:23
p,p-DDT	ND	0.0010	1	02/28/2017 19:23
Dieldrin	ND	0.0010	1	02/28/2017 19:23
Endosulfan I	ND	0.0010	1	02/28/2017 19:23
Endosulfan II	ND	0.0010	1	02/28/2017 19:23
Endosulfan sulfate	ND	0.0010	1	02/28/2017 19:23
Endrin	ND	0.0010	1	02/28/2017 19:23
Endrin aldehyde	ND	0.0010	1	02/28/2017 19:23
Endrin ketone	ND	0.0010	1	02/28/2017 19:23
Heptachlor	ND	0.0010	1	02/28/2017 19:23
Heptachlor epoxide	ND	0.0010	1	02/28/2017 19:23
Hexachlorobenzene	ND	0.010	1	02/28/2017 19:23
Hexachlorocyclopentadiene	ND	0.020	1	02/28/2017 19:23
Methoxychlor	ND	0.0010	1	02/28/2017 19:23
Toxaphene	ND	0.050	1	02/28/2017 19:23
Aroclor1016	ND	0.050	1	02/28/2017 19:23
Aroclor1221	ND	0.050	1	02/28/2017 19:23
Aroclor1232	ND	0.050	1	02/28/2017 19:23
Aroclor1242	ND	0.050	1	02/28/2017 19:23
Aroclor1248	ND	0.050	1	02/28/2017 19:23
Aroclor1254	ND	0.050	1	02/28/2017 19:23
Aroclor1260	ND	0.050	1	02/28/2017 19:23
PCBs, total	ND	0.050	1	02/28/2017 19:23

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	123	70-130	02/28/2017 19:23

Analyst(s): CK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	GC22	134574

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.010	10	02/28/2017 19:57
a-BHC	ND	0.010	10	02/28/2017 19:57
b-BHC	ND	0.010	10	02/28/2017 19:57
d-BHC	ND	0.010	10	02/28/2017 19:57
g-BHC	ND	0.010	10	02/28/2017 19:57
Chlordane (Technical)	ND	0.25	10	02/28/2017 19:57
a-Chlordane	ND	0.010	10	02/28/2017 19:57
g-Chlordane	ND	0.010	10	02/28/2017 19:57
p,p-DDD	ND	0.010	10	02/28/2017 19:57
p,p-DDE	ND	0.010	10	02/28/2017 19:57
p,p-DDT	ND	0.010	10	02/28/2017 19:57
Dieldrin	ND	0.010	10	02/28/2017 19:57
Endosulfan I	ND	0.010	10	02/28/2017 19:57
Endosulfan II	ND	0.010	10	02/28/2017 19:57
Endosulfan sulfate	ND	0.010	10	02/28/2017 19:57
Endrin	ND	0.010	10	02/28/2017 19:57
Endrin aldehyde	ND	0.010	10	02/28/2017 19:57
Endrin ketone	ND	0.010	10	02/28/2017 19:57
Heptachlor	ND	0.010	10	02/28/2017 19:57
Heptachlor epoxide	ND	0.010	10	02/28/2017 19:57
Hexachlorobenzene	ND	0.10	10	02/28/2017 19:57
Hexachlorocyclopentadiene	ND	0.20	10	02/28/2017 19:57
Methoxychlor	ND	0.010	10	02/28/2017 19:57
Toxaphene	ND	0.50	10	02/28/2017 19:57
Aroclor1016	ND	0.50	10	02/28/2017 19:57
Aroclor1221	ND	0.50	10	02/28/2017 19:57
Aroclor1232	ND	0.50	10	02/28/2017 19:57
Aroclor1242	ND	0.50	10	02/28/2017 19:57
Aroclor1248	ND	0.50	10	02/28/2017 19:57
Aroclor1254	ND	0.50	10	02/28/2017 19:57
Aroclor1260	ND	0.50	10	02/28/2017 19:57
PCBs, total	ND	0.50	10	02/28/2017 19:57

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	118	70-130	02/28/2017 19:57

Analyst(s): CK

Analytical Comments: a3

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	GC22	134574

Analytes	Result	RL	DF	Date Analyzed
Aldrin	ND	0.0050	5	02/28/2017 20:31
a-BHC	ND	0.0050	5	02/28/2017 20:31
b-BHC	ND	0.0050	5	02/28/2017 20:31
d-BHC	ND	0.0050	5	02/28/2017 20:31
g-BHC	ND	0.0050	5	02/28/2017 20:31
Chlordane (Technical)	ND	0.12	5	02/28/2017 20:31
a-Chlordane	ND	0.0050	5	02/28/2017 20:31
g-Chlordane	ND	0.0050	5	02/28/2017 20:31
p,p-DDD	ND	0.0050	5	02/28/2017 20:31
p,p-DDE	ND	0.0050	5	02/28/2017 20:31
p,p-DDT	ND	0.0050	5	02/28/2017 20:31
Dieldrin	ND	0.0050	5	02/28/2017 20:31
Endosulfan I	ND	0.0050	5	02/28/2017 20:31
Endosulfan II	ND	0.0050	5	02/28/2017 20:31
Endosulfan sulfate	ND	0.0050	5	02/28/2017 20:31
Endrin	ND	0.0050	5	02/28/2017 20:31
Endrin aldehyde	ND	0.0050	5	02/28/2017 20:31
Endrin ketone	ND	0.0050	5	02/28/2017 20:31
Heptachlor	ND	0.0050	5	02/28/2017 20:31
Heptachlor epoxide	ND	0.0050	5	02/28/2017 20:31
Hexachlorobenzene	ND	0.050	5	02/28/2017 20:31
Hexachlorocyclopentadiene	ND	0.10	5	02/28/2017 20:31
Methoxychlor	ND	0.0050	5	02/28/2017 20:31
Toxaphene	ND	0.25	5	02/28/2017 20:31
Aroclor1016	ND	0.25	5	02/28/2017 20:31
Aroclor1221	ND	0.25	5	02/28/2017 20:31
Aroclor1232	ND	0.25	5	02/28/2017 20:31
Aroclor1242	ND	0.25	5	02/28/2017 20:31
Aroclor1248	ND	0.25	5	02/28/2017 20:31
Aroclor1254	ND	0.25	5	02/28/2017 20:31
Aroclor1260	ND	0.25	5	02/28/2017 20:31
PCBs, total	ND	0.25	5	02/28/2017 20:31

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	119	70-130	02/28/2017 20:31

Analyst(s): CK

Analytical Comments: a3



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	GC10	134576

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	02/23/2017 21:34
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/23/2017 21:34
Benzene	ND	0.0050	1	02/23/2017 21:34
Bromobenzene	ND	0.0050	1	02/23/2017 21:34
Bromochloromethane	ND	0.0050	1	02/23/2017 21:34
Bromodichloromethane	ND	0.0050	1	02/23/2017 21:34
Bromoform	ND	0.0050	1	02/23/2017 21:34
Bromomethane	ND	0.0050	1	02/23/2017 21:34
2-Butanone (MEK)	ND	0.020	1	02/23/2017 21:34
t-Butyl alcohol (TBA)	ND	0.050	1	02/23/2017 21:34
n-Butyl benzene	ND	0.0050	1	02/23/2017 21:34
sec-Butyl benzene	ND	0.0050	1	02/23/2017 21:34
tert-Butyl benzene	ND	0.0050	1	02/23/2017 21:34
Carbon Disulfide	ND	0.0050	1	02/23/2017 21:34
Carbon Tetrachloride	ND	0.0050	1	02/23/2017 21:34
Chlorobenzene	ND	0.0050	1	02/23/2017 21:34
Chloroethane	ND	0.0050	1	02/23/2017 21:34
Chloroform	ND	0.0050	1	02/23/2017 21:34
Chloromethane	ND	0.0050	1	02/23/2017 21:34
2-Chlorotoluene	ND	0.0050	1	02/23/2017 21:34
4-Chlorotoluene	ND	0.0050	1	02/23/2017 21:34
Dibromochloromethane	ND	0.0050	1	02/23/2017 21:34
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/23/2017 21:34
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/23/2017 21:34
Dibromomethane	ND	0.0050	1	02/23/2017 21:34
1,2-Dichlorobenzene	ND	0.0050	1	02/23/2017 21:34
1,3-Dichlorobenzene	ND	0.0050	1	02/23/2017 21:34
1,4-Dichlorobenzene	ND	0.0050	1	02/23/2017 21:34
Dichlorodifluoromethane	ND	0.0050	1	02/23/2017 21:34
1,1-Dichloroethane	ND	0.0050	1	02/23/2017 21:34
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/23/2017 21:34
1,1-Dichloroethene	ND	0.0050	1	02/23/2017 21:34
cis-1,2-Dichloroethene	ND	0.0050	1	02/23/2017 21:34
trans-1,2-Dichloroethene	ND	0.0050	1	02/23/2017 21:34
1,2-Dichloropropane	ND	0.0050	1	02/23/2017 21:34
1,3-Dichloropropane	ND	0.0050	1	02/23/2017 21:34
2,2-Dichloropropane	ND	0.0050	1	02/23/2017 21:34

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	GC10	134576
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	02/23/2017 21:34
cis-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 21:34
trans-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 21:34
Diisopropyl ether (DIPE)	ND		0.0050	1	02/23/2017 21:34
Ethylbenzene	ND		0.0050	1	02/23/2017 21:34
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/23/2017 21:34
Freon 113	ND		0.0050	1	02/23/2017 21:34
Hexachlorobutadiene	ND		0.0050	1	02/23/2017 21:34
Hexachloroethane	ND		0.0050	1	02/23/2017 21:34
2-Hexanone	ND		0.0050	1	02/23/2017 21:34
Isopropylbenzene	ND		0.0050	1	02/23/2017 21:34
4-Isopropyl toluene	ND		0.0050	1	02/23/2017 21:34
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/23/2017 21:34
Methylene chloride	ND		0.0050	1	02/23/2017 21:34
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/23/2017 21:34
Naphthalene	ND		0.0050	1	02/23/2017 21:34
n-Propyl benzene	ND		0.0050	1	02/23/2017 21:34
Styrene	ND		0.0050	1	02/23/2017 21:34
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 21:34
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 21:34
Tetrachloroethene	ND		0.0050	1	02/23/2017 21:34
Toluene	ND		0.0050	1	02/23/2017 21:34
1,2,3-Trichlorobenzene	ND		0.0050	1	02/23/2017 21:34
1,2,4-Trichlorobenzene	ND		0.0050	1	02/23/2017 21:34
1,1,1-Trichloroethane	ND		0.0050	1	02/23/2017 21:34
1,1,2-Trichloroethane	ND		0.0050	1	02/23/2017 21:34
Trichloroethene	ND		0.0050	1	02/23/2017 21:34
Trichlorofluoromethane	ND		0.0050	1	02/23/2017 21:34
1,2,3-Trichloropropane	ND		0.0050	1	02/23/2017 21:34
1,2,4-Trimethylbenzene	ND		0.0050	1	02/23/2017 21:34
1,3,5-Trimethylbenzene	ND		0.0050	1	02/23/2017 21:34
Vinyl Chloride	ND		0.0050	1	02/23/2017 21:34
Xylenes, Total	ND		0.0050	1	02/23/2017 21:34

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	GC10	134576

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	99	70-130		02/23/2017 21:34
Toluene-d8	109	70-130		02/23/2017 21:34
4-BFB	102	70-130		02/23/2017 21:34
Benzene-d6	98	60-140		02/23/2017 21:34
Ethylbenzene-d10	119	60-140		02/23/2017 21:34
1,2-DCB-d4	84	60-140		02/23/2017 21:34

Analyst(s): AK



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	GC10	134576
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	02/23/2017 22:14
tert-Amyl methyl ether (TAME)	ND		0.0050	1	02/23/2017 22:14
Benzene	ND		0.0050	1	02/23/2017 22:14
Bromobenzene	ND		0.0050	1	02/23/2017 22:14
Bromochloromethane	ND		0.0050	1	02/23/2017 22:14
Bromodichloromethane	ND		0.0050	1	02/23/2017 22:14
Bromoform	ND		0.0050	1	02/23/2017 22:14
Bromomethane	ND		0.0050	1	02/23/2017 22:14
2-Butanone (MEK)	ND		0.020	1	02/23/2017 22:14
t-Butyl alcohol (TBA)	ND		0.050	1	02/23/2017 22:14
n-Butyl benzene	ND		0.0050	1	02/23/2017 22:14
sec-Butyl benzene	ND		0.0050	1	02/23/2017 22:14
tert-Butyl benzene	ND		0.0050	1	02/23/2017 22:14
Carbon Disulfide	ND		0.0050	1	02/23/2017 22:14
Carbon Tetrachloride	ND		0.0050	1	02/23/2017 22:14
Chlorobenzene	ND		0.0050	1	02/23/2017 22:14
Chloroethane	ND		0.0050	1	02/23/2017 22:14
Chloroform	ND		0.0050	1	02/23/2017 22:14
Chloromethane	ND		0.0050	1	02/23/2017 22:14
2-Chlorotoluene	ND		0.0050	1	02/23/2017 22:14
4-Chlorotoluene	ND		0.0050	1	02/23/2017 22:14
Dibromochloromethane	ND		0.0050	1	02/23/2017 22:14
1,2-Dibromo-3-chloropropane	ND		0.0040	1	02/23/2017 22:14
1,2-Dibromoethane (EDB)	ND		0.0040	1	02/23/2017 22:14
Dibromomethane	ND		0.0050	1	02/23/2017 22:14
1,2-Dichlorobenzene	ND		0.0050	1	02/23/2017 22:14
1,3-Dichlorobenzene	ND		0.0050	1	02/23/2017 22:14
1,4-Dichlorobenzene	ND		0.0050	1	02/23/2017 22:14
Dichlorodifluoromethane	ND		0.0050	1	02/23/2017 22:14
1,1-Dichloroethane	ND		0.0050	1	02/23/2017 22:14
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	02/23/2017 22:14
1,1-Dichloroethene	ND		0.0050	1	02/23/2017 22:14
cis-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 22:14
trans-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 22:14
1,2-Dichloropropane	ND		0.0050	1	02/23/2017 22:14
1,3-Dichloropropane	ND		0.0050	1	02/23/2017 22:14
2,2-Dichloropropane	ND		0.0050	1	02/23/2017 22:14

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	GC10	134576
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	02/23/2017 22:14
cis-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 22:14
trans-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 22:14
Diisopropyl ether (DIPE)	ND		0.0050	1	02/23/2017 22:14
Ethylbenzene	ND		0.0050	1	02/23/2017 22:14
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/23/2017 22:14
Freon 113	ND		0.0050	1	02/23/2017 22:14
Hexachlorobutadiene	ND		0.0050	1	02/23/2017 22:14
Hexachloroethane	ND		0.0050	1	02/23/2017 22:14
2-Hexanone	ND		0.0050	1	02/23/2017 22:14
Isopropylbenzene	ND		0.0050	1	02/23/2017 22:14
4-Isopropyl toluene	ND		0.0050	1	02/23/2017 22:14
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/23/2017 22:14
Methylene chloride	ND		0.0050	1	02/23/2017 22:14
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/23/2017 22:14
Naphthalene	ND		0.0050	1	02/23/2017 22:14
n-Propyl benzene	ND		0.0050	1	02/23/2017 22:14
Styrene	ND		0.0050	1	02/23/2017 22:14
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 22:14
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 22:14
Tetrachloroethene	ND		0.0050	1	02/23/2017 22:14
Toluene	ND		0.0050	1	02/23/2017 22:14
1,2,3-Trichlorobenzene	ND		0.0050	1	02/23/2017 22:14
1,2,4-Trichlorobenzene	ND		0.0050	1	02/23/2017 22:14
1,1,1-Trichloroethane	ND		0.0050	1	02/23/2017 22:14
1,1,2-Trichloroethane	ND		0.0050	1	02/23/2017 22:14
Trichloroethene	ND		0.0050	1	02/23/2017 22:14
Trichlorofluoromethane	ND		0.0050	1	02/23/2017 22:14
1,2,3-Trichloropropane	ND		0.0050	1	02/23/2017 22:14
1,2,4-Trimethylbenzene	ND		0.0050	1	02/23/2017 22:14
1,3,5-Trimethylbenzene	ND		0.0050	1	02/23/2017 22:14
Vinyl Chloride	ND		0.0050	1	02/23/2017 22:14
Xylenes, Total	ND		0.0050	1	02/23/2017 22:14

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	GC10	134576

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	99	70-130		02/23/2017 22:14
Toluene-d8	108	70-130		02/23/2017 22:14
4-BFB	107	70-130		02/23/2017 22:14
Benzene-d6	101	60-140		02/23/2017 22:14
Ethylbenzene-d10	120	60-140		02/23/2017 22:14
1,2-DCB-d4	85	60-140		02/23/2017 22:14

Analyst(s): AK



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	GC18	134576
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	02/24/2017 03:32
tert-Amyl methyl ether (TAME)	ND		0.0050	1	02/24/2017 03:32
Benzene	ND		0.0050	1	02/24/2017 03:32
Bromobenzene	ND		0.0050	1	02/24/2017 03:32
Bromochloromethane	ND		0.0050	1	02/24/2017 03:32
Bromodichloromethane	ND		0.0050	1	02/24/2017 03:32
Bromoform	ND		0.0050	1	02/24/2017 03:32
Bromomethane	ND		0.0050	1	02/24/2017 03:32
2-Butanone (MEK)	ND		0.020	1	02/24/2017 03:32
t-Butyl alcohol (TBA)	ND		0.050	1	02/24/2017 03:32
n-Butyl benzene	ND		0.0050	1	02/24/2017 03:32
sec-Butyl benzene	ND		0.0050	1	02/24/2017 03:32
tert-Butyl benzene	ND		0.0050	1	02/24/2017 03:32
Carbon Disulfide	ND		0.0050	1	02/24/2017 03:32
Carbon Tetrachloride	ND		0.0050	1	02/24/2017 03:32
Chlorobenzene	ND		0.0050	1	02/24/2017 03:32
Chloroethane	ND		0.0050	1	02/24/2017 03:32
Chloroform	ND		0.0050	1	02/24/2017 03:32
Chloromethane	ND		0.0050	1	02/24/2017 03:32
2-Chlorotoluene	ND		0.0050	1	02/24/2017 03:32
4-Chlorotoluene	ND		0.0050	1	02/24/2017 03:32
Dibromochloromethane	ND		0.0050	1	02/24/2017 03:32
1,2-Dibromo-3-chloropropane	ND		0.0040	1	02/24/2017 03:32
1,2-Dibromoethane (EDB)	ND		0.0040	1	02/24/2017 03:32
Dibromomethane	ND		0.0050	1	02/24/2017 03:32
1,2-Dichlorobenzene	ND		0.0050	1	02/24/2017 03:32
1,3-Dichlorobenzene	ND		0.0050	1	02/24/2017 03:32
1,4-Dichlorobenzene	ND		0.0050	1	02/24/2017 03:32
Dichlorodifluoromethane	ND		0.0050	1	02/24/2017 03:32
1,1-Dichloroethane	ND		0.0050	1	02/24/2017 03:32
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	02/24/2017 03:32
1,1-Dichloroethene	ND		0.0050	1	02/24/2017 03:32
cis-1,2-Dichloroethene	ND		0.0050	1	02/24/2017 03:32
trans-1,2-Dichloroethene	ND		0.0050	1	02/24/2017 03:32
1,2-Dichloropropane	ND		0.0050	1	02/24/2017 03:32
1,3-Dichloropropane	ND		0.0050	1	02/24/2017 03:32
2,2-Dichloropropane	ND		0.0050	1	02/24/2017 03:32

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	GC18	134576
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	02/24/2017 03:32
cis-1,3-Dichloropropene	ND		0.0050	1	02/24/2017 03:32
trans-1,3-Dichloropropene	ND		0.0050	1	02/24/2017 03:32
Diisopropyl ether (DIPE)	ND		0.0050	1	02/24/2017 03:32
Ethylbenzene	ND		0.0050	1	02/24/2017 03:32
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/24/2017 03:32
Freon 113	ND		0.0050	1	02/24/2017 03:32
Hexachlorobutadiene	ND		0.0050	1	02/24/2017 03:32
Hexachloroethane	ND		0.0050	1	02/24/2017 03:32
2-Hexanone	ND		0.0050	1	02/24/2017 03:32
Isopropylbenzene	ND		0.0050	1	02/24/2017 03:32
4-Isopropyl toluene	ND		0.0050	1	02/24/2017 03:32
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/24/2017 03:32
Methylene chloride	ND		0.0050	1	02/24/2017 03:32
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/24/2017 03:32
Naphthalene	ND		0.0050	1	02/24/2017 03:32
n-Propyl benzene	ND		0.0050	1	02/24/2017 03:32
Styrene	ND		0.0050	1	02/24/2017 03:32
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/24/2017 03:32
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/24/2017 03:32
Tetrachloroethene	ND		0.0050	1	02/24/2017 03:32
Toluene	ND		0.0050	1	02/24/2017 03:32
1,2,3-Trichlorobenzene	ND		0.0050	1	02/24/2017 03:32
1,2,4-Trichlorobenzene	ND		0.0050	1	02/24/2017 03:32
1,1,1-Trichloroethane	ND		0.0050	1	02/24/2017 03:32
1,1,2-Trichloroethane	ND		0.0050	1	02/24/2017 03:32
Trichloroethene	ND		0.0050	1	02/24/2017 03:32
Trichlorofluoromethane	ND		0.0050	1	02/24/2017 03:32
1,2,3-Trichloropropane	ND		0.0050	1	02/24/2017 03:32
1,2,4-Trimethylbenzene	ND		0.0050	1	02/24/2017 03:32
1,3,5-Trimethylbenzene	ND		0.0050	1	02/24/2017 03:32
Vinyl Chloride	ND		0.0050	1	02/24/2017 03:32
Xylenes, Total	ND		0.0050	1	02/24/2017 03:32

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	GC18	134576

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	94	70-130		02/24/2017 03:32
Toluene-d8	100	70-130		02/24/2017 03:32
4-BFB	109	70-130		02/24/2017 03:32
Benzene-d6	91	60-140		02/24/2017 03:32
Ethylbenzene-d10	101	60-140		02/24/2017 03:32
1,2-DCB-d4	76	60-140		02/24/2017 03:32

Analyst(s): JEM



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	GC10	134576
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	02/23/2017 23:35
tert-Amyl methyl ether (TAME)	ND		0.0050	1	02/23/2017 23:35
Benzene	ND		0.0050	1	02/23/2017 23:35
Bromobenzene	ND		0.0050	1	02/23/2017 23:35
Bromochloromethane	ND		0.0050	1	02/23/2017 23:35
Bromodichloromethane	ND		0.0050	1	02/23/2017 23:35
Bromoform	ND		0.0050	1	02/23/2017 23:35
Bromomethane	ND		0.0050	1	02/23/2017 23:35
2-Butanone (MEK)	ND		0.020	1	02/23/2017 23:35
t-Butyl alcohol (TBA)	ND		0.050	1	02/23/2017 23:35
n-Butyl benzene	ND		0.0050	1	02/23/2017 23:35
sec-Butyl benzene	ND		0.0050	1	02/23/2017 23:35
tert-Butyl benzene	ND		0.0050	1	02/23/2017 23:35
Carbon Disulfide	ND		0.0050	1	02/23/2017 23:35
Carbon Tetrachloride	ND		0.0050	1	02/23/2017 23:35
Chlorobenzene	ND		0.0050	1	02/23/2017 23:35
Chloroethane	ND		0.0050	1	02/23/2017 23:35
Chloroform	ND		0.0050	1	02/23/2017 23:35
Chloromethane	ND		0.0050	1	02/23/2017 23:35
2-Chlorotoluene	ND		0.0050	1	02/23/2017 23:35
4-Chlorotoluene	ND		0.0050	1	02/23/2017 23:35
Dibromochloromethane	ND		0.0050	1	02/23/2017 23:35
1,2-Dibromo-3-chloropropane	ND		0.0040	1	02/23/2017 23:35
1,2-Dibromoethane (EDB)	ND		0.0040	1	02/23/2017 23:35
Dibromomethane	ND		0.0050	1	02/23/2017 23:35
1,2-Dichlorobenzene	ND		0.0050	1	02/23/2017 23:35
1,3-Dichlorobenzene	ND		0.0050	1	02/23/2017 23:35
1,4-Dichlorobenzene	ND		0.0050	1	02/23/2017 23:35
Dichlorodifluoromethane	ND		0.0050	1	02/23/2017 23:35
1,1-Dichloroethane	ND		0.0050	1	02/23/2017 23:35
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	02/23/2017 23:35
1,1-Dichloroethene	ND		0.0050	1	02/23/2017 23:35
cis-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 23:35
trans-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 23:35
1,2-Dichloropropane	ND		0.0050	1	02/23/2017 23:35
1,3-Dichloropropane	ND		0.0050	1	02/23/2017 23:35
2,2-Dichloropropane	ND		0.0050	1	02/23/2017 23:35

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	GC10	134576
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	02/23/2017 23:35
cis-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 23:35
trans-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 23:35
Diisopropyl ether (DIPE)	ND		0.0050	1	02/23/2017 23:35
Ethylbenzene	ND		0.0050	1	02/23/2017 23:35
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/23/2017 23:35
Freon 113	ND		0.0050	1	02/23/2017 23:35
Hexachlorobutadiene	ND		0.0050	1	02/23/2017 23:35
Hexachloroethane	ND		0.0050	1	02/23/2017 23:35
2-Hexanone	ND		0.0050	1	02/23/2017 23:35
Isopropylbenzene	ND		0.0050	1	02/23/2017 23:35
4-Isopropyl toluene	ND		0.0050	1	02/23/2017 23:35
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/23/2017 23:35
Methylene chloride	ND		0.0050	1	02/23/2017 23:35
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/23/2017 23:35
Naphthalene	ND		0.0050	1	02/23/2017 23:35
n-Propyl benzene	ND		0.0050	1	02/23/2017 23:35
Styrene	ND		0.0050	1	02/23/2017 23:35
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 23:35
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 23:35
Tetrachloroethene	ND		0.0050	1	02/23/2017 23:35
Toluene	ND		0.0050	1	02/23/2017 23:35
1,2,3-Trichlorobenzene	ND		0.0050	1	02/23/2017 23:35
1,2,4-Trichlorobenzene	ND		0.0050	1	02/23/2017 23:35
1,1,1-Trichloroethane	ND		0.0050	1	02/23/2017 23:35
1,1,2-Trichloroethane	ND		0.0050	1	02/23/2017 23:35
Trichloroethene	ND		0.0050	1	02/23/2017 23:35
Trichlorofluoromethane	ND		0.0050	1	02/23/2017 23:35
1,2,3-Trichloropropane	ND		0.0050	1	02/23/2017 23:35
1,2,4-Trimethylbenzene	ND		0.0050	1	02/23/2017 23:35
1,3,5-Trimethylbenzene	ND		0.0050	1	02/23/2017 23:35
Vinyl Chloride	ND		0.0050	1	02/23/2017 23:35
Xylenes, Total	ND		0.0050	1	02/23/2017 23:35

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	GC10	134576

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	100	70-130		02/23/2017 23:35
Toluene-d8	108	70-130		02/23/2017 23:35
4-BFB	102	70-130		02/23/2017 23:35
Benzene-d6	101	60-140		02/23/2017 23:35
Ethylbenzene-d10	120	60-140		02/23/2017 23:35
1,2-DCB-d4	87	60-140		02/23/2017 23:35

Analyst(s): AK



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	GC21	134796
Analytes	Result	RL	DF	Date Analyzed	
Acenaphthene	ND	0.25	1	02/28/2017 15:37	
Acenaphthylene	ND	0.25	1	02/28/2017 15:37	
Acetochlor	ND	0.25	1	02/28/2017 15:37	
Anthracene	ND	0.25	1	02/28/2017 15:37	
Benzidine	ND	1.3	1	02/28/2017 15:37	
Benzo (a) anthracene	ND	0.25	1	02/28/2017 15:37	
Benzo (a) pyrene	ND	0.25	1	02/28/2017 15:37	
Benzo (b) fluoranthene	ND	0.25	1	02/28/2017 15:37	
Benzo (g,h,i) perylene	ND	0.25	1	02/28/2017 15:37	
Benzo (k) fluoranthene	ND	0.25	1	02/28/2017 15:37	
Benzyl Alcohol	ND	1.3	1	02/28/2017 15:37	
1,1-Biphenyl	ND	0.25	1	02/28/2017 15:37	
Bis (2-chloroethoxy) Methane	ND	0.25	1	02/28/2017 15:37	
Bis (2-chloroethyl) Ether	ND	0.25	1	02/28/2017 15:37	
Bis (2-chloroisopropyl) Ether	ND	0.25	1	02/28/2017 15:37	
Bis (2-ethylhexyl) Adipate	ND	0.25	1	02/28/2017 15:37	
Bis (2-ethylhexyl) Phthalate	ND	0.25	1	02/28/2017 15:37	
4-Bromophenyl Phenyl Ether	ND	0.25	1	02/28/2017 15:37	
Butylbenzyl Phthalate	ND	0.25	1	02/28/2017 15:37	
4-Chloroaniline	ND	0.50	1	02/28/2017 15:37	
4-Chloro-3-methylphenol	ND	0.25	1	02/28/2017 15:37	
2-Chloronaphthalene	ND	0.25	1	02/28/2017 15:37	
2-Chlorophenol	ND	0.25	1	02/28/2017 15:37	
4-Chlorophenyl Phenyl Ether	ND	0.25	1	02/28/2017 15:37	
Chrysene	ND	0.25	1	02/28/2017 15:37	
Dibenzo (a,h) anthracene	ND	0.25	1	02/28/2017 15:37	
Dibenzofuran	ND	0.25	1	02/28/2017 15:37	
Di-n-butyl Phthalate	ND	0.25	1	02/28/2017 15:37	
1,2-Dichlorobenzene	ND	0.25	1	02/28/2017 15:37	
1,3-Dichlorobenzene	ND	0.25	1	02/28/2017 15:37	
1,4-Dichlorobenzene	ND	0.25	1	02/28/2017 15:37	
3,3-Dichlorobenzidine	ND	0.50	1	02/28/2017 15:37	
2,4-Dichlorophenol	ND	0.25	1	02/28/2017 15:37	
Diethyl Phthalate	ND	0.25	1	02/28/2017 15:37	
2,4-Dimethylphenol	ND	0.25	1	02/28/2017 15:37	
Dimethyl Phthalate	ND	0.25	1	02/28/2017 15:37	
4,6-Dinitro-2-methylphenol	ND	1.3	1	02/28/2017 15:37	

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	GC21	134796
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		6.3	1	02/28/2017 15:37
2,4-Dinitrotoluene	ND		0.25	1	02/28/2017 15:37
2,6-Dinitrotoluene	ND		0.25	1	02/28/2017 15:37
Di-n-octyl Phthalate	ND		0.50	1	02/28/2017 15:37
1,2-Diphenylhydrazine	ND		0.25	1	02/28/2017 15:37
Fluoranthene	ND		0.25	1	02/28/2017 15:37
Fluorene	ND		0.25	1	02/28/2017 15:37
Hexachlorobenzene	ND		0.25	1	02/28/2017 15:37
Hexachlorobutadiene	ND		0.25	1	02/28/2017 15:37
Hexachlorocyclopentadiene	ND		1.3	1	02/28/2017 15:37
Hexachloroethane	ND		0.25	1	02/28/2017 15:37
Indeno (1,2,3-cd) pyrene	ND		0.25	1	02/28/2017 15:37
Isophorone	ND		0.25	1	02/28/2017 15:37
2-Methylnaphthalene	ND		0.25	1	02/28/2017 15:37
2-Methylphenol (o-Cresol)	ND		0.25	1	02/28/2017 15:37
3 & 4-Methylphenol (m,p-Cresol)	ND		0.25	1	02/28/2017 15:37
Naphthalene	ND		0.25	1	02/28/2017 15:37
2-Nitroaniline	ND		1.3	1	02/28/2017 15:37
3-Nitroaniline	ND		1.3	1	02/28/2017 15:37
4-Nitroaniline	ND		1.3	1	02/28/2017 15:37
Nitrobenzene	ND		0.25	1	02/28/2017 15:37
2-Nitrophenol	ND		1.3	1	02/28/2017 15:37
4-Nitrophenol	ND		1.3	1	02/28/2017 15:37
N-Nitrosodiphenylamine	ND		0.25	1	02/28/2017 15:37
N-Nitrosodi-n-propylamine	ND		0.25	1	02/28/2017 15:37
Pentachlorophenol	ND		1.3	1	02/28/2017 15:37
Phenanthrene	ND		0.25	1	02/28/2017 15:37
Phenol	ND		0.25	1	02/28/2017 15:37
Pyrene	ND		0.25	1	02/28/2017 15:37
1,2,4-Trichlorobenzene	ND		0.25	1	02/28/2017 15:37
2,4,5-Trichlorophenol	ND		0.25	1	02/28/2017 15:37
2,4,6-Trichlorophenol	ND		0.25	1	02/28/2017 15:37

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	GC21	134796

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	94	30-130		02/28/2017 15:37
Phenol-d5	88	30-130		02/28/2017 15:37
Nitrobenzene-d5	82	30-130		02/28/2017 15:37
2-Fluorobiphenyl	77	30-130		02/28/2017 15:37
2,4,6-Tribromophenol	63	16-130		02/28/2017 15:37
4-Terphenyl-d14	81	30-130		02/28/2017 15:37

Analyst(s): REB



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	GC21	134796

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.25	1	02/28/2017 16:05
Acenaphthylene	ND	0.25	1	02/28/2017 16:05
Acetochlor	ND	0.25	1	02/28/2017 16:05
Anthracene	ND	0.25	1	02/28/2017 16:05
Benzidine	ND	1.3	1	02/28/2017 16:05
Benzo (a) anthracene	ND	0.25	1	02/28/2017 16:05
Benzo (a) pyrene	ND	0.25	1	02/28/2017 16:05
Benzo (b) fluoranthene	ND	0.25	1	02/28/2017 16:05
Benzo (g,h,i) perylene	ND	0.25	1	02/28/2017 16:05
Benzo (k) fluoranthene	ND	0.25	1	02/28/2017 16:05
Benzyl Alcohol	ND	1.3	1	02/28/2017 16:05
1,1-Biphenyl	ND	0.25	1	02/28/2017 16:05
Bis (2-chloroethoxy) Methane	ND	0.25	1	02/28/2017 16:05
Bis (2-chloroethyl) Ether	ND	0.25	1	02/28/2017 16:05
Bis (2-chloroisopropyl) Ether	ND	0.25	1	02/28/2017 16:05
Bis (2-ethylhexyl) Adipate	ND	0.25	1	02/28/2017 16:05
Bis (2-ethylhexyl) Phthalate	ND	0.25	1	02/28/2017 16:05
4-Bromophenyl Phenyl Ether	ND	0.25	1	02/28/2017 16:05
Butylbenzyl Phthalate	ND	0.25	1	02/28/2017 16:05
4-Chloroaniline	ND	0.50	1	02/28/2017 16:05
4-Chloro-3-methylphenol	ND	0.25	1	02/28/2017 16:05
2-Chloronaphthalene	ND	0.25	1	02/28/2017 16:05
2-Chlorophenol	ND	0.25	1	02/28/2017 16:05
4-Chlorophenyl Phenyl Ether	ND	0.25	1	02/28/2017 16:05
Chrysene	ND	0.25	1	02/28/2017 16:05
Dibenzo (a,h) anthracene	ND	0.25	1	02/28/2017 16:05
Dibenzofuran	ND	0.25	1	02/28/2017 16:05
Di-n-butyl Phthalate	ND	0.25	1	02/28/2017 16:05
1,2-Dichlorobenzene	ND	0.25	1	02/28/2017 16:05
1,3-Dichlorobenzene	ND	0.25	1	02/28/2017 16:05
1,4-Dichlorobenzene	ND	0.25	1	02/28/2017 16:05
3,3-Dichlorobenzidine	ND	0.50	1	02/28/2017 16:05
2,4-Dichlorophenol	ND	0.25	1	02/28/2017 16:05
Diethyl Phthalate	ND	0.25	1	02/28/2017 16:05
2,4-Dimethylphenol	ND	0.25	1	02/28/2017 16:05
Dimethyl Phthalate	ND	0.25	1	02/28/2017 16:05
4,6-Dinitro-2-methylphenol	ND	1.3	1	02/28/2017 16:05

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	GC21	134796
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		6.3	1	02/28/2017 16:05
2,4-Dinitrotoluene	ND		0.25	1	02/28/2017 16:05
2,6-Dinitrotoluene	ND		0.25	1	02/28/2017 16:05
Di-n-octyl Phthalate	ND		0.50	1	02/28/2017 16:05
1,2-Diphenylhydrazine	ND		0.25	1	02/28/2017 16:05
Fluoranthene	ND		0.25	1	02/28/2017 16:05
Fluorene	ND		0.25	1	02/28/2017 16:05
Hexachlorobenzene	ND		0.25	1	02/28/2017 16:05
Hexachlorobutadiene	ND		0.25	1	02/28/2017 16:05
Hexachlorocyclopentadiene	ND		1.3	1	02/28/2017 16:05
Hexachloroethane	ND		0.25	1	02/28/2017 16:05
Indeno (1,2,3-cd) pyrene	ND		0.25	1	02/28/2017 16:05
Isophorone	ND		0.25	1	02/28/2017 16:05
2-Methylnaphthalene	ND		0.25	1	02/28/2017 16:05
2-Methylphenol (o-Cresol)	ND		0.25	1	02/28/2017 16:05
3 & 4-Methylphenol (m,p-Cresol)	ND		0.25	1	02/28/2017 16:05
Naphthalene	ND		0.25	1	02/28/2017 16:05
2-Nitroaniline	ND		1.3	1	02/28/2017 16:05
3-Nitroaniline	ND		1.3	1	02/28/2017 16:05
4-Nitroaniline	ND		1.3	1	02/28/2017 16:05
Nitrobenzene	ND		0.25	1	02/28/2017 16:05
2-Nitrophenol	ND		1.3	1	02/28/2017 16:05
4-Nitrophenol	ND		1.3	1	02/28/2017 16:05
N-Nitrosodiphenylamine	ND		0.25	1	02/28/2017 16:05
N-Nitrosodi-n-propylamine	ND		0.25	1	02/28/2017 16:05
Pentachlorophenol	ND		1.3	1	02/28/2017 16:05
Phenanthrene	ND		0.25	1	02/28/2017 16:05
Phenol	ND		0.25	1	02/28/2017 16:05
Pyrene	ND		0.25	1	02/28/2017 16:05
1,2,4-Trichlorobenzene	ND		0.25	1	02/28/2017 16:05
2,4,5-Trichlorophenol	ND		0.25	1	02/28/2017 16:05
2,4,6-Trichlorophenol	ND		0.25	1	02/28/2017 16:05

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	GC21	134796

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	120	30-130		02/28/2017 16:05
Phenol-d5	110	30-130		02/28/2017 16:05
Nitrobenzene-d5	98	30-130		02/28/2017 16:05
2-Fluorobiphenyl	90	30-130		02/28/2017 16:05
2,4,6-Tribromophenol	82	16-130		02/28/2017 16:05
4-Terphenyl-d14	95	30-130		02/28/2017 16:05

Analyst(s): REB



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	GC17	134796
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		4.0	2	03/01/2017 16:37
Acenaphthylene	ND		4.0	2	03/01/2017 16:37
Acetochlor	ND		4.0	2	03/01/2017 16:37
Anthracene	ND		4.0	2	03/01/2017 16:37
Benzidine	ND		21	2	03/01/2017 16:37
Benzo (a) anthracene	ND		4.0	2	03/01/2017 16:37
Benzo (a) pyrene	ND		4.0	2	03/01/2017 16:37
Benzo (b) fluoranthene	ND		4.0	2	03/01/2017 16:37
Benzo (g,h,i) perylene	ND		4.0	2	03/01/2017 16:37
Benzo (k) fluoranthene	ND		4.0	2	03/01/2017 16:37
Benzyl Alcohol	ND		21	2	03/01/2017 16:37
1,1-Biphenyl	ND		4.0	2	03/01/2017 16:37
Bis (2-chloroethoxy) Methane	ND		4.0	2	03/01/2017 16:37
Bis (2-chloroethyl) Ether	ND		4.0	2	03/01/2017 16:37
Bis (2-chloroisopropyl) Ether	ND		4.0	2	03/01/2017 16:37
Bis (2-ethylhexyl) Adipate	ND		4.0	2	03/01/2017 16:37
Bis (2-ethylhexyl) Phthalate	ND		4.0	2	03/01/2017 16:37
4-Bromophenyl Phenyl Ether	ND		4.0	2	03/01/2017 16:37
Butylbenzyl Phthalate	ND		4.0	2	03/01/2017 16:37
4-Chloroaniline	ND		8.0	2	03/01/2017 16:37
4-Chloro-3-methylphenol	ND		4.0	2	03/01/2017 16:37
2-Chloronaphthalene	ND		4.0	2	03/01/2017 16:37
2-Chlorophenol	ND		4.0	2	03/01/2017 16:37
4-Chlorophenyl Phenyl Ether	ND		4.0	2	03/01/2017 16:37
Chrysene	ND		4.0	2	03/01/2017 16:37
Dibenzo (a,h) anthracene	ND		4.0	2	03/01/2017 16:37
Dibenzofuran	ND		4.0	2	03/01/2017 16:37
Di-n-butyl Phthalate	ND		4.0	2	03/01/2017 16:37
1,2-Dichlorobenzene	ND		4.0	2	03/01/2017 16:37
1,3-Dichlorobenzene	ND		4.0	2	03/01/2017 16:37
1,4-Dichlorobenzene	ND		4.0	2	03/01/2017 16:37
3,3-Dichlorobenzidine	ND		8.0	2	03/01/2017 16:37
2,4-Dichlorophenol	ND		4.0	2	03/01/2017 16:37
Diethyl Phthalate	ND		4.0	2	03/01/2017 16:37
2,4-Dimethylphenol	ND		4.0	2	03/01/2017 16:37
Dimethyl Phthalate	ND		4.0	2	03/01/2017 16:37
4,6-Dinitro-2-methylphenol	ND		21	2	03/01/2017 16:37

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	GC17	134796
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		100	2	03/01/2017 16:37
2,4-Dinitrotoluene	ND		4.0	2	03/01/2017 16:37
2,6-Dinitrotoluene	ND		4.0	2	03/01/2017 16:37
Di-n-octyl Phthalate	ND		8.0	2	03/01/2017 16:37
1,2-Diphenylhydrazine	ND		4.0	2	03/01/2017 16:37
Fluoranthene	ND		4.0	2	03/01/2017 16:37
Fluorene	ND		4.0	2	03/01/2017 16:37
Hexachlorobenzene	ND		4.0	2	03/01/2017 16:37
Hexachlorobutadiene	ND		4.0	2	03/01/2017 16:37
Hexachlorocyclopentadiene	ND		21	2	03/01/2017 16:37
Hexachloroethane	ND		4.0	2	03/01/2017 16:37
Indeno (1,2,3-cd) pyrene	ND		4.0	2	03/01/2017 16:37
Isophorone	ND		4.0	2	03/01/2017 16:37
2-Methylnaphthalene	ND		4.0	2	03/01/2017 16:37
2-Methylphenol (o-Cresol)	ND		4.0	2	03/01/2017 16:37
3 & 4-Methylphenol (m,p-Cresol)	ND		4.0	2	03/01/2017 16:37
Naphthalene	ND		4.0	2	03/01/2017 16:37
2-Nitroaniline	ND		21	2	03/01/2017 16:37
3-Nitroaniline	ND		21	2	03/01/2017 16:37
4-Nitroaniline	ND		21	2	03/01/2017 16:37
Nitrobenzene	ND		4.0	2	03/01/2017 16:37
2-Nitrophenol	ND		21	2	03/01/2017 16:37
4-Nitrophenol	ND		21	2	03/01/2017 16:37
N-Nitrosodiphenylamine	ND		4.0	2	03/01/2017 16:37
N-Nitrosodi-n-propylamine	ND		4.0	2	03/01/2017 16:37
Pentachlorophenol	ND		21	2	03/01/2017 16:37
Phenanthrene	ND		4.0	2	03/01/2017 16:37
Phenol	ND		4.0	2	03/01/2017 16:37
Pyrene	ND		4.0	2	03/01/2017 16:37
1,2,4-Trichlorobenzene	ND		4.0	2	03/01/2017 16:37
2,4,5-Trichlorophenol	ND		4.0	2	03/01/2017 16:37
2,4,6-Trichlorophenol	ND		4.0	2	03/01/2017 16:37

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	GC17	134796

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	113	30-130		03/01/2017 16:37
Phenol-d5	97	30-130		03/01/2017 16:37
Nitrobenzene-d5	100	30-130		03/01/2017 16:37
2-Fluorobiphenyl	88	30-130		03/01/2017 16:37
2,4,6-Tribromophenol	28	16-130		03/01/2017 16:37
4-Terphenyl-d14	102	30-130		03/01/2017 16:37

Analyst(s): REB

Analytical Comments: a3,a4



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	GC21	134796

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	2.0	1	02/28/2017 17:01
Acenaphthylene	ND	2.0	1	02/28/2017 17:01
Acetochlor	ND	2.0	1	02/28/2017 17:01
Anthracene	ND	2.0	1	02/28/2017 17:01
Benzidine	ND	10	1	02/28/2017 17:01
Benzo (a) anthracene	ND	2.0	1	02/28/2017 17:01
Benzo (a) pyrene	ND	2.0	1	02/28/2017 17:01
Benzo (b) fluoranthene	ND	2.0	1	02/28/2017 17:01
Benzo (g,h,i) perylene	ND	2.0	1	02/28/2017 17:01
Benzo (k) fluoranthene	ND	2.0	1	02/28/2017 17:01
Benzyl Alcohol	ND	10	1	02/28/2017 17:01
1,1-Biphenyl	ND	2.0	1	02/28/2017 17:01
Bis (2-chloroethoxy) Methane	ND	2.0	1	02/28/2017 17:01
Bis (2-chloroethyl) Ether	ND	2.0	1	02/28/2017 17:01
Bis (2-chloroisopropyl) Ether	ND	2.0	1	02/28/2017 17:01
Bis (2-ethylhexyl) Adipate	ND	2.0	1	02/28/2017 17:01
Bis (2-ethylhexyl) Phthalate	ND	2.0	1	02/28/2017 17:01
4-Bromophenyl Phenyl Ether	ND	2.0	1	02/28/2017 17:01
Butylbenzyl Phthalate	ND	2.0	1	02/28/2017 17:01
4-Chloroaniline	ND	4.0	1	02/28/2017 17:01
4-Chloro-3-methylphenol	ND	2.0	1	02/28/2017 17:01
2-Chloronaphthalene	ND	2.0	1	02/28/2017 17:01
2-Chlorophenol	ND	2.0	1	02/28/2017 17:01
4-Chlorophenyl Phenyl Ether	ND	2.0	1	02/28/2017 17:01
Chrysene	ND	2.0	1	02/28/2017 17:01
Dibenzo (a,h) anthracene	ND	2.0	1	02/28/2017 17:01
Dibenzofuran	ND	2.0	1	02/28/2017 17:01
Di-n-butyl Phthalate	ND	2.0	1	02/28/2017 17:01
1,2-Dichlorobenzene	ND	2.0	1	02/28/2017 17:01
1,3-Dichlorobenzene	ND	2.0	1	02/28/2017 17:01
1,4-Dichlorobenzene	ND	2.0	1	02/28/2017 17:01
3,3-Dichlorobenzidine	ND	4.0	1	02/28/2017 17:01
2,4-Dichlorophenol	ND	2.0	1	02/28/2017 17:01
Diethyl Phthalate	ND	2.0	1	02/28/2017 17:01
2,4-Dimethylphenol	ND	2.0	1	02/28/2017 17:01
Dimethyl Phthalate	ND	2.0	1	02/28/2017 17:01
4,6-Dinitro-2-methylphenol	ND	10	1	02/28/2017 17:01

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	GC21	134796
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		50	1	02/28/2017 17:01
2,4-Dinitrotoluene	ND		2.0	1	02/28/2017 17:01
2,6-Dinitrotoluene	ND		2.0	1	02/28/2017 17:01
Di-n-octyl Phthalate	ND		4.0	1	02/28/2017 17:01
1,2-Diphenylhydrazine	ND		2.0	1	02/28/2017 17:01
Fluoranthene	ND		2.0	1	02/28/2017 17:01
Fluorene	ND		2.0	1	02/28/2017 17:01
Hexachlorobenzene	ND		2.0	1	02/28/2017 17:01
Hexachlorobutadiene	ND		2.0	1	02/28/2017 17:01
Hexachlorocyclopentadiene	ND		10	1	02/28/2017 17:01
Hexachloroethane	ND		2.0	1	02/28/2017 17:01
Indeno (1,2,3-cd) pyrene	ND		2.0	1	02/28/2017 17:01
Isophorone	ND		2.0	1	02/28/2017 17:01
2-Methylnaphthalene	ND		2.0	1	02/28/2017 17:01
2-Methylphenol (o-Cresol)	ND		2.0	1	02/28/2017 17:01
3 & 4-Methylphenol (m,p-Cresol)	ND		2.0	1	02/28/2017 17:01
Naphthalene	ND		2.0	1	02/28/2017 17:01
2-Nitroaniline	ND		10	1	02/28/2017 17:01
3-Nitroaniline	ND		10	1	02/28/2017 17:01
4-Nitroaniline	ND		10	1	02/28/2017 17:01
Nitrobenzene	ND		2.0	1	02/28/2017 17:01
2-Nitrophenol	ND		10	1	02/28/2017 17:01
4-Nitrophenol	ND		10	1	02/28/2017 17:01
N-Nitrosodiphenylamine	ND		2.0	1	02/28/2017 17:01
N-Nitrosodi-n-propylamine	ND		2.0	1	02/28/2017 17:01
Pentachlorophenol	ND		10	1	02/28/2017 17:01
Phenanthrene	ND		2.0	1	02/28/2017 17:01
Phenol	ND		2.0	1	02/28/2017 17:01
Pyrene	ND		2.0	1	02/28/2017 17:01
1,2,4-Trichlorobenzene	ND		2.0	1	02/28/2017 17:01
2,4,5-Trichlorophenol	ND		2.0	1	02/28/2017 17:01
2,4,6-Trichlorophenol	ND		2.0	1	02/28/2017 17:01

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/27/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	GC21	134796

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	89	30-130		02/28/2017 17:01
Phenol-d5	81	30-130		02/28/2017 17:01
Nitrobenzene-d5	75	30-130		02/28/2017 17:01
2-Fluorobiphenyl	70	30-130		02/28/2017 17:01
2,4,6-Tribromophenol	61	16-130		02/28/2017 17:01
4-Terphenyl-d14	66	30-130		02/28/2017 17:01

Analyst(s): REB

Analytical Comments: a4



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	ICP-MS3	134519
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	02/24/2017 00:08
Arsenic	2.3		0.50	1	02/24/2017 00:08
Barium	95		5.0	1	02/24/2017 00:08
Beryllium	ND		0.50	1	02/24/2017 00:08
Cadmium	ND		0.25	1	02/24/2017 00:08
Chromium	69		0.50	1	02/24/2017 00:08
Cobalt	7.7		0.50	1	02/24/2017 00:08
Copper	9.6		0.50	1	02/24/2017 00:08
Lead	3.5		0.50	1	02/24/2017 00:08
Mercury	ND		0.050	1	02/24/2017 00:08
Molybdenum	ND		0.50	1	02/24/2017 00:08
Nickel	49		0.50	1	02/24/2017 00:08
Selenium	ND		0.50	1	02/24/2017 00:08
Silver	ND		0.50	1	02/24/2017 00:08
Thallium	ND		0.50	1	02/24/2017 00:08
Vanadium	31		0.50	1	02/24/2017 00:08
Zinc	24		5.0	1	02/24/2017 00:08
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	108		70-130		02/24/2017 00:08
<u>Analyst(s):</u> DB					

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Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	ICP-MS3	134519
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	02/24/2017 00:14
Arsenic	3.9		0.50	1	02/24/2017 00:14
Barium	96		5.0	1	02/24/2017 00:14
Beryllium	ND		0.50	1	02/24/2017 00:14
Cadmium	ND		0.25	1	02/24/2017 00:14
Chromium	58		0.50	1	02/24/2017 00:14
Cobalt	8.9		0.50	1	02/24/2017 00:14
Copper	12		0.50	1	02/24/2017 00:14
Lead	5.4		0.50	1	02/24/2017 00:14
Mercury	ND		0.050	1	02/24/2017 00:14
Molybdenum	ND		0.50	1	02/24/2017 00:14
Nickel	48		0.50	1	02/24/2017 00:14
Selenium	ND		0.50	1	02/24/2017 00:14
Silver	ND		0.50	1	02/24/2017 00:14
Thallium	ND		0.50	1	02/24/2017 00:14
Vanadium	40		0.50	1	02/24/2017 00:14
Zinc	35		5.0	1	02/24/2017 00:14
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	106		70-130		02/24/2017 00:14
<u>Analyst(s):</u> DB					

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Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	ICP-MS3	134519
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	0.70		0.50	1	02/24/2017 00:20
Arsenic	4.1		0.50	1	02/24/2017 00:20
Barium	220		5.0	1	02/24/2017 00:20
Beryllium	ND		0.50	1	02/24/2017 00:20
Cadmium	0.42		0.25	1	02/24/2017 00:20
Chromium	53		0.50	1	02/24/2017 00:20
Cobalt	14		0.50	1	02/24/2017 00:20
Copper	22		0.50	1	02/24/2017 00:20
Lead	470		5.0	10	02/24/2017 12:41
Mercury	0.88		0.050	1	02/24/2017 00:20
Molybdenum	0.56		0.50	1	02/24/2017 00:20
Nickel	57		0.50	1	02/24/2017 00:20
Selenium	ND		0.50	1	02/24/2017 00:20
Silver	ND		0.50	1	02/24/2017 00:20
Thallium	ND		0.50	1	02/24/2017 00:20
Vanadium	34		0.50	1	02/24/2017 00:20
Zinc	130		5.0	1	02/24/2017 00:20
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	99		70-130		02/24/2017 00:20
<u>Analyst(s):</u> DB, MIG					

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Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	ICP-MS3	134519
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	02/24/2017 00:27
Arsenic	2.9		0.50	1	02/24/2017 00:27
Barium	78		5.0	1	02/24/2017 00:27
Beryllium	ND		0.50	1	02/24/2017 00:27
Cadmium	ND		0.25	1	02/24/2017 00:27
Chromium	52		0.50	1	02/24/2017 00:27
Cobalt	6.0		0.50	1	02/24/2017 00:27
Copper	9.4		0.50	1	02/24/2017 00:27
Lead	4.2		0.50	1	02/24/2017 00:27
Mercury	0.065		0.050	1	02/24/2017 00:27
Molybdenum	ND		0.50	1	02/24/2017 00:27
Nickel	40		0.50	1	02/24/2017 00:27
Selenium	ND		0.50	1	02/24/2017 00:27
Silver	ND		0.50	1	02/24/2017 00:27
Thallium	ND		0.50	1	02/24/2017 00:27
Vanadium	30		0.50	1	02/24/2017 00:27
Zinc	21		5.0	1	02/24/2017 00:27
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	95		70-130		02/24/2017 00:27
<u>Analyst(s):</u> DB					



Analytical Report

Client: Geosolve, Inc.

Date Received: 2/22/17 18:20

Date Prepared: 2/22/17

Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47

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
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	GC19	134568
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/26/2017 03:44
MTBE	ND		0.050	1	02/26/2017 03:44
Benzene	ND		0.0050	1	02/26/2017 03:44
Toluene	ND		0.0050	1	02/26/2017 03:44
Ethylbenzene	ND		0.0050	1	02/26/2017 03:44
Xylenes	ND		0.015	1	02/26/2017 03:44
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	86		69-117		02/26/2017 03:44
<u>Analyst(s):</u> LT					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	GC19	134568
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	1.8		1.0	1	02/26/2017 15:30
MTBE	ND		0.050	1	02/26/2017 15:30
Benzene	ND		0.0050	1	02/26/2017 15:30
Toluene	ND		0.0050	1	02/26/2017 15:30
Ethylbenzene	ND		0.0050	1	02/26/2017 15:30
Xylenes	ND		0.015	1	02/26/2017 15:30
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	87		69-117		02/26/2017 15:30
<u>Analyst(s):</u> TD	<u>Analytical Comments:</u> d7				

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.

Date Received: 2/22/17 18:20

Date Prepared: 2/22/17

Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47

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
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	GC19	134568

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	02/26/2017 16:01
MTBE	ND	0.050	1	02/26/2017 16:01
Benzene	ND	0.0050	1	02/26/2017 16:01
Toluene	ND	0.0050	1	02/26/2017 16:01
Ethylbenzene	ND	0.0050	1	02/26/2017 16:01
Xylenes	ND	0.015	1	02/26/2017 16:01

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	91	69-117	02/26/2017 16:01

Analyst(s): TD

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	GC19	134568

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	02/26/2017 16:32
MTBE	ND	0.050	1	02/26/2017 16:32
Benzene	ND	0.0050	1	02/26/2017 16:32
Toluene	ND	0.0050	1	02/26/2017 16:32
Ethylbenzene	ND	0.0050	1	02/26/2017 16:32
Xylenes	ND	0.015	1	02/26/2017 16:32

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	90	69-117	02/26/2017 16:32

Analyst(s): TD



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	GC6B	134575

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 12:32
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/25/2017 12:32

Surrogates	REC (%)	Limits	
C9	91	70-130	02/25/2017 12:32

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	GC9a	134575

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/23/2017 20:59
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/23/2017 20:59

Surrogates	REC (%)	Limits	
C9	93	70-130	02/23/2017 20:59

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	GC6B	134575

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 20:17
TPH-Motor Oil (C18-C36)	13	5.0	1	02/25/2017 20:17

Surrogates	REC (%)	Limits	
C9	90	70-130	02/25/2017 20:17

Analyst(s): TK

Analytical Comments: e7

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 2/22/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3550B/3630C
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	GC6B	134575

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2.5	1.0	1	02/25/2017 13:11
TPH-Motor Oil (C18-C36)	33	5.0	1	02/25/2017 13:11

Surrogates	REC (%)	Limits	
C9	91	70-130	02/25/2017 13:11

Analyst(s): TK

Analytical Comments: e7,e2



Quality Control Report

Client: Geosolve, Inc.
Date Prepared: 2/23/17
Date Analyzed: 2/23/17
Instrument: O&G
Matrix: Soil
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
BatchID: 134602
Extraction Method: E418.1
Analytical Method: E418.1
Unit: mg/kg
Sample ID: MB/LCS-134602
1702A72-001AMS/MSD

QC Summary Report for E418.1

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TRPH	ND	145	15	156	-	93	70-130
Surrogate Recovery							
MAI-SS	152.7	134		150	102	90	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TRPH	146	148	156	ND	93	95	70-130	1.72	20
Surrogate Recovery									
MAI-SS	136	137	150		91	91	70-130	0	20



Quality Control Report

Client: Geosolve, Inc.

Date Prepared: 2/22/17

Date Analyzed: 2/27/17

Instrument: GC23

Matrix: Soil

Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47

BatchID: 134574

Extraction Method: SW3550B

Analytical Method: SW8081A/8082

Unit: mg/kg

Sample ID: MB/LCS/LCSD-134574

QC Summary Report for SW8081A/8082

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Aldrin	ND	0.0010	-	-	-
a-BHC	ND	0.0010	-	-	-
b-BHC	ND	0.0010	-	-	-
d-BHC	ND	0.0010	-	-	-
g-BHC	ND	0.0010	-	-	-
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	0.0010	-	-	-
Dieldrin	ND	0.0010	-	-	-
Endosulfan I	ND	0.0010	-	-	-
Endosulfan II	ND	0.0010	-	-	-
Endosulfan sulfate	ND	0.0010	-	-	-
Endrin	ND	0.0010	-	-	-
Endrin aldehyde	ND	0.0010	-	-	-
Endrin ketone	ND	0.0010	-	-	-
Heptachlor	ND	0.0010	-	-	-
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	-	-	-
PCBs, total	ND	0.050	-	-	-
Surrogate Recovery					
Decachlorobiphenyl	0.05959		0.050	119	70-130

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: Geosolve, Inc. **WorkOrder:** 1702B47
Date Prepared: 2/22/17 **BatchID:** 134574
Date Analyzed: 2/27/17 **Extraction Method:** SW3550B
Instrument: GC23 **Analytical Method:** SW8081A/8082
Matrix: Soil **Unit:** mg/kg
Project: 2016-04; 19th of Harrison **Sample ID:** MB/LCS/LCSD-134574

QC Summary Report for SW8081A/8082

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aldrin	0.0602	-	0.050	120	-	70-130	-	-
g-BHC	0.0748	-	0.050	150, F2	-	70-130	-	-
p,p-DDT	0.0550	-	0.050	110	-	70-130	-	-
Dieldrin	0.0678	-	0.050	136, F2	-	70-130	-	-
Endrin	0.0441	-	0.050	88	-	70-130	-	-
Heptachlor	0.0564	-	0.050	113	-	70-130	-	-
Aroclor1016	0.159	0.160	0.15	106	107	70-130	0.306	20
Aroclor1260	0.170	0.168	0.15	114	112	70-130	1.05	20
Surrogate Recovery								
Decachlorobiphenyl	0.0577	-	0.050	115	-	70-130	-	-



Quality Control Report

Client: Geosolve, Inc.
Date Prepared: 2/21/17 - 2/22/17
Date Analyzed: 2/22/17 - 2/23/17
Instrument: ICP-MS2, ICP-MS3
Matrix: Soil
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
BatchID: 134519
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134519
1702103-017AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	46.1	0.50	50	-	92	75-125
Arsenic	ND	48.6	0.50	50	-	97	75-125
Barium	ND	485	5.0	500	-	97	75-125
Beryllium	ND	47.0	0.50	50	-	94	75-125
Cadmium	ND	48.2	0.25	50	-	96	75-125
Chromium	ND	48.9	0.50	50	-	98	75-125
Cobalt	ND	48.6	0.50	50	-	97	75-125
Copper	ND	48.2	0.50	50	-	96	75-125
Lead	ND	48.6	0.50	50	-	97	75-125
Mercury	ND	1.22	0.050	1.25	-	98	75-125
Molybdenum	ND	47.1	0.50	50	-	94	75-125
Nickel	ND	48.2	0.50	50	-	96	75-125
Selenium	ND	47.8	0.50	50	-	96	75-125
Silver	ND	46.1	0.50	50	-	92	75-125
Thallium	ND	46.2	0.50	50	-	92	75-125
Vanadium	ND	48.8	0.50	50	-	98	75-125
Zinc	ND	480	5.0	500	-	96	75-125
Surrogate Recovery							
Terbium	517.5	489		500	103	98	70-130

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Quality Control Report

Client: Geosolve, Inc.
Date Prepared: 2/21/17 - 2/22/17
Date Analyzed: 2/22/17 - 2/23/17
Instrument: ICP-MS2, ICP-MS3
Matrix: Soil
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
BatchID: 134519
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134519
1702103-017AMS/MSD

QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Antimony	53.9	56.0	50	ND	108	112	75-125	3.86	20
Arsenic	54.2	55.8	50	2.5	103	107	75-125	2.89	20
Barium	574	581	500	13	112	114	75-125	1.26	20
Beryllium	56.0	56.2	50	ND	112	112	75-125	0	20
Cadmium	51.4	52.8	50	ND	103	106	75-125	2.57	20
Chromium	111	110	50	57	109	108	75-125	0.721	20
Cobalt	59.0	59.5	50	3.9	110	111	75-125	0.709	20
Copper	58.1	59.8	50	7.2	102	105	75-125	2.75	20
Lead	97.0	97.7	50	43.43	107	108	75-125	0.637	20
Mercury	1.53	1.56	1.25	0.14	111	114	75-125	2.26	20
Molybdenum	51.8	53.2	50	ND	104	106	75-125	2.59	20
Nickel	67.0	69.5	50	19	96	101	75-125	3.77	20
Selenium	52.1	53.2	50	ND	104	106	75-125	1.98	20
Silver	49.6	50.4	50	ND	99	101	75-125	1.76	20
Thallium	50.5	50.7	50	ND	101	101	75-125	0	20
Vanadium	96.8	100	50	46	102	108	75-125	3.24	20
Zinc	546	566	500	49	99	104	75-125	3.61	20

Surrogate Recovery

Terbium	588	606	500		118	121	70-130	2.88	20
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Analyte	DLT Result	DLTRef Val	%D	%D Limit
Antimony	ND<2.5	ND	-	-
Arsenic	ND<2.5	2.5	-	-
Barium	ND<25	13	-	-
Beryllium	ND<2.5	ND	-	-
Cadmium	ND<1.2	ND	-	-
Chromium	55.7	57	2.28	20
Cobalt	3.83	3.9	1.79	-
Copper	6.16	7.2	14.4	-
Lead	41.1	43.43	5.36	20
Mercury	ND<0.25	0.14	-	-
Molybdenum	ND<2.5	ND	-	-
Nickel	18.0	19	5.26	20
Selenium	ND<2.5	ND	-	-

(Cont.)



Quality Control Report

Client: Geosolve, Inc.
Date Prepared: 2/21/17 - 2/22/17
Date Analyzed: 2/22/17 - 2/23/17
Instrument: ICP-MS2, ICP-MS3
Matrix: Soil
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
BatchID: 134519
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134519
1702103-017AMS/MSD

QC Summary Report for Metals

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Silver	ND<2.5	ND	-	-
Thallium	ND<2.5	ND	-	-
Vanadium	45.2	46	1.74	20
Zinc	49.4	49	0.816	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



Quality Control Report

Client: Geosolve, Inc.

Date Prepared: 2/22/17

Date Analyzed: 2/23/17

Instrument: GC9a

Matrix: Soil

Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47

BatchID: 134575

Extraction Method: SW3550B/3630C

Analytical Method: SW8015B

Unit: mg/Kg

Sample ID: MB/LCS-134575
1702B47-002AMS/MSD

QC Report for SW8015B w/ Silica Gel Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	34.6	1.0	40	-	86	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	23.33	23.3		25	93	93	62-139

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	32.8	34.3	40	ND	82	86	70-130	4.51	30
Surrogate Recovery									
C9	23.5	23.5	25		94	94	70-130	0	30



Quality Control Report

Client: Geosolve, Inc.
Date Prepared: 2/22/17
Date Analyzed: 2/23/17
Instrument: GC10, GC18
Matrix: Soil
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
BatchID: 134576
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-134576
1702B47-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0372	0.0050	0.050	-	74	53-116
Benzene	ND	0.0455	0.0050	0.050	-	91	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.125	0.050	0.20	-	63	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0444	0.0050	0.050	-	89	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	0.0412	0.0040	0.050	-	82	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	0.0422	0.0040	0.050	-	84	58-135
1,1-Dichloroethene	ND	0.0455	0.0050	0.050	-	91	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	-	-	-	-

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: Geosolve, Inc.
Date Prepared: 2/22/17
Date Analyzed: 2/23/17
Instrument: GC10, GC18
Matrix: Soil
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
BatchID: 134576
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-134576
1702B47-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0417	0.0050	0.050	-	83	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0400	0.0050	0.050	-	80	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0371	0.0050	0.050	-	74	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0486	0.0050	0.050	-	97	76-130
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	0.0474	0.0050	0.050	-	95	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

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NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: Geosolve, Inc.
Date Prepared: 2/22/17
Date Analyzed: 2/23/17
Instrument: GC10, GC18
Matrix: Soil
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
BatchID: 134576
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-134576
1702B47-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.1246	0.127		0.12	100	102	70-130
Toluene-d8	0.1386	0.135		0.12	111	108	70-130
4-BFB	0.01277	0.0140		0.012	102	112	70-130
Benzene-d6	0.1021	0.0960		0.10	102	96	60-140
Ethylbenzene-d10	0.1252	0.113		0.10	125	113	60-140
1,2-DCB-d4	0.0871	0.0816		0.10	87	82	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0447	0.0392	0.050	ND	89	78	53-116	13.1	20
Benzene	0.0532	0.0467	0.050	ND	106	93	63-137	13.2	20
t-Butyl alcohol (TBA)	0.134	0.123	0.20	ND	67	62	41-135	8.18	20
Chlorobenzene	0.0532	0.0459	0.050	ND	106	92	77-121	14.7	20
1,2-Dibromoethane (EDB)	0.0474	0.0405	0.050	ND	95	81	67-119	15.8	20
1,2-Dichloroethane (1,2-DCA)	0.0475	0.0409	0.050	ND	95	82	58-135	15.1	20
1,1-Dichloroethene	0.0556	0.0481	0.050	ND	111	96	42-145	14.3	20
Diisopropyl ether (DIPE)	0.0494	0.0432	0.050	ND	99	86	52-129	13.5	20
Ethyl tert-butyl ether (ETBE)	0.0473	0.0412	0.050	ND	95	82	53-125	13.8	20
Methyl-t-butyl ether (MTBE)	0.0440	0.0384	0.050	ND	88	77	58-122	13.6	20
Toluene	0.0613	0.0524	0.050	ND	123	105	76-130	15.5	20
Trichloroethene	0.0537	0.0476	0.050	ND	107	95	72-132	12.1	20
Surrogate Recovery									
Dibromofluoromethane	0.114	0.116	0.12		91	93	70-130	2.28	20
Toluene-d8	0.134	0.131	0.12		107	105	70-130	2.02	20
4-BFB	0.0131	0.0135	0.012		105	108	70-130	3.26	20
Benzene-d6	0.104	0.0920	0.10		104	92	60-140	12.3	20
Ethylbenzene-d10	0.122	0.104	0.10		121	104	60-140	15.8	20
1,2-DCB-d4	0.102	0.0847	0.10		102	85	60-140	18.4	20



Quality Control Report

Client: Geosolve, Inc.

Date Prepared: 2/27/17

Date Analyzed: 2/28/17

Instrument: GC17

Matrix: Soil

Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47

BatchID: 134796

Extraction Method: SW3550B

Analytical Method: SW8270C

Unit: mg/Kg

Sample ID: MB/LCS-134796
1702D53-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	6.32	0.25	5	-	127, F2	46-118
Acenaphthylene	ND	-	0.25	-	-	-	-
Acetochlor	ND	-	0.25	-	-	-	-
Anthracene	ND	-	0.25	-	-	-	-
Benzidine	ND	-	1.3	-	-	-	-
Benzo (a) anthracene	ND	-	0.25	-	-	-	-
Benzo (a) pyrene	ND	-	0.25	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.25	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.25	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.25	-	-	-	-
Benzyl Alcohol	ND	-	1.3	-	-	-	-
1,1-Biphenyl	ND	-	0.25	-	-	-	-
Bis (2-chloroethoxy) Methane	ND	-	0.25	-	-	-	-
Bis (2-chloroethyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-chloroisopropyl) Ether	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Adipate	ND	-	0.25	-	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	-	0.25	-	-	-	-
4-Bromophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Butylbenzyl Phthalate	ND	-	0.25	-	-	-	-
4-Chloroaniline	ND	-	0.50	-	-	-	-
4-Chloro-3-methylphenol	ND	5.91	0.25	5	-	118	49-123
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	5.92	0.25	5	-	118, F2	55-116
4-Chlorophenyl Phenyl Ether	ND	-	0.25	-	-	-	-
Chrysene	ND	-	0.25	-	-	-	-
Dibenzo (a,h) anthracene	ND	-	0.25	-	-	-	-
Dibenzofuran	ND	-	0.25	-	-	-	-
Di-n-butyl Phthalate	ND	-	0.25	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.25	-	-	-	-
1,4-Dichlorobenzene	ND	4.83	0.25	5	-	97	50-102
3,3-Dichlorobenzidine	ND	-	0.50	-	-	-	-
2,4-Dichlorophenol	ND	-	0.25	-	-	-	-
Diethyl Phthalate	ND	-	0.25	-	-	-	-
2,4-Dimethylphenol	ND	-	0.25	-	-	-	-
Dimethyl Phthalate	ND	-	0.25	-	-	-	-
4,6-Dinitro-2-methylphenol	ND	-	1.3	-	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: Geosolve, Inc.

Date Prepared: 2/27/17

Date Analyzed: 2/28/17

Instrument: GC17

Matrix: Soil

Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47

BatchID: 134796

Extraction Method: SW3550B

Analytical Method: SW8270C

Unit: mg/Kg

Sample ID: MB/LCS-134796
1702D53-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
2,4-Dinitrophenol	ND	-	6.3	-	-	-	-
2,4-Dinitrotoluene	ND	7.26	0.25	5	-	145, F2	47-117
2,6-Dinitrotoluene	ND	-	0.25	-	-	-	-
Di-n-octyl Phthalate	ND	-	0.50	-	-	-	-
1,2-Diphenylhydrazine	ND	-	0.25	-	-	-	-
Fluoranthene	ND	-	0.25	-	-	-	-
Fluorene	ND	-	0.25	-	-	-	-
Hexachlorobenzene	ND	-	0.25	-	-	-	-
Hexachlorobutadiene	ND	-	0.25	-	-	-	-
Hexachlorocyclopentadiene	ND	-	1.3	-	-	-	-
Hexachloroethane	ND	-	0.25	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.25	-	-	-	-
Isophorone	ND	-	0.25	-	-	-	-
2-Methylnaphthalene	ND	-	0.25	-	-	-	-
2-Methylphenol (o-Cresol)	ND	-	0.25	-	-	-	-
3 & 4-Methylphenol (m,p-Cresol)	ND	-	0.25	-	-	-	-
Naphthalene	ND	-	0.25	-	-	-	-
2-Nitroaniline	ND	-	1.3	-	-	-	-
3-Nitroaniline	ND	-	1.3	-	-	-	-
4-Nitroaniline	ND	-	1.3	-	-	-	-
Nitrobenzene	ND	-	0.25	-	-	-	-
2-Nitrophenol	ND	-	1.3	-	-	-	-
4-Nitrophenol	ND	4.98	1.3	5	-	100	40-102
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	4.78	0.25	5	-	95	47-108
Pentachlorophenol	ND	5.71	1.3	5	-	114	39-134
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	5.49	0.25	5	-	110, F2	49-107
Pyrene	ND	7.18	0.25	5	-	144, F2	55-124
1,2,4-Trichlorobenzene	ND	5.82	0.25	5	-	116	51-121
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: Geosolve, Inc.

Date Prepared: 2/27/17

Date Analyzed: 2/28/17

Instrument: GC17

Matrix: Soil

Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47

BatchID: 134796

Extraction Method: SW3550B

Analytical Method: SW8270C

Unit: mg/Kg

Sample ID: MB/LCS-134796
1702D53-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
2-Fluorophenol	5.866	5.94		5	117	119	47-125
Phenol-d5	5.521	5.70		5	110	114	45-117
Nitrobenzene-d5	4.686	5.25		5	94	105	39-121
2-Fluorobiphenyl	4.788	5.35		5	96	107	35-120
2,4,6-Tribromophenol	4.529	4.98		5	91	100	32-111
4-Terphenyl-d14	5.422	5.85		5	108	117	32-128

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Acenaphthene	NR	NR		ND<1.2	NR	NR	-	NR	
4-Chloro-3-methylphenol	NR	NR		ND<1.2	NR	NR	-	NR	
2-Chlorophenol	NR	NR		ND<1.2	NR	NR	-	NR	
1,4-Dichlorobenzene	NR	NR		ND<1.2	NR	NR	-	NR	
2,4-Dinitrotoluene	NR	NR		ND<1.2	NR	NR	-	NR	
4-Nitrophenol	NR	NR		ND<6.5	NR	NR	-	NR	
N-Nitrosodi-n-propylamine	NR	NR		ND<1.2	NR	NR	-	NR	
Pentachlorophenol	NR	NR		ND<6.5	NR	NR	-	NR	
Phenol	NR	NR		ND<1.2	NR	NR	-	NR	
Pyrene	NR	NR		ND<1.2	NR	NR	-	NR	
1,2,4-Trichlorobenzene	NR	NR		ND<1.2	NR	NR	-	NR	
Surrogate Recovery									
2-Fluorophenol	NR	NR			NR	NR	-	NR	
Phenol-d5	NR	NR			NR	NR	-	NR	
Nitrobenzene-d5	NR	NR			NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR			NR	NR	-	NR	
2,4,6-Tribromophenol	NR	NR			NR	NR	-	NR	
4-Terphenyl-d14	NR	NR			NR	NR	-	NR	



Quality Control Report

Client: Geosolve, Inc.

Date Prepared: 2/22/17

Date Analyzed: 2/22/17 - 2/23/17

Instrument: GC19

Matrix: Soil

Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47

BatchID: 134568

Extraction Method: SW5030B

Analytical Method: SW8021B/8015Bm

Unit: mg/Kg

Sample ID: MB/LCS-134568
1702B36-005AMS/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	0.638	0.40	0.60	-	106	89-118
MTBE	ND	0.0900	0.050	0.10	-	90	68-116
Benzene	ND	0.117	0.0050	0.10	-	117	85-118
Toluene	ND	0.116	0.0050	0.10	-	116	87-121
Ethylbenzene	ND	0.115	0.0050	0.10	-	115	91-124
Xylenes	ND	0.321	0.015	0.30	-	107	92-126
Surrogate Recovery							
2-Fluorotoluene	0.09754	0.0936		0.10	98	94	88-119

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR		5	NR	NR	-	NR	-
MTBE	NR	NR		ND	NR	NR	-	NR	-
Benzene	NR	NR		0.0071	NR	NR	-	NR	-
Toluene	NR	NR		0.085	NR	NR	-	NR	-
Ethylbenzene	NR	NR		0.23	NR	NR	-	NR	-
Xylenes	NR	NR		0.29	NR	NR	-	NR	-
Surrogate Recovery									
2-Fluorotoluene	NR	NR			NR	NR	-	NR	-

McCampbell Analytical, Inc.



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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 1702B47

ClientCode: GSP

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☒ EQulS ☒ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:

Rob Campbell
Geosolve, Inc.

1807 Santa Rita Road, Suite D-165

Pleasanton, CA 94566

(925) 963-1198 FAX:

Email: rcampbell@geosolve-inc.com

cc/3rd Party:

PO: 2016-04

ProjectNo: 2016-04; 19th of Harrison

Bill to:

Lisa Campbell
Geosolve, Inc.

1807 Santa Rita Road, Suite D-165

Pleasanton, CA 94566

lcampbell@geosolve-inc.com

Requested TAT: 5 days;

Date Received: 02/22/2017

Date Logged: 02/22/2017

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
1702B47-001	SPB1-A,B,C,D	Soil	2/22/2017 00:00	<input type="checkbox"/>	A	A	A	A	A	A	A	A				
1702B47-002	SPB2-A,B,C,D	Soil	2/22/2017 00:00	<input type="checkbox"/>	A	A	A	A	A	A	A	A				
1702B47-003	SPB3-A,B,C,D	Soil	2/22/2017 00:00	<input type="checkbox"/>	A	A	A	A	A	A	A	A				
1702B47-004	SPB4-A,B,C,D	Soil	2/22/2017 00:00	<input type="checkbox"/>	A	A	A	A	A	A	A	A				

Test Legend:

1	418_SG_S	2	8081PCB_S	3	8260B_S	4	8270_PNA_S
5	CAM17MS_TTLC_S	6	G-MBTX_S	7	TPH(DMO)WSG_S	8	
9		10		11		12	

Prepared by: Briana Cutino

The following SampleIDs: 001A, 002A, 003A, 004A contain testgroup Multi RangeWSG_S.

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.



McC Campbell Analytical, Inc.

"When Quality Counts"

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

WORK ORDER SUMMARY

Client Name: GEOSOLVE, INC.
Client Contact: Rob Campbell
Contact's Email: rcampbell@geosolve-inc.com

Project: 2016-04; 19th of Harrison

Comments:

Work Order: 1702B47
QC Level:
Date Logged: 2/22/2017

☐ 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
1702B47-001A	SPB1-A,B,C,D	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	4 / (4:1)	Acetate Liner	<input type="checkbox"/>	2/22/2017	5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			E418.1 (TRPH w/ S.G. Clean-Up)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1702B47-002A	SPB2-A,B,C,D	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	4 / (4:1)	Acetate Liner	<input type="checkbox"/>	2/22/2017	5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			E418.1 (TRPH w/ S.G. Clean-Up)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1702B47-003A	SPB3-A,B,C,D	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	4 / (4:1)	Acetate Liner	<input type="checkbox"/>	2/22/2017	5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 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.



McC Campbell Analytical, Inc.

"When Quality Counts"

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

WORK ORDER SUMMARY

Client Name: GEOSOLVE, INC.
Client Contact: Rob Campbell
Contact's Email: rcampbell@geosolve-inc.com

Project: 2016-04; 19th of Harrison

Work Order: 1702B47

QC Level:

Date Logged: 2/22/2017

Comments:

☐ 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
1702B47-003A	SPB3-A,B,C,D	Soil	SW8260B (VOCs)	4 / (4:1)	Acetate Liner	<input type="checkbox"/>	2/22/2017	5 days		<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			E418.1 (TRPH w/ S.G. Clean-Up)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1702B47-004A	SPB4-A,B,C,D	Soil	Multi-Range TPH(g,d,mo) w/ S.G. Clean-Up	4 / (4:1)	Acetate Liner	<input type="checkbox"/>	2/22/2017	5 days		<input type="checkbox"/>	
			SW6020 (CAM 17)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW8081A/8082 (OC Pesticides+PCBs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			E418.1 (TRPH w/ S.G. Clean-Up)			<input type="checkbox"/>		5 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.



CHAIN OF CUSTODY RECORD

Effluent Sample Requiring "J" flag ☐ UST Clean Up Fund Project ☐; Claim #_____

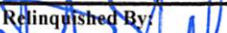
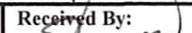


Report To: Rob Campbell	Bill To: Geosolve, Inc.
Company: Geosolve, Inc.	
1807 Santa Rita Rd #0165	Pleasanton, CA 94566
Tele: (925) 963-1198	E-Mail: rcampbell@geosolve-inc
Project #: 2016-04	Project Name: 19 th & Harrison
Project Location: 1750 Webster St.	Purchase Order# 2016-04
Sampler Signature: [Signature]	

Analysis Request

[illegible]

****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: <u>2-22-17</u>	Time: <u>1630</u>	Received By: 
Relinquished By: 	Date: <u>2/22/17</u>	Time: <u>1820</u>	Received By: 
Relinquished By:	Date:	Time:	Received By:

ICE/t^o _____
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
APPROPRIATE CONTAINERS _____
PRESERVED IN LAB _____

VOAS	O&G	METALS	OTHER	HAZARDOUS:
PRESERVATION		pH<2		

COMMENTS

COMMENTS:

* If Pb and/or Cr > 50 ppm
then STLC

If Pb and/or Cr > 100 ppm
then TCLP-

ALC OTHER HAZARDOUS:

1 of 2



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

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 Campbell Bill To: Geosolve, Inc.
Company: Geosolve, Inc.
1807 Santa Rita Rd # D165 Pleasanton Ca 94566
Tele: (925) 763-1198 E-Mail: rcampbell@geosolve-inc.com
Project #: 2016-04 Project Name: 19th + Harrison
Project Location: 1750 Webster St Purchase Order# 2016-04
Sampler Signature: Not J. Lee

Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX								METHOD PRESERVED		BTX & TPH as Gas (8021/8015) MTBE	TPH as Diesel (8015) + TCE/PAHs w/511/5520	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 only	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
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO ₃	Other														
SPB7-A		2-22-17		1					X							X	X	X	X			X		X					
SPB3-B				1																									
SPB7-C				1																									
SPB3-D				1																									
SPB4-A		2-22-17		1					X							X	X	X	X			X		X					
SPB4-B				1																									
SPB4-C				1																									
SPB4-D				1																									

***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: Not J. Lee Date: 2-22-17 Time: 1630 Received By: [Signature]
Relinquished By: [Signature] Date: 2/22/17 Time: 1820 Received By: [Signature]
Relinquished By: _____ Date: _____ Time: _____ Received By: _____

ICE/°
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
APPROPRIATE CONTAINERS _____
PRESERVED IN LAB _____
VOAS O&G METALS OTHER HAZARDOUS
PRESERVATION _____ pH < 2 _____
COMMENTS: IF Pb and/or Cr > 750 ppm, then STLC
IF Pb and/or Cr > 100 ppm, then TCLP

2 of 2



Sample Receipt Checklist

Client Name: **Geosolve, Inc.**
Project Name: **2016-04; 19th of Harrison**
WorkOrder №: **1702B47** Matrix: Soil
Carrier: Benjamin Yslas (MAI Courier)

Date and Time Received: **2/22/2017 18:20**
Date Logged: **2/22/2017**
Received by: **Briana Cutino**
Logged by: **Briana Cutino**

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

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

(Ice Type: WET ICE)

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1702B47 A

Report Created for: Geosolve, Inc.

1807 Santa Rita Road, Suite D-165
Pleasanton, CA 94566

Project Contact: Rob Campbell

Project P.O.: 2016-04

Project Name: 2016-04; 19th of Harrison

Project Received: 02/22/2017

Analytical Report reviewed & approved for release on 03/06/2017 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: Geosolve, Inc.
Project: 2016-04; 19th of Harrison
WorkOrder: 1702B47

Glossary Abbreviation

%D	Serial Dilution Percent Difference
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 (Serial Dilution)
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
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: Geosolve, Inc.
Project: 2016-04; 19th of Harrison
WorkOrder: 1702B47

Analytical Qualifiers

a3 sample diluted due to high organic content.
a4 reporting limits raised due to the sample's matrix prohibiting a full volume extraction.
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

Quality Control Qualifiers

F2 LCS/LCSD recovery and/or RPD is out of acceptance criteria.



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 3/2/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

Lead

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A	1702B47-003B	Soil	02/22/2017	ICP-MS2	134984

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	760	5.0	10	03/06/2017 12:54

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>
Terbium	101	70-130

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-B	1702B47-003C	Soil	02/22/2017	ICP-MS2	134984

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	4.8	0.50	1	03/03/2017 19:40

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>
Terbium	103	70-130

Analyst(s): DB

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-C	1702B47-003D	Soil	02/22/2017	ICP-MS2	134984

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	3.1	0.50	1	03/06/2017 13:00

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>
Terbium	104	70-130

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-D	1702B47-003E	Soil	02/22/2017	ICP-MS3	134984

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Lead	3.5	0.50	1	03/03/2017 13:16

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>
Terbium	111	70-130

Analyst(s): MIG



Quality Control Report

Client: Geosolve, Inc.

Date Prepared: 3/2/17

Date Analyzed: 3/3/17

Instrument: ICP-MS3

Matrix: Soil

Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47

BatchID: 134984

Extraction Method: SW3050B

Analytical Method: SW6020

Unit: mg/Kg

Sample ID: MB/LCS-134984
1702B47-003EMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	50.1	0.50	50	-	100	75-125
Surrogate Recovery							
Terbium	528.9	557		500	106	111	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	51.4	51.6	50	3.460	96	96	75-125	0	20
Surrogate Recovery									
Terbium	540	546	500		108	109	70-130	1.10	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	4.54	3.460	31.2	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



CHAIN-OF-CUSTODY RECORD

WorkOrder: 1702B47 **A** ClientCode: GSP

☐ WaterTrax
 ☐ WriteOn
 ☐ EDF
 ☐ Excel
 ☐ Fax
 ☒ Email
 ☐ HardCopy
 ☐ ThirdParty
 ☐ J-flag

Report to:

Rob Campbell
 Geosolve, Inc.
 1807 Santa Rita Road, Suite D-165
 Pleasanton, CA 94566
 (925) 963-1198 FAX:

Email: rcampbell@geosolve-inc.com
 cc/3rd Party:
 PO: 2016-04
 ProjectNo: 2016-04; 19th of Harrison

Bill to:

Lisa Campbell
 Geosolve, Inc.
 1807 Santa Rita Road, Suite D-165
 Pleasanton, CA 94566
 lcampbell@geosolve-inc.com

Requested TAT: **5 days;**

Date Received: **02/22/2017**

Date Logged: **02/22/2017**

Date Add-On: **03/02/2017**

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
1702B47-003	SPB3-A	Soil	2/22/2017 00:00	<input type="checkbox"/>	B											
1702B47-003	SPB3-B	Soil	2/22/2017 00:00	<input type="checkbox"/>	C											
1702B47-003	SPB3-C	Soil	2/22/2017 00:00	<input type="checkbox"/>	D											
1702B47-003	SPB3-D	Soil	2/22/2017 00:00	<input type="checkbox"/>	E											

Test Legend:

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

Prepared by: **Briana Cutino**

Add-On Prepared By: **Maria Venegas**

Comments: STLC's, TCLP's & TTLC's added 3/2/17 per client TTLC's on separate add-on.

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.



McC Campbell Analytical, Inc.

"When Quality Counts"

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

WORK ORDER SUMMARY

Client Name: GEOSOLVE, INC.

Project: 2016-04; 19th of Harrison

Work Order: 1702B47

Client Contact: Rob Campbell

QC Level:

Contact's Email rcampbell@geosolve-inc.com

Comments: STLC's, TCLP's & TTLC's added 3/2/17 per client TTLC's on separate add-on.

Date Logged: 2/22/2017

Date Add-On: 3/2/2017

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1702B47-003B	SPB3-A	Soil	SW6020 (Lead)	1	Acetate Liner	2/22/2017	5 days		<input type="checkbox"/>	
1702B47-003C	SPB3-B	Soil	SW6020 (Lead)	1	Acetate Liner	2/22/2017	5 days		<input type="checkbox"/>	
1702B47-003D	SPB3-C	Soil	SW6020 (Lead)	1	Acetate Liner	2/22/2017	5 days		<input type="checkbox"/>	
1702B47-003E	SPB3-D	Soil	SW6020 (Lead)	1	Acetate Liner	2/22/2017	5 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.

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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: <i>Kob Campbell</i>	Bill To: <i>Geosolve, Inc.</i>
Company: <i>Geosolve, Inc.</i>	
<i>1807 Santa Rita Rd #D165</i>	<i>Pleasanton CA 94566</i>
Tele: <i>(925) 763-1198</i>	E-Mail: <i>KCampbell@Geosolve-inc.com</i>
Project #: <i>2016-07</i>	Project Name: <i>19th + Harrison</i>
Project Location: <i>1750 Webster St.</i>	Purchase Order# <i>2016-04</i>
Sampler Signature: <i>Kob Campbell</i>	

Analysis Request

[illegible]

****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: 2-22-17	Time: 1630	Received By: 
Relinquished By: 	Date: 2/22/17	Time: 1820	Received By: 
Relinquished By:	Date:	Time:	Received By:

ICE/t° _____
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
APPROPRIATE CONTAINERS _____
PRESERVED IN LAB _____

COMMENTS:
 (*) IF Pb and/or Cr > 50 ppm
 Then STLC
 IF Pb and/or Cr > 100 ppm
 Then TCLP

METALS OTHER HAZARDOUS

	VOAS	O&G	METALS	OTHER	HAZARDOUS
PRESERVATION			pH<2		

2 of 2

APPENDIX C

McCAMPBELL ANALYTICAL, INC. LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTS DATED MARCH 6 AND MARCH 8, 2017





McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1702B47 B

Report Created for: Geosolve, Inc.

1807 Santa Rita Road, Suite D-165
Pleasanton, CA 94566

Project Contact: Rob Campbell

Project P.O.: 2016-04

Project Name: 2016-04; 19th of Harrison

Project Received: 02/22/2017

Analytical Report reviewed & approved for release on 03/08/2017 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: Geosolve, Inc.
Project: 2016-04; 19th of Harrison
WorkOrder: 1702B47

Glossary Abbreviation

%D	Serial Dilution Percent Difference
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 (Serial Dilution)
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
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: Geosolve, Inc.
Project: 2016-04; 19th of Harrison
WorkOrder: 1702B47

Analytical Qualifiers

a3 sample diluted due to high organic content.
a4 reporting limits raised due to the sample's matrix prohibiting a full volume extraction.
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

Quality Control Qualifiers

F2 LCS/LCSD recovery and/or RPD is out of acceptance criteria.



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 3/4/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L

Metals (STLC)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB1-A,B,C,D	1702B47-001A	Soil	02/22/2017	ICP-MS2	135069

Analytes	Result	RL	DF	Date Analyzed
Chromium	ND	0.10	1	03/06/2017 19:30

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB2-A,B,C,D	1702B47-002A	Soil	02/22/2017	ICP-MS2	135069

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.11	0.10	1	03/06/2017 19:54

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB4-A,B,C,D	1702B47-004A	Soil	02/22/2017	ICP-MS2	135069

Analytes	Result	RL	DF	Date Analyzed
Chromium	ND	0.10	1	03/06/2017 20:07

Analyst(s): DVH



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 3/4/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L

STLC Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	ICP-MS2	135069
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	0.21		0.10	1	03/06/2017 20:00
Lead	16		0.10	1	03/06/2017 20:00

Analyst(s): DVH



Analytical Report

Client: Geosolve, Inc.
Date Received: 2/22/17 18:20
Date Prepared: 3/5/17
Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47
Extraction Method: SW1311/SW3010
Analytical Method: SW6020
Unit: mg/L

TCLP Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SPB3-A,B,C,D	1702B47-003A	Soil	02/22/2017	ICP-MS2	135076

Analytes	Result	RL	DF	Date Analyzed
Lead	0.82	0.10	1	03/07/2017 17:14

Analyst(s): MIG



Quality Control Report

Client: Geosolve, Inc.

Date Prepared: 3/4/17

Date Analyzed: 3/6/17

Instrument: ICP-MS3

Matrix: Soil

Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47

BatchID: 135069

Extraction Method: CA Title 22

Analytical Method: SW6020

Unit: mg/L

Sample ID: MB/LCS-135069
1703137-002AMS/MSD

QC Summary Report for Metals (STLC)

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	9.13	0.10	10	-	91	75-125
Lead	ND	9.63	0.10	10	-	96	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	9.33	9.58	10	0.2034	91	94	75-125	2.64	20
Lead	9.67	9.87	10	ND	97	99	75-125	2.09	20



Quality Control Report

Client: Geosolve, Inc.

Date Prepared: 3/5/17

Date Analyzed: 3/6/17 - 3/7/17

Instrument: ICP-MS3

Matrix: Soil

Project: 2016-04; 19th of Harrison

WorkOrder: 1702B47

BatchID: 135076

Extraction Method: SW1311/SW3010

Analytical Method: SW6020

Unit: mg/L

Sample ID: MB/LCS-135076
1702D97-010AMS/MSD

QC Summary Report for Metals (TCLP)

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	9.90	0.10	10	-	99	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	9.95	9.98	10	ND	100	100	75-125	0	20



CHAIN-OF-CUSTODY RECORD

WorkOrder: 1702B47 **B**

ClientCode: GSP

☐ WaterTrax
 ☐ WriteOn
 ☐ EDF
 ☐ Excel
 ☐ Fax
 ☒ Email
 ☐ HardCopy
 ☐ ThirdParty
 ☐ J-flag

Report to:

Rob Campbell
Geosolve, Inc.

1807 Santa Rita Road, Suite D-165

Pleasanton, CA 94566

(925) 963-1198 FAX:

Email: rcampbell@geosolve-inc.com

cc/3rd Party:

PO: 2016-04

ProjectNo: 2016-04; 19th of Harrison

Bill to:

Lisa Campbell
Geosolve, Inc.

1807 Santa Rita Road, Suite D-165

Pleasanton, CA 94566

lcampbell@geosolve-inc.com

Requested TAT:

5 days;

Date Received: 02/22/2017

Date Logged: 02/22/2017

Date Add-On: 03/03/2017

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
1702B47-001	SPB1-A,B,C,D	Soil	2/22/2017 00:00	<input type="checkbox"/>	A											
1702B47-002	SPB2-A,B,C,D	Soil	2/22/2017 00:00	<input type="checkbox"/>	A											
1702B47-003	SPB3-A,B,C,D	Soil	2/22/2017 00:00	<input type="checkbox"/>		A	A									
1702B47-004	SPB4-A,B,C,D	Soil	2/22/2017 00:00	<input type="checkbox"/>	A											

Test Legend:

1	CRMS_STLC_S	2	PBCRMS_STLC_S	3	PBMS_TCLP_S	4	
5		6		7		8	
9		10		11		12	

Prepared by: Briana Cutino

Add-On Prepared By: Maria Venegas

Comments: STLC's, TCLP's & TTLC's added 3/2/17 per client TTLC's on separate add-on.

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.



McC Campbell Analytical, Inc.

"When Quality Counts"

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

WORK ORDER SUMMARY

Client Name: GEOSOLVE, INC.

Project: 2016-04; 19th of Harrison

Work Order: 1702B47

Client Contact: Rob Campbell

QC Level:

Contact's Email rcampbell@geosolve-inc.com

Comments: STLC's, TCLP's & TTLC's added 3/2/17 per client TTLC's on separate add-on.

Date Logged: 2/22/2017

Date Add-On: 3/3/2017

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1702B47-001A	SPB1-A,B,C,D	Soil	SW6020 (Chromium) (STLC)	4 / (4:1)	Acetate Liner	2/22/2017	5 days*		<input type="checkbox"/>	
1702B47-002A	SPB2-A,B,C,D	Soil	SW6020 (Chromium) (STLC)	4 / (4:1)	Acetate Liner	2/22/2017	5 days*		<input type="checkbox"/>	
1702B47-003A	SPB3-A,B,C,D	Soil	SW6020 (Lead) (TCLP)	4 / (4:1)	Acetate Liner	2/22/2017	5 days*		<input type="checkbox"/>	
			SW6020 (Chromium & Lead) (STLC)				5 days*		<input type="checkbox"/>	
1702B47-004A	SPB4-A,B,C,D	Soil	SW6020 (Chromium) (STLC)	4 / (4:1)	Acetate Liner	2/22/2017	5 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.



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

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: Rob Campbell Bill To: Geosolve, Inc.
Company: Geosolve, Inc.
1807 Santa Rosa Rd #6165 Pleasanton, CA 94566
Tele: (925) 963-1198 E-Mail: rcampbell@geosolve-inc.
Project #: 2016-04 Project Name: 19th & Harrison
Project Location: 1750 Webster St. Purchase Order# 2016-04
Sampler Signature: Rob Campbell

Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX										METHOD PRESERVED		BTX & 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 only	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	STLC
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO ₃	Other																	
SPB1-A		2.22.17		1					X						X	X	X		X	X		X	X		X							
SPB1-B		↓		1																												
SPB1-C				1																												
SPB1-D		↓		1																												
Composite 4 → 1 Prior to Analysis																																
SPB2-A		2.22.17		1					X						X	X	X		X	X		X	X		X							
SPB2-B		↓		1																												
SPB2-C				1																												
SPB2-D		↓		1																												
Composite 4 → 1 Prior to Analysis																																

**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>Rob Campbell</u>	Date: <u>2.22.17</u>	Time: <u>1630</u>	Received By: <u>[Signature]</u>	ICE/r ^o _____ GOOD CONDITION _____ HEAD SPACE ABSENT _____ DECHLORINATED IN LAB _____ APPROPRIATE CONTAINERS _____ PRESERVED IN LAB _____	COMMENTS: * IF Pb and/or Cr > 50 ppm then STLC If Pb and/or Cr > 100 ppm then TCLP.
Relinquished By: <u>[Signature]</u>	Date: <u>2/22/17</u>	Time: <u>1820</u>	Received By: <u>[Signature]</u>	VOAS O&G METALS OTHER HAZARDOUS: PRESERVATION _____ pH<2 _____	
Relinquished By: _____	Date: _____	Time: _____	Received By: _____		

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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 Campbell Bill To: Geosolve, Inc.
Company: Geosolve, Inc.
1807 Santa Rita Rd # D165 Pleasanton CA 94566
Tele: (925) 763-1198 E-Mail: rcampbell@geosolve-inc.com
Project #: 2016-04 Project Name: 19th + Harrison
Project Location: 1750 Webster St Purchase Order# 2016-04
Sampler Signature: Not a client

Analysis Request

SAMPLE ID	Location/ Field Point Name	SAMPLING		# Containers	MATRIX										METHOD PRESERVED		BTX & TPH as Gas (8021/8015) MTBE	TPH as Diesel (8015) + TEPHing w/ 51/520	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 only	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)	CAMEL Metals (200.8/6020)***	LUFT 5 Metals (200.8/6020)***	Metals (200.8/6020)***	Lab to Filter sample for Dissolved metals analysis	Discrete TML Pb	STLC Cr	STLC Pb	TCLP Pb
		Date	Time		Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	HCL	HNO ₃	Other																				
SPB3-A		2-22-17		1				X						X	X	X	X	X	X			X	X	X											
SPB3-B				1																															
SPB3-C				1																															
SPB3-D				1																															
SPB4-A		2-22-17		1				X						X	X	X	X	X	X			X	X	X											
SPB4-B				1																															
SPB4-C				1																															
SPB4-D				1																															

**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: Not a client Date: 2-22-17 Time: 1630 Received By: [Signature]
Relinquished By: [Signature] Date: 2/22/17 Time: 1820 Received By: [Signature]
Relinquished By: _____ Date: _____ Time: _____ Received By: _____

ICE/IF _____ COMMENTS: IF Pb and/or Cr 750 ppm, then STLC
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
APPROPRIATE CONTAINERS _____
PRESERVED IN LAB _____
VOAS O&G METALS OTHER HAZARDOUS
PRESERVATION _____ pH < 2
IF Pb and/or Cr > 100 ppm then TCLP

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