
ENVIRONMENTAL SITE CHARACTERIZATION

199 Bassett Street

San Jose, California

Prepared For:

KT Urban
Cupertino, California

Prepared By:

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12 May 2017
7700638201

LANGAN

12 May 2017

Ms. Jennifer Jodoin
KT Urban
21710 Stevens Creek Blvd, Suite 200
Cupertino, California 95014

Subject: Environmental Site Characterization
199 Bassett Street
San Jose, California
Langan Project No.: 770618302

Dear Ms. Jodoin,

Langan Engineering and Environmental (Langan) is pleased to submit this Environmental Site Characterization (ESC), for the property located at 199 Bassett Street (Site) in San Jose, California.

In performing this ESC, we have endeavored to observe that degree of care and skill generally exercised by other consultants undertaking similar studies at the same time, under similar circumstances and conditions, and in the same geographical area.

We appreciate the opportunity to assist you with this project. If you have any questions or need any information clarified, please call Mr. Peter J. Cusack at (408) 283-3600.

Sincerely yours,

Langan Engineering and Environmental



Christine B Madsen
Senior Staff Scientist



Peter J. Cusack
Senior Associate/VP

770638201.02 PJC_ESC Report_199 Bassett

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ENVIRONMENTAL SITE CHARACTERIZATION
199 Bassett Street
San Jose, California

1.0 INTRODUCTION

Langan Engineering and Environmental (Langan) has prepared this Environmental Site Characterization (ESC) for the property located at the 199 Bassett Street Avenue (Site) property in San Jose, California (Figure 1). The ESC was performed on behalf of KT Urban, located in Cupertino, California (Client). The Site is located at 199 Bassett Street and 361 N San Pedro Street in San Jose, California and consists of three parcels and is bound by North San Pedro Street on the northeast, Bassett Street on the southeast, Terraine on the southwest and a rail road tracks to the northwest. As shown on Figure 2, the Site is currently occupied by two one-story warehouse buildings (APNs 259-23-005 and 259-23- 006) in the southeast portion of the Site fronting Bassett Street and partially paved undeveloped land (APN of 259-51-007) to the northwest. The buildings are currently used by Mektra as an office and storage.

2.0 PROJECT DESCRIPTION

Based on our discussions with KT Urban and the conceptual plans (199 Bassett Street, San Jose, California, Conceptual Plan V.4, dated 12.23.2016 by C2K Architecture), we understand the proposed development will likely consist of a nineteen-story mixed-use tower that includes retail space and a residential tower above three basement levels extending up to 35 to 40 feet below the ground surface (bgs). The basement levels and first level will be used mostly for parking (for both car and bike), retail space, and a lobby area.

3.0 BACKGROUND AND PREVIOUS SUBSURFACE INVESTIGATION

This ESC was conducted based on required depths of excavation needed for Site construction and redevelopment. The future use of the Site includes the construction of a new nineteen-story mixed-use tower that includes retail space and a residential tower above three basement levels extending up to 35 to 40 feet bgs. In order to allow for construction of the foundation of the building, excavation is expected to extend to a depth of approximately 40 feet bgs.

Langan reviewed the following reports previously prepared for the Site:

- Langan, Phase I Environmental Site Assessment (ESA), 199 Bassett Street, San Jose, California, dated May 2017.

- Preliminary Geotechnical Investigation, Bassett Townhome Project, San Jose, California, prepared by TRC, dated 13 January 2016.

Information from these documents has been included in the preparation of this report, as appropriate.

4.0 PURPOSE AND SCOPE OF SITE CHARACTERIZATION WORK

Our work included collecting soil samples throughout the Site to assist in the characterization of the Site's subsurface conditions, for the proposed development project. Our scope of services included drilling six exploratory environmental borings throughout the Site for the collection and analyses of soil samples and the collection and analysis of one grab groundwater sample from one of the exploratory boring locations. All sampling locations are shown on Figure 2.

5.0 FIELD INVESTIGATION

All field activities were completed on 20 February 2017. Prior to drilling and sampling, Langan notified Underground Services Alert (USA) and a private utility clearance company to locate and identify underground utilities throughout the Site

5.1 Soil Sampling

A total of six exploratory environmental borings (LSB-1 through LSB-16) were drilled to a maximum depth of 40 feet bgs. Four of the borings were drilled to depths of 20 feet bgs, and two were completed to depths of 32 feet bgs and 40 feet bgs. All environmental drilling was conducted by Gregg Drilling and Testing (Gregg) of Martinez, California. The exploratory boring locations are shown on Figure 2.

Based on the depth of the proposed excavation and in an effort to adequately characterize the soil to be off-hauled during construction, soil samples were collected at the following approximate depths: 1.5, 3.0, 5.0, 7.5, 10.0, 15.0, 20.0, 25.0, 30.0, 35.0, and 40.0 feet bgs (where applicable). Sample ends were covered with Teflon, sealed with plastic end caps, labeled, and stored on ice until delivery to the analytical laboratory. All samples were delivered under chain-of-custody control to McCampbell Analytical, Inc. (McCampbell), a California Department of Public Health certified analytical laboratory in Pittsburg, California.

Following sample collection, each boring was properly abandoned via grouting. The surface of each boring was completed with asphalt, to match the existing surface of the various boring locations.

Environmental boring logs from this investigation are presented in Appendix A as Figures A-1 through A-6. The material encountered was classified according to the soil classification system described on Figure A-7.

5.2 Groundwater Sampling

One grab groundwater sample was collected from one of the six boring locations (LSB-6) as shown on Figure 2. The grab groundwater sample was collected from the boring, in which a 1-inch PVC slotted temporary well was installed, using a weighted polyethylene bailer. The sample was decanted into laboratory supplied containers, labeled, and stored on ice until delivery to the analytical laboratory. The groundwater sample was delivered under chain-of-custody to McCampbell.

6.0 SUBSURFACE CONDITIONS

Subsurface conditions at the Site, based on the results of our subsurface investigations, indicates the site is blanketed by up to 10 feet of loose to medium dense sand and medium stiff to stiff silt deposits with varying amounts of clay and gravel. The clay is divided by a layer of silty sand and clayey sand at depths of 24 to 28 feet and generally varies in thickness from 2 to 5 feet; at the west end of the Site, the layer is approximately 10 feet thick. The clay is in turn underlain by another granular layer which varies in thickness between approximately 4 and 14 feet. This medium dense to very dense sand and gravel layer contains varying amounts of clay and silt.

Groundwater was encountered during drilling at approximately 26 feet bgs, however, once a temporary well was installed in boring LSB-6; stabilized groundwater was encountered at approximately 14 feet bgs.

7.0 SAMPLE SELECTION AND ANALYTICAL TESTING

The soil samples were submitted under appropriate chain-of-custody documentation to McCampbell, for some or all of the following analyses:

- Total petroleum hydrocarbons (TPH) as gasoline (TPHg), diesel (TPHd), and motor oil

(TPHmo) by EPA Method 8021/8015;

- Volatile organic compounds (VOCs) by EPA Method 8260;
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270;
- Organochlorine pesticides (OCPs) by EPA Method 8081;
- Polychlorinated biphenyls (PCBs) by EPA Method 8082;
- California Assessment Manual (CAM) 17 metals by EPA Method 6020; and
- LUFT 5 metals by EPA Method 6020.

Analytical results for metal concentrations in soil were compared to the total threshold limit concentration (TTLC). Samples with concentrations of any metal greater than ten times the soluble threshold limit concentration (STLC) were also analyzed for soluble metals using the California waste extraction test (WET) method. Select soil samples in which the TTLC concentration was elevated or where the detected concentrations exceeded the STLC value after analysis with the WET method was submitted for analysis by the Federal toxicity characteristic leaching potential (TCLP). These analyses were run to assess if metal concentrations in soil were at State and/or Federal hazardous waste levels.

The groundwater sample was submitted under appropriate chain-of-custody documentation to Torrent, for all of the following analyses:

- Total petroleum hydrocarbons (TPH) as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo) by EPA Method 8021/8015;
- Volatile organic compounds (VOCs) by EPA Method 8260B;
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270C;
- Polychlorinated biphenyls (PCBs) by EPA Method 8082A; and
- California Assessment Manual (CAM) 17 metals by EPA Method 6010B.

8.0 LABORATORY TEST RESULTS AND EVALUATION

The laboratory analytical results for soil are summarized in Tables 1 and 2 and the groundwater results are summarized in Table 3. Copies of the laboratory analytical reports are presented in Appendix C. The analytical results are discussed in the following sections.

8.1 Soil Results

Soil analytical results for parameters other than metals are summarized in Table 1 and were compared to the San Francisco Bay Area Regional Water Quality Control Board (RWQCB) Tier 1 environmental screening levels (ESLs) summary table (RWQCB, February 2016 [Rev. 3]) for residential and commercial/industrial ESLs, associated with direct exposure human health risk levels in shallow soils (Table S-1, RWQCB, February 2016 [Rev. 3]).

TPHg was not detected at or above the method reporting limit (1.0 milligram per kilogram (mg/kg)) in any of the samples analyzed. TPHd and TPHmo was detected at or above the respective method reporting limit in one sample, LSB-2-1.5, at a concentration of 230 mg/kg and 1,000 mg/kg, respectively. The TPHd concentration exceeds the Tier 1 ESL of 230mg/kg exceeds the commercial ESL. No other soil sample analyzed detected concentrations of petroleum hydrocarbons that met or exceeded one or more of the established ESLs.

No VOCs, SVOCs, OCPs, or PCBs, were detected at or above the method reporting limits in any of the samples analyzed.

Soil analytical results for metal parameters are summarized in Table 2 and were compared to the California total threshold limit concentration (TTLC), the State of California hazardous waste criterion, and the Federal hazardous waste criterion

Total chromium was detected in all nineteen samples analyzed at concentrations ranging from 20 mg/kg to 61 mg/kg. Chromium was detected at concentrations at or above 50 mg/kg but below 1,000 mg/kg, the state hazardous waste concentration threshold, in seven out of 19 soil samples. All of these samples were then analyzed for STLC. Only three samples had detections over laboratory reporting limits in samples LSB-1-20, LSB-1-40, and LSB-5-20, but were below the California Soluble Threshold Limit Concentration (STLC).

Total lead was detected in each of the 20 soil samples analyzed at concentrations ranging from 2.8 mg/kg to 430 mg/kg. Lead was detected at concentrations at or above 50 mg/kg but below 1,000 mg/kg, the state hazardous waste concentration threshold, in three out of 20 soil

samples. All of these samples were then analyzed for STLC. Two of the three samples exceeded the STLC criteria of 5 mg/kg in LSB-2-1.5 at a concentration of 14 mg/kg and LSB-3-1.5 at a concentration of 13 mg/kg. These two samples were subsequently run for TCLP lead to determine if the soil represents a Federal RCRA hazardous waste but neither exceeded the TCLP criteria.

Total zinc was detected in each of the 20 soil samples analyzed at concentrations ranging from 31 mg/kg to 900 mg/kg. Zinc was detected at concentrations at or above 500 mg/kg but below 5,000 mg/kg, the state hazardous waste concentration threshold, in two out of 20 soil samples. Both samples were then analyzed for STLC. None of the samples exceeded the STLC criteria of 250 mg/kg.

All other metal concentrations were within normal¹ background ranges found in the western United States, specifically the San Francisco Bay Area.

8.1 Groundwater Results

No groundwater results reported above laboratory detections limits for TPHg, TPHd, TPHmo, VOCs, SVOCs, or PCBs. Some metals were reported above the Tier 1 ESLs in the sample including: barium at a concentration of 18,000 micrograms per liter (µg/L); chromium at a concentration of 1,300 µg/L; cobalt at a concentration of 630 µg/L; copper at a concentration of 2,000 µg/L; lead at a concentration of 460 µg/L; mercury at a concentration of 5.4 µg/L; nickel at a concentration of 3,400 µg/L, vanadium at a concentration of 760 µg/L; and zinc at a concentration of 2,300 µg/L. The groundwater analytical results are summarized on Tables 3 and 4. The analytical qualifiers within the certified analytical reports, indicated that groundwater sample contained greater than one percent volume sediment, which explains the elevated concentrations of metals detected in the unfiltered samples analyzed for total metals.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The Site is located at 199 Bassett Street and 361 N San Pedro Street in San Jose, California and consists of three parcels and is bound by North San Pedro Street on the northeast, Bassett Street on the southeast, Terraine on the southwest and a rail road tracks to the northwest. As shown on Figure 2, the Site is currently occupied by two one-story warehouse buildings (APNs 259-23-005 and 259-23- 006) in the southeast portion of the Site fronting Bassett Street and

¹ "U.S.G.S. Professional Paper 1270, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States," 1984.

partially paved undeveloped land (APN of 259-51-007) to the northwest. The buildings are currently used by Mektra as an office and storage.

We understand the proposed development will likely consist of a nineteen-story mixed-use tower that includes retail space and a residential tower above three basement levels extending up to 35 to 40 feet bgs. The basement levels and first level will be used mostly for parking (for both car and bike), retail space, and a lobby area.

The results of Langan's environmental and geotechnical subsurface investigations at the Site indicate that the Site is underlain by up to 10 feet of loose to medium dense sand and medium stiff to stiff silt deposits with varying amounts of clay and gravel. The clay is divided by a layer of silty sand and clayey sand at depths of 24 to 28 feet and generally varies in thickness from 2 to 5 feet; at the west end of the Site, the layer is approximately 10 feet thick. The clay is in turn underlain by another granular layer which varies in thickness between approximately 4 and 14 feet. This medium dense to very dense sand and gravel layer contains varying amounts of clay and silt.

Groundwater was encountered during drilling at approximately 26 feet bgs, however, once a temporary well was installed in boring LSB-6; stabilized groundwater was encountered at approximately 14 feet bgs. We anticipate the groundwater level will be affected by local variations in subsurface conditions and seasonal variations in rainfall.

Based on the analytical results from this ESC, some of the fill material at the Site contains soluble lead concentrations that exceed the State of California hazardous waste criteria. The areas of fill material containing soluble lead concentrations exceeding the State of California hazardous waste criteria are near borings LSB-2 at depths of 1.5 feet bgs and LSB-3 at a depth of 1.5 feet bgs. The remaining material would most likely be disposed as unrestrictive waste depending on the receiving facilities acceptance criteria.

Because hazardous materials were detected at the Site, a soil management plan (SMP) and a health and safety plan (HASP) prepared by others) will be required prior to construction. The SMP will provide recommended measures to mitigate the long-term environmental or health and safety risks caused by the presence of hazardous materials in the soil. The SMP will also contain contingency plans to be implemented during soil excavation if unanticipated hazardous materials are encountered. The HASP will outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction.

10.0 LIMITATIONS

Descriptions of specific field activities and historical events are based on our observations and on information provided by others. The opinions and information presented in this report apply to Site conditions and the information that was available at the time the work was performed and do not apply to changes of which we are not aware or have not had the opportunity to evaluate. Langan makes no guarantees or warranties with respect to the accuracy or completeness of this information.

TABLES

Table 1
Soil Analytical Results for Non-Metals
199 Bassett Street
San Jose, California

Langan Project: 770638201
May 2017

Sample ID	Depth (feet)	Sample Date	TPHg	TPHd	TPHmo	VOCs	SVOCs	OCPs	PCBs
(mg/kg)									
LSB-1-1.5	1.5	02/20/17	< 1.0	< 1.0	< 5.0	--	--	ND	--
LSB-1-5	5.0	02/20/17	< 1.0	3.3	23	ND	ND	--	--
LSB-1-20	20.0	02/20/17	< 1.0	< 1.0	< 5.0	--	--	--	--
LSB-2-1.5	1.5	02/20/17	3.8	230	1,000	ND	ND	ND	< 2.5
LSB-2-3	3.0	02/20/17	< 1.0	8.4	40	--	--	--	--
LSB-2-7.5	7.5	02/20/17	< 1.0	< 1.0	< 5.0	--	--	--	--
LSB-3-1.5	1.5	02/20/17	6.4	3.8	41	--	--	ND	--
LSB-3-3	3.0	02/20/17	< 1.0	< 1.0	< 5.0	ND	ND	--	< 0.050
LSB-3-25	25.0	02/20/17	< 1.0	< 1.0	< 5.0	ND	ND	--	--
LSB-3-32	32.0	02/20/17	< 1.0	< 1.0	< 5.0	--	--	--	--
LSB-4-1.5	1.5	02/20/17	< 1.0	< 1.0	< 5.0	ND	ND	ND	< 0.050
LSB-4-3	3.0	02/20/17	< 1.0	< 1.0	< 5.0	--	--	--	--
LSB-4-10	10.0	02/21/17	< 1.0	< 1.0	< 5.0	ND	ND	--	--
LSB-5-1.5	1.5	02/20/17	< 1.0	< 1.0	< 5.0	--	--	ND	--
LSB-5-3	3.0	02/20/17	< 1.0	< 1.0	< 5.0	--	--	--	--
LSB-5-15	15.0	02/20/17	< 1.0	< 1.0	< 5.0	ND	ND	--	--
LSB-5-20	20.0	02/20/17	--	--	--	--	--	ND	--
LSB-6-1.5	1.5	02/20/17	< 1.0	< 1.0	< 5.0	--	--	--	--
LSB-6-3	3.0	02/20/17	< 1.0	< 1.0	< 5.0	ND	ND	--	--
LSB-6-10	10.0	02/20/17	< 1.0	< 1.0	< 5.0	--	--	--	--
Tier 1 ESLs			100	230	100	Various	Various	Various	Various

Notes:

mg/kg - milligrams per kilograms

TRPH - Total recoverable Hydrocarbons, EPA Method E418.1

TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M

TPHd - Total Petroleum Hydrocarbons as Diesel Range, EPA Method 8015M

VOCs - Volatile Organics, EPA Method SW8260B

OCPs - Organochlorine Pesticides, EPA Method 8081A/8082

PCBs - Polychlorinated Biphenyls, EPA Method 8081

Tier 1 ESLs - RWQCB Environmental Soil Screening Levels based on a generic conceptual site model designed for use at most sites. The Tier 1 ESL summary table is generally derived from the most conservative ESL for each compound (February 2016 [Rev.3])

ND - Not detected at or above the laboratory reporting limit

< 1.0 - Analyte was not detected above the laboratory reporting limit (1.0 mg/kg)

-- Not analyzed

Bold - Sample exceeds ESLs

Table 2
Soil Analytical Results for Metals
199 Bassett Street
San Jose, California

Langan Project: 770638201
May 2017

Sample ID	Depth (feet)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Chromium STLC	Cobalt	Copper	Lead	STLC Lead	TCLP Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	STLC Zinc
LSB-1-1.5	1.5	02/20/17	1.2	5.8	130	< 0.50	0.4	41	--	12	52	28	--	--	1.8	< 0.50	70	< 0.50	< 0.50	< 0.50	29	900	68
LSB-1-5	5.0	02/20/17	3.7	7	140	< 0.50	< 0.50	47	--	12	59	61	0.28	--	0.88	< 0.50	76	< 0.50	< 0.50	< 0.50	42	540	17
LSB-1-7.5	7.5	02/20/17	--	--	--	--	--	--	--	--	--	12	--	--	--	--	--	--	--	--	--	85	--
LSB-1-20	20.0	02/20/17	--	--	--	--	ND	56	0.41	--	--	10	--	--	--	--	92	--	--	--	--	73	--
LSB-1-40	40.0	02/20/17	--	--	--	--	0.27	51	0.43	--	--	9.7	--	--	--	--	78	--	--	--	--	84	--
LSB-2-1.5	1.5	02/20/17	24	10	130	< 0.50	< 0.25	23	--	8.8	130	430	14	0.16	1.1	< 0.50	22	< 0.50	< 0.50	< 0.50	73	77	--
LSB-2-3	3.0	02/20/17	--	--	--	--	< 0.25	60	< 0.10	--	--	23	--	--	--	--	100	--	--	--	--	79	--
LSB-2-7.5	7.5	02/20/17	--	--	--	--	< 0.25	43	--	--	--	7.5	--	--	--	--	73	--	--	--	--	52	--
LSB-3-1.5	1.5	02/20/17	12	8.9	320	< 0.50	< 0.50	20	--	5.4	84	410	13	< 0.10	18	0.56	28	< 0.50	< 0.50	< 0.50	32	54	--
LSB-3-3	3.0	02/20/17	2.1	6.9	110	< 0.50	< 0.25	50	< 0.10	9.9	24	8.8	--	--	0.19	< 0.50	81	< 0.50	< 0.50	< 0.50	32	80	--
LSB-3-25	25.0	02/20/17	--	--	--	--	< 0.25	43	--	--	--	3.3	--	--	--	--	47	--	--	--	--	35	--
LSB-3-32	32.0	02/20/17	< 0.50	4.1	60	< 0.50	< 0.25	35	--	5.9	11	2.8	--	--	< 0.050	< 0.50	41	< 0.50	< 0.50	< 0.50	30	31	--
LSB-4-1.5	1.5	02/20/17	0.54	6.6	130	< 0.50	< 0.25	46	--	9.2	22	6.9	--	--	<0.050	< 0.50	71	< 0.50	< 0.50	< 0.50	29	49	--
LSB-4-3	3.0	02/20/17	--	--	--	--	< 0.25	52	< 0.10	--	--	7.7	--	--	--	--	86	--	--	--	--	56	--
LSB-4-15	15.0	02/20/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LSB-4-10	10.0	02/21/17	< 0.50	5.8	89	<0.50	< 0.25	46	--	7.7	17	5.1	--	--	< 0.050	< 0.50	76	< 0.50	< 0.50	< 0.50	26	43	--
LSB-5-1.5	1.5	02/20/17	0.58	6.8	140	< 0.50	<0.25	46	--	10	22	8.8	--	--	0.0063	<0.50	72	< 0.50	< 0.50	< 0.50	30	50	--
LSB-5-3	3.0	02/20/17	0.57	7.1	120	< 0.50	< 0.25	52	< 0.10	10	22	8.8	--	--	0.0069	< 0.50	77	< 0.50	< 0.50	< 0.50	32	54	--
LSB-5-15	15.0	02/20/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LSB-5-20	20.0	02/20/17	< 0.50	3.1	150	0.68	< 0.25	61	0.19	12	27	7.4	--	--	0.056	0.55	77	< 0.50	< 0.50	< 0.50	36	63	--
LSB-6-1.5	1.5	02/20/17	0.57	6.5	110	< 0.50	< 0.25	47	--	9.9	26	30	--	--	0.26	0.57	70	< 0.50	< 0.50	< 0.50	33	78	--
LSB-6-3	3.0	02/20/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
LSB-6-10	10.0	02/20/17	< 0.50	6.3	110	< 0.50	< 0.25	46	--	8.5	18	5.5	--	--	0.082	< 0.50	67	< 0.50	< 0.50	< 0.50	29	44	--
Hazardous Waste Criteria																							
TTL		(mg/kg)	500	500	10,000	75	100	2,500	--	8,000	2,500	1,000	--	--	20	3,500	2,000	100	500	700	2,400	5,000	
STLC		(mg/L)	15	5	100	0.75	1	--	5	80	25	--	5	--	0.2	350	20	1	5	7	24	250	250
TCLP		(mg/L)	--	5	100	--	1	--	--	--	--	--	--	5	0.2	--	--	1	5	--	--	--	--

Notes:
mg/kg - milligrams per kilograms
< 0.5 - Analyte was not detected above the laboratory reporting limit (0.5 mg/kg).
– Not analyzed
TTL - California Total Threshold Limit Concentration - State hazardous waste criterion
STLC - California Soluble Threshold Limit Concentration
TCLP - Federal Toxicity Characteristic Leaching Procedure
Bold - Exceeds State of California Hazardous Waste Criteria

Table 3
Groundwater Discharge Analytical Results
199 Bassett Street
San Jose, California

Sample ID	Sample Date	TPHg	TPHd	TPHmo	VOCs	SVOCs	PCBs
		µg/L					
LSB-6-GW	02/20/17	< 50	< 50	< 250	ND	ND	< 0.50
Residential ESLs		100	100	500*	Various	Various	Various

Notes:

µg/L - micrograms per Liter

TPHg - Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015M

TPHd - Total Petroleum Hydrocarbons as Diesel Range, EPA Method 8015M

TPHmo - Total Petroleum Hydrocarbons as Motor Oil, EPA Method 8015M

PCB - Polychlorinated Biphenyls, EPA Method 8081

VOC - Volatile Organics Compounds, EPA 8260B

SVOC - Semi-volatile Organics Compounds, EPA Method 8270

< 50 - Analyte was not detected above the laboratory reporting limit (50 mg/L)

Residential ESLs - Regional Water Quality Control Board, SFBay, Environmental Screening Level for residential land use soil

* The listed value of 500 µg/L is for TPH as residual fuels, the closest analogue to TPHmo.

ND - Not detected at or above the laboratory reporting limit

Table 4
Groundwater Analytical Results for Metals
199 Bassett Street
San Jose, California

Sample ID	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Colbalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
(µg/L)																		
LSB-6-GW	02/20/17	< 50	< 50	18,000	< 50	< 25	1,300	630	2,000	460	5.3	< 50	3,400	< 50	< 19	< 50	760	2,300
Tier 1 ESLs		6	10	1,000	2.7	0.25	50	3	3.1	2.5	0.051	100	8.2	5	0.19	2	19	81

Notes:

µg/L - micrograms per Liter

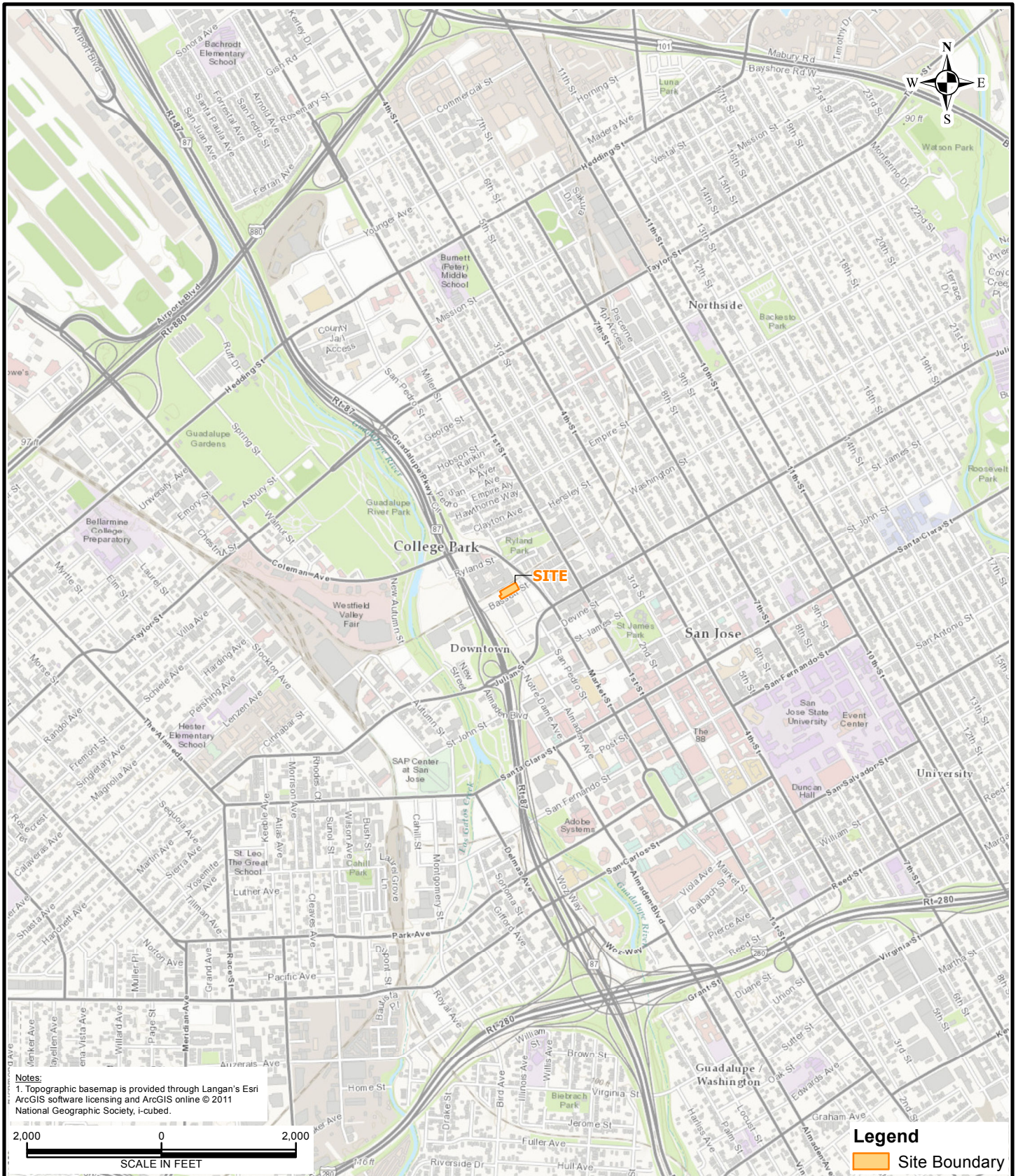
< 0.5 - Analyte was not detected above the laboratory reporting limit (0.5 µg/L).

– Not analyzed

Tier 1 ESLs - RWQCB Environmental Groundwater Screening Levels based on a generic conceptual site model designed for use at most sites. The Tier 1

ESL summary table is generally derived from the most conservative ESL for each compound (February 2016 [Rev.3])

FIGURES



LANGAN

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Langan Engineering & Environmental Services, Inc.
 Langan Engineering, Environmental, Surveying and
 Landscape Architecture, D.P.C.
 Langan International LLC

Collectively known as Langan

Project
**199 BASSETT STREET
 AND
 361 N SAN PEDRO STREET**
 SAN JOSE
 SANTA CLARA COUNTY CALIFORNIA

Drawing Title
**SITE
 LOCATION MAP**

Project No.
770638201
 Date
3/29/2017
 Scale
1" = 2,000'
 Drawn By
BJS

Figure

1



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Langan International LLC

Collectively known as Langan

Project

199 BASSETT STREET
 AND
 361 N SAN PEDRO STREET
 SAN JOSE

SANTA CLARA COUNTY CALIFORNIA

Drawing Title

SITE PLAN

Project No.

770638201

Date

3/29/2017

Scale

1" = 150'

Drawn By

BJS

Figure

2



LANGAN

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Langan International LLC

Collectively known as Langan

Project

199 BASSETT STREET
AND
361 N SAN PEDRO STREET

SAN JOSE

SANTA CLARA COUNTY CALIFORNIA

Drawing Title

SOIL AND
GROUNDWATER
SAMPLE LOCATIONS

Project No.
770638201

Date
3/29/2017

Scale
1" = 50'

Drawn By
BJS

Figure

3

APPENDIX A
EXPLORATORY BORING LOGS

PROJECT:

199 BASSETT STREET
San Jose, California**Log of Boring LSB-1**

PAGE 1 OF 2

Boring location: See Site Plan, Figure 2

Logged by: T. Houghton

Date started: 2/20/17

Date finished: 2/1/17

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler: Macrocore

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample ID	Sample	Blow Count	Recovery (inches)			
1							4 inches asphalt concrete (AC)
2	LSB-1-2.0	•					--
3							SILTY SAND (SM) brown with orange mottling, medium stiff, moist, no odor
4							
5	LSB-1-5.5	•					
6						SM	
7				36/36			
8	LSB-1-8.0	•					
9							
10	LSB-1-10.5	•		48/48			
11							CLAY (CL) yellow-brown, soft, moist, trace sand, no odor
12						CL	
13							
14				16/48			SILTY SAND (SM) brown, medium stiff, moist, no odor
15	LSB-1-15.5	•					
16							
17							
18				--/48			CLAY with ORGANICS (CL) gray, medium stiff, moist, no odor
19							
20	LSB-1-20.5	•					stiff
21						CL	
22				48/48			
23							
24							
25	LSB-1-25.5	•					CLAYEY SAND (SC) gray-brown, loose, moist, no odor fine-grained sand increasing with depth
26				48/48		SC	
27							
28							
29				48/48		SM	SILTY SAND (SM)
30							

TEST ENVIRONMENTAL INCHES 770638201.GPJ T&R.GDT 6/12/17

LANGANProject No.:
770638201Figure:
A-1a

PROJECT:

199 BASSETT STREET
San Jose, California

Log of Boring LSB-1

PAGE 2 OF 2

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample ID	Sample	Blow Count	Recovery (Inches)			
31	LSB-1-30.5	•		48/48		SM	brown, loose, moist, no odor, sand with trace of --
32							
33							
34				48/48		SP	SAND (SP) gray, loose, moist to wet, no odor
35	LSB-1-35.5	•					
36							
37							
38				48/48		CL	CLAY (CL) dark gray, soft to medium stiff, no odor sand lens from 37 to 37.4 feet
39							
40	LSB-1-40.0	•					
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							
59							
60							
Boring terminated at a depth of 40 feet below ground surface. Boring backfilled with grout. Groundwater not encountered during drilling.							LANGAN Project No.: 770638201 Figure: A-1b

TEST ENVIRONMENTAL INCHES 770638201.GPJ T&R.GDT 6/12/17

PROJECT:

199 BASSETT STREET
San Jose, California**Log of Boring LSB-2**

PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Logged by: T. Houghton

Date started: 2/20/17

Date finished: 2/20/17

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler: Macrocore

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample ID	Sample	Blow Count	Recovery (inches)			
1						SC	3 inches asphalt concrete (AC)
2	LSB-2-2.0	•					CLAYEY SAND (SC) dark brown, medium dense, moist, no odor
3	LSB-2-3.5	•					SILTY SAND (SM) brown, medium stiff, moist, no odor
4							
5	LSB-2-5.5	•				SM	
6							
7				36/36			brown
8	LSB-2-8.0	•					
9							
10	LSB-2-10.5	•		44/48		SP	SAND (SP) brown, loose, moist, no odor
11							
12							CLAY (CL) brown with oxidation mottling, medium stiff, moist soft
13							
14				48/48			
15	LSB-2-15.5	•				CL	
16							
17							
18				24/48			
19							
20	LSB-2-20.0	•					
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Boring terminated at a depth of 20 feet below ground surface.
Boring backfilled with grout.
Groundwater not encountered during drilling.

LANGAN

Project No.: 770638201

Figure:

A-2

TEST ENVIRONMENTAL INCHES 770638201.GPJ T&R.GDT 6/12/17

PROJECT:

199 BASSETT STREET
San Jose, California

Log of Boring LSB-3

PAGE 1 OF 2

Boring location: See Site Plan, Figure 2

Logged by: C. Madsen

Date started: 2/20/17

Date finished: 2/20/17

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler: Macrocore

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample ID	Sample	Blow Count	Recovery (inches)			
1	LSB-3-1.5	•					4 inches concrete
2	4						SAND with SILT (SP-SM) brown, medium dense, moist, no odor
3	LSB-3-3.0	•					
4						SP-SM	
5	LSB-3-5.0	•					
6				32/48			
7							
8							SILTY SAND (SM) brown, medium dense, moist, no odor
9							
10	LSB-3-10.0	•		36/48		SM	
11							
12							SANDY SILT (ML) gray, soft, wet, no odor
13							
14				34/48		ML	
15	LSB-3-15.0	•					
16							
17							CLAYEY SILT (ML) brown, medium stiff, moist, no odor
18				42/48			
19							
20						ML	
21							
22				25/48			
23							
24							CLAYEY SAND (SC) brown-gray, moist, no odor
25	LSB-3-25.0	•					
26				38/48		SC	
27							
28							
29				12/48			
30	LSB-3-30.0	•					

TEST ENVIRONMENTAL INCHES 770638201.GPJ T&R.GDT 6/12/17

LANGAN

Project No.: 770638201

Figure:

A-3a

PROJECT:

199 BASSETT STREET
San Jose, California**Log of Boring LSB-3**

PAGE 2 OF 2

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample ID	Sample	Blow Count	Recovery (Inches)			
31	LSB-3-32.0			12/48	SC	CLAYEY SAND (SC) (continued)	
32						No recovery	
33							
34				0/48			
35							
36							
37							
38				0/48			
39							
40	LSB-3-40.0						
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							
59							
60	Boring terminated at a depth of 40 feet below ground surface. Boring backfilled with grout. Groundwater not encountered during drilling.					LANGAN Project No.: 770638201 Figure: A-3b	

TEST ENVIRONMENTAL INCHES 770638201.GPJ T&R.GDT 6/12/17

PROJECT:

199 BASSETT STREET
San Jose, California

Log of Boring LSB-4

PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Logged by: C. Madsen

Date started: 2/20/17

Date finished: 2/20/17

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler: Macrocore

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample ID	Sample	Blow Count	Recovery (inches)			
1	LSB-4-1.5	•					4 inches concrete
2							SILTY SAND (SM) brown mottled, medium dense, dry, no odor
3	LSB-4-3.0	•					
4							
5	LSB-4-5.0	•					
6							
7	LSB-4-7.5	•		24/36			
8						SM	4 inch clay layer
9							
10	LSB-4-10.0	•		14/48			
11							
12							
13							
14				32/48			
15	LSB-4-15.0	•					
16						ML	SILT (ML) brown, moist, no odor
17							
18				36/48			
19						CL	CLAY (CL) gray-black, medium stiff, moist, no odor
20	LSB-4-20.0	•					
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Boring terminated at a depth of 20 feet below ground surface.
Boring backfilled with grout.
Groundwater not encountered during drilling.

LANGAN

Project No.: 770638201

Figure:

A-4

TEST ENVIRONMENTAL INCHES 770638201.GPJ T&R.GDT 6/12/17

PROJECT:

199 BASSETT STREET
San Jose, California**Log of Boring LSB-5**

PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Logged by: C. Madsen

Date started: 2/20/17

Date finished: 2/20/17

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler: Macrocore

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample ID	Sample	Blow Count	Recovery (inches)			
1	LSB-5-1.5	•				SM-SC	4 inches concrete SILTY CLAY SAND (SM-SC) dark brown, medium dense, dry, no odor
2							
3	LSB-5-3.0	•				SM	SILTY SAND (SM) brown, medium dense, dry, no odor
4							
5	LSB-5-5.0	•					
6							
7	LSB-5-7.5	•		24/36			
8							
9							
10	LSB-5-10.0	•		40/48		ML	SILT (ML) brown mottled, medium stiff, dry, no odor
11							
12							
13							
14				42/48			
15	LSB-5-15.0	•					
16						ML	CLAYEY SILT (ML) brown, very soft, moist, no odor
17							
18				48/48			
19						ML	SILT (ML) gray, very soft, moist, no odor
20	LSB-5-20.0	•					
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

Boring terminated at a depth of 20 feet below ground surface.
Boring backfilled with grout.
Groundwater not encountered during drilling.

LANGANProject No.:
770638201

Figure:

A-5

TEST ENVIRONMENTAL INCHES 770638201.GPJ T&R.GDT 6/12/17

PROJECT:

199 BASSETT STREET
San Jose, California**Log of Boring LSB-6**

PAGE 1 OF 1

Boring location: See Site Plan, Figure 2

Logged by: T. Houghton

Date started: 2/20/17

Date finished: 2/20/17

Drilling method: Direct Push

Hammer weight/drop: NA

Hammer type: NA

Sampler: Macrocore

DEPTH (feet)	SAMPLES				PID (ppm)	LITHOLOGY	MATERIAL DESCRIPTION
	Sample ID	Sample	Blow Count	Recovery (inches)			
1							4 inches concrete
2	LSB-6-2.0	•					4 to 6 inches asphalt concrete (AC)
3	LSB-6-3.5	•				SM	8 inches brick
4							SILTY SAND (SM)
5	LSB-6-5.5	•				SM	brown, medium dense, moist, no odor
6				36/36			SILTY SAND (SM)
7	LSB-6-7.5	•					brown, loose, moist, no odor
8						SP-SM	SAND with SILT (SP-SM)
9							brown, loose, moist, no odor
10	LSB-6-10.5	•		24/48			CLAY (CL)
11						CL	brown, stiff, moist, no odor
12							
13							
14				30/48			
15	LSB-6-15.5	•				SM	SILTY SAND (SM)
16							brown, loose, moist, no odor
17							CLAY with ORGANICS (CL)
18				48/48			brown to gray, medium stiff, no odor
19							transitions from clay to organics with depth, stiff, mottling
20	LSB-6-20.0	•				CL	
21							
22				48/48			
23							
24							
25							
26				48/48		SP-SM	▽ (02/20/17)
27							SAND with SILT (SP-SM)
28							brown-gray, loose, wet, no odor
29							
30							

Boring terminated at a depth of 28 feet below ground surface.
 Boring backfilled with grout.
 Groundwater encountered at 26 feet below ground surface during drilling.

LANGANProject No.:
770638201

Figure:

A-6

TEST ENVIRONMENTAL INCHES 770638201.GPJ T&R.GDT 6/12/17

UNIFIED SOIL CLASSIFICATION SYSTEM			
Major Divisions		Symbols	Typical Names
Coarse-Grained Soils (more than half of soil > no. 200 sieve size)	Gravels (More than half of coarse fraction > no. 4 sieve size)	GW	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (More than half of coarse fraction < no. 4 sieve size)	SW	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
Fine -Grained Soils (more than half of soil < no. 200 sieve size)	Silts and Clays LL = < 50	ML	Inorganic silts and clayey silts of low plasticity, sandy silts, gravelly silts
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	Silts and Clays LL = > 50	MH	Inorganic silts of high plasticity
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic silts and clays of high plasticity
Highly Organic Soils		PT	Peat and other highly organic soils

GRAIN SIZE CHART

Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	Grain Size in Millimeters
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel coarse fine	3" to No. 4	76.2 to 4.76
	3" to 3/4"	76.2 to 19.1
	3/4" to No. 4	19.1 to 4.76
Sand coarse medium fine	No. 4 to No. 200	4.76 to 0.075
	No. 4 to No. 10	4.76 to 2.00
	No. 10 to No. 40	2.00 to 0.420
	No. 40 to No. 200	0.420 to 0.075
Silt and Clay	Below No. 200	Below 0.075

Unstabilized groundwater level

Stabilized groundwater level

Sample taken with Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter. Darkened area indicates soil recovered

Classification sample taken with Standard Penetration Test sampler

Undisturbed sample taken with thin-walled tube

Disturbed sample

Sampling attempted with no recovery

Core sample

Analytical laboratory sample

Sample taken with Direct Push or Drive sampler

SAMPLER TYPE

C	Core barrel	PT	Pitcher tube sampler using 3.0-inch outside diameter, thin-walled Shelby tube
CA	California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter	S&H	Sprague & Henwood split-barrel sampler with a 3.0-inch outside diameter and a 2.43-inch inside diameter
D&M	Dames & Moore piston sampler using 2.5-inch outside diameter, thin-walled tube	SPT	Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter
O	Osterberg piston sampler using 3.0-inch outside diameter, thin-walled Shelby tube	ST	Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure

199 BASSETT STREET
San Jose, California

LANGAN

CLASSIFICATION CHART

Date 03/03/17

Project No. 770638201

Figure A-7

APPENDIX B

**CERTIFIED ANALYTICAL RESULTS AND
CHAIN-OF-CUSTODY RECORDS**



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1702A52

Report Created for: Langan

1 Almaden Blvd, Suite 590
San Jose, CA 95113

Project Contact: Peter Cusack

Project P.O.:

Project Name: 770638201; 199 Bassett Street

Project Received: 02/21/2017

Analytical Report reviewed & approved for release on 02/28/2017 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: Langan
Project: 770638201; 199 Bassett Street
WorkOrder: 1702A52

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
PDS D	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: Langan
Project: 770638201; 199 Bassett Street
WorkOrder: 1702A52

Analytical Qualifiers

a1 sample diluted due to matrix interference
a16 reporting limit raised due to high metals content
a19 reporting limit near, but not identical to our standard reporting limit due to variable water sample volume
c8 sample pH is greater than 2

Quality Control Qualifiers

F2 LCS/LCSD recovery and/or RPD is out of acceptance criteria.
F3 the surrogate standard recovery and/or RPD is outside of acceptance limits.
F13 Indigenous sample results too high for a representative matrix spike analysis.



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

Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
Extraction Method: SW3510C
Analytical Method: SW8082
Unit: µg/L

Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-GW	1702A52-001D	Water	02/20/2017 11:55	GC20	134448

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.50	1	02/22/2017 10:06
Aroclor1221	ND	0.50	1	02/22/2017 10:06
Aroclor1232	ND	0.50	1	02/22/2017 10:06
Aroclor1242	ND	0.50	1	02/22/2017 10:06
Aroclor1248	ND	0.50	1	02/22/2017 10:06
Aroclor1254	ND	0.50	1	02/22/2017 10:06
Aroclor1260	ND	0.50	1	02/22/2017 10:06
PCBs, total	ND	0.50	1	02/22/2017 10:06

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	101	70-130	02/22/2017 10:06

Analyst(s): CK



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-GW	1702A52-001B	Water	02/20/2017 11:55	GC18	134522
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		10	1	02/21/2017 22:37
tert-Amyl methyl ether (TAME)	ND		0.50	1	02/21/2017 22:37
Benzene	ND		0.50	1	02/21/2017 22:37
Bromobenzene	ND		0.50	1	02/21/2017 22:37
Bromochloromethane	ND		0.50	1	02/21/2017 22:37
Bromodichloromethane	ND		0.50	1	02/21/2017 22:37
Bromoform	ND		0.50	1	02/21/2017 22:37
Bromomethane	ND		0.50	1	02/21/2017 22:37
2-Butanone (MEK)	ND		2.0	1	02/21/2017 22:37
t-Butyl alcohol (TBA)	ND		2.0	1	02/21/2017 22:37
n-Butyl benzene	ND		0.50	1	02/21/2017 22:37
sec-Butyl benzene	ND		0.50	1	02/21/2017 22:37
tert-Butyl benzene	ND		0.50	1	02/21/2017 22:37
Carbon Disulfide	ND		0.50	1	02/21/2017 22:37
Carbon Tetrachloride	ND		0.50	1	02/21/2017 22:37
Chlorobenzene	ND		0.50	1	02/21/2017 22:37
Chloroethane	ND		0.50	1	02/21/2017 22:37
Chloroform	ND		0.50	1	02/21/2017 22:37
Chloromethane	ND		0.50	1	02/21/2017 22:37
2-Chlorotoluene	ND		0.50	1	02/21/2017 22:37
4-Chlorotoluene	ND		0.50	1	02/21/2017 22:37
Dibromochloromethane	ND		0.50	1	02/21/2017 22:37
1,2-Dibromo-3-chloropropane	ND		0.20	1	02/21/2017 22:37
1,2-Dibromoethane (EDB)	ND		0.50	1	02/21/2017 22:37
Dibromomethane	ND		0.50	1	02/21/2017 22:37
1,2-Dichlorobenzene	ND		0.50	1	02/21/2017 22:37
1,3-Dichlorobenzene	ND		0.50	1	02/21/2017 22:37
1,4-Dichlorobenzene	ND		0.50	1	02/21/2017 22:37
Dichlorodifluoromethane	ND		0.50	1	02/21/2017 22:37
1,1-Dichloroethane	ND		0.50	1	02/21/2017 22:37
1,2-Dichloroethane (1,2-DCA)	ND		0.50	1	02/21/2017 22:37
1,1-Dichloroethene	ND		0.50	1	02/21/2017 22:37
cis-1,2-Dichloroethene	ND		0.50	1	02/21/2017 22:37
trans-1,2-Dichloroethene	ND		0.50	1	02/21/2017 22:37
1,2-Dichloropropane	ND		0.50	1	02/21/2017 22:37
1,3-Dichloropropane	ND		0.50	1	02/21/2017 22:37
2,2-Dichloropropane	ND		0.50	1	02/21/2017 22:37

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-GW	1702A52-001B	Water	02/20/2017 11:55	GC18	134522
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.50	1	02/21/2017 22:37
cis-1,3-Dichloropropene	ND		0.50	1	02/21/2017 22:37
trans-1,3-Dichloropropene	ND		0.50	1	02/21/2017 22:37
Diisopropyl ether (DIPE)	ND		0.50	1	02/21/2017 22:37
Ethylbenzene	ND		0.50	1	02/21/2017 22:37
Ethyl tert-butyl ether (ETBE)	ND		0.50	1	02/21/2017 22:37
Freon 113	ND		0.50	1	02/21/2017 22:37
Hexachlorobutadiene	ND		0.50	1	02/21/2017 22:37
Hexachloroethane	ND		0.50	1	02/21/2017 22:37
2-Hexanone	ND		0.50	1	02/21/2017 22:37
Isopropylbenzene	ND		0.50	1	02/21/2017 22:37
4-Isopropyl toluene	ND		0.50	1	02/21/2017 22:37
Methyl-t-butyl ether (MTBE)	ND		0.50	1	02/21/2017 22:37
Methylene chloride	ND		0.50	1	02/21/2017 22:37
4-Methyl-2-pentanone (MIBK)	ND		0.50	1	02/21/2017 22:37
Naphthalene	ND		0.50	1	02/21/2017 22:37
n-Propyl benzene	ND		0.50	1	02/21/2017 22:37
Styrene	ND		0.50	1	02/21/2017 22:37
1,1,1,2-Tetrachloroethane	ND		0.50	1	02/21/2017 22:37
1,1,2,2-Tetrachloroethane	ND		0.50	1	02/21/2017 22:37
Tetrachloroethene	ND		0.50	1	02/21/2017 22:37
Toluene	ND		0.50	1	02/21/2017 22:37
1,2,3-Trichlorobenzene	ND		0.50	1	02/21/2017 22:37
1,2,4-Trichlorobenzene	ND		0.50	1	02/21/2017 22:37
1,1,1-Trichloroethane	ND		0.50	1	02/21/2017 22:37
1,1,2-Trichloroethane	ND		0.50	1	02/21/2017 22:37
Trichloroethene	ND		0.50	1	02/21/2017 22:37
Trichlorofluoromethane	ND		0.50	1	02/21/2017 22:37
1,2,3-Trichloropropane	ND		0.50	1	02/21/2017 22:37
1,2,4-Trimethylbenzene	ND		0.50	1	02/21/2017 22:37
1,3,5-Trimethylbenzene	ND		0.50	1	02/21/2017 22:37
Vinyl Chloride	ND		0.50	1	02/21/2017 22:37
Xylenes, Total	ND		0.50	1	02/21/2017 22:37

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-GW	1702A52-001B	Water	02/20/2017 11:55	GC18	134522

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	98	70-130		02/21/2017 22:37
Toluene-d8	92	70-130		02/21/2017 22:37
4-BFB	103	70-130		02/21/2017 22:37
Analyst(s): KF	Analytical Comments: c8			



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
Extraction Method: E625
Analytical Method: SW8270C
Unit: µg/L

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-GW	1702A52-001C	Water	02/20/2017 11:55	GC21	134496
<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>	
Acenaphthene	ND	2.2	1	02/24/2017 12:34	
Acenaphthylene	ND	2.2	1	02/24/2017 12:34	
Acetochlor	ND	2.2	1	02/24/2017 12:34	
Anthracene	ND	2.2	1	02/24/2017 12:34	
Benzidine	ND	11	1	02/24/2017 12:34	
Benzo (a) anthracene	ND	2.2	1	02/24/2017 12:34	
Benzo (a) pyrene	ND	2.2	1	02/24/2017 12:34	
Benzo (b) fluoranthene	ND	2.2	1	02/24/2017 12:34	
Benzo (g,h,i) perylene	ND	2.2	1	02/24/2017 12:34	
Benzo (k) fluoranthene	ND	2.2	1	02/24/2017 12:34	
Benzyl Alcohol	ND	11	1	02/24/2017 12:34	
1,1-Biphenyl	ND	2.2	1	02/24/2017 12:34	
Bis (2-chloroethoxy) Methane	ND	2.2	1	02/24/2017 12:34	
Bis (2-chloroethyl) Ether	ND	2.2	1	02/24/2017 12:34	
Bis (2-chloroisopropyl) Ether	ND	2.2	1	02/24/2017 12:34	
Bis (2-ethylhexyl) Adipate	ND	2.2	1	02/24/2017 12:34	
Bis (2-ethylhexyl) Phthalate	ND	4.5	1	02/24/2017 12:34	
4-Bromophenyl Phenyl Ether	ND	11	1	02/24/2017 12:34	
Butylbenzyl Phthalate	ND	2.2	1	02/24/2017 12:34	
4-Chloroaniline	ND	4.5	1	02/24/2017 12:34	
4-Chloro-3-methylphenol	ND	11	1	02/24/2017 12:34	
2-Chloronaphthalene	ND	2.2	1	02/24/2017 12:34	
2-Chlorophenol	ND	2.2	1	02/24/2017 12:34	
4-Chlorophenyl Phenyl Ether	ND	2.2	1	02/24/2017 12:34	
Chrysene	ND	2.2	1	02/24/2017 12:34	
Dibenzo (a,h) anthracene	ND	2.2	1	02/24/2017 12:34	
Dibenzofuran	ND	2.2	1	02/24/2017 12:34	
Di-n-butyl Phthalate	ND	2.2	1	02/24/2017 12:34	
1,2-Dichlorobenzene	ND	2.2	1	02/24/2017 12:34	
1,3-Dichlorobenzene	ND	2.2	1	02/24/2017 12:34	
1,4-Dichlorobenzene	ND	2.2	1	02/24/2017 12:34	
3,3-Dichlorobenzidine	ND	4.5	1	02/24/2017 12:34	
2,4-Dichlorophenol	ND	2.2	1	02/24/2017 12:34	
Diethyl Phthalate	ND	2.2	1	02/24/2017 12:34	
2,4-Dimethylphenol	ND	2.2	1	02/24/2017 12:34	
Dimethyl Phthalate	ND	2.2	1	02/24/2017 12:34	
4,6-Dinitro-2-methylphenol	ND	11	1	02/24/2017 12:34	

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
Extraction Method: E625
Analytical Method: SW8270C
Unit: µg/L

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-GW	1702A52-001C	Water	02/20/2017 11:55	GC21	134496
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		28	1	02/24/2017 12:34
2,4-Dinitrotoluene	ND		2.2	1	02/24/2017 12:34
2,6-Dinitrotoluene	ND		2.2	1	02/24/2017 12:34
Di-n-octyl Phthalate	ND		2.2	1	02/24/2017 12:34
1,2-Diphenylhydrazine	ND		2.2	1	02/24/2017 12:34
Fluoranthene	ND		2.2	1	02/24/2017 12:34
Fluorene	ND		2.2	1	02/24/2017 12:34
Hexachlorobenzene	ND		2.2	1	02/24/2017 12:34
Hexachlorobutadiene	ND		2.2	1	02/24/2017 12:34
Hexachlorocyclopentadiene	ND		11	1	02/24/2017 12:34
Hexachloroethane	ND		2.2	1	02/24/2017 12:34
Indeno (1,2,3-cd) pyrene	ND		2.2	1	02/24/2017 12:34
Isophorone	ND		2.2	1	02/24/2017 12:34
2-Methylnaphthalene	ND		2.2	1	02/24/2017 12:34
2-Methylphenol (o-Cresol)	ND		2.2	1	02/24/2017 12:34
3 & 4-Methylphenol (m,p-Cresol)	ND		2.2	1	02/24/2017 12:34
Naphthalene	ND		2.2	1	02/24/2017 12:34
2-Nitroaniline	ND		11	1	02/24/2017 12:34
3-Nitroaniline	ND		11	1	02/24/2017 12:34
4-Nitroaniline	ND		11	1	02/24/2017 12:34
Nitrobenzene	ND		2.2	1	02/24/2017 12:34
2-Nitrophenol	ND		11	1	02/24/2017 12:34
4-Nitrophenol	ND		11	1	02/24/2017 12:34
N-Nitrosodiphenylamine	ND		2.2	1	02/24/2017 12:34
N-Nitrosodi-n-propylamine	ND		2.2	1	02/24/2017 12:34
Pentachlorophenol	ND		11	1	02/24/2017 12:34
Phenanthrene	ND		2.2	1	02/24/2017 12:34
Phenol	ND		2.2	1	02/24/2017 12:34
Pyrene	ND		2.2	1	02/24/2017 12:34
1,2,4-Trichlorobenzene	ND		2.2	1	02/24/2017 12:34
2,4,5-Trichlorophenol	ND		2.2	1	02/24/2017 12:34
2,4,6-Trichlorophenol	ND		2.2	1	02/24/2017 12:34

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
Extraction Method: E625
Analytical Method: SW8270C
Unit: µg/L

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-GW	1702A52-001C	Water	02/20/2017 11:55	GC21	134496

Analytes	Result	RL	DE	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	26	8-130		02/24/2017 12:34
Phenol-d5	31	5-130		02/24/2017 12:34
Nitrobenzene-d5	46	20-140		02/24/2017 12:34
2-Fluorobiphenyl	47	40-140		02/24/2017 12:34
2,4,6-Tribromophenol	61	16-180		02/24/2017 12:34
4-Terphenyl-d14	74	40-170		02/24/2017 12:34

Analyst(s): REB

Analytical Comments: a19



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/24/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-GW	1702A52-001E	Water	02/20/2017 11:55	ICP-MS3	134675
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		50	100	02/28/2017 16:25
Arsenic	ND		50	100	02/28/2017 16:25
Barium	18,000		500	100	02/28/2017 16:25
Beryllium	ND		50	100	02/28/2017 16:25
Cadmium	ND		25	100	02/28/2017 16:25
Chromium	1300		50	100	02/28/2017 16:25
Cobalt	630		50	100	02/28/2017 16:25
Copper	2000		200	100	02/28/2017 16:25
Lead	460		50	100	02/28/2017 16:25
Mercury	5.3		5.0	100	02/28/2017 16:25
Molybdenum	ND		50	100	02/28/2017 16:25
Nickel	3400		50	100	02/28/2017 16:25
Selenium	ND		50	100	02/28/2017 16:25
Silver	ND		19	100	02/28/2017 16:25
Thallium	ND		50	100	02/28/2017 16:25
Vanadium	760		50	100	02/28/2017 16:25
Zinc	2300		1500	100	02/28/2017 16:25
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	102		70-130		02/28/2017 16:25
<u>Analyst(s):</u> DVH		<u>Analytical Comments:</u> a16,a1			



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/24/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-GW	1702A52-001A	Water	02/20/2017 11:55	GC3	134592
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		50	1	02/24/2017 02:19
MTBE	---		5.0	1	02/24/2017 02:19
Benzene	---		0.50	1	02/24/2017 02:19
Toluene	---		0.50	1	02/24/2017 02:19
Ethylbenzene	---		0.50	1	02/24/2017 02:19
Xylenes	---		1.5	1	02/24/2017 02:19
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
aaa-TFT	107		89-115		02/24/2017 02:19
<u>Analyst(s):</u> IA					



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"When Quality Counts"

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mcccampbell.com / E-mail: main@mcccampbell.com

Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-GW	1702A52-001A	Water	02/20/2017 11:55	GC9b	134477

Analytes	Result	RL	DE	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	02/22/2017 00:10
TPH-Motor Oil (C18-C36)	ND	250	1	02/22/2017 00:10

Surrogates	REC (%)	Limits	
C9	95	72-117	02/22/2017 00:10

Analyst(s): TK



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17
Instrument: GC20
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134448
Extraction Method: SW3510C
Analytical Method: SW8082
Unit: µg/L
Sample ID: MB/LCS/LCSD-134448

QC Summary Report for SW8082

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Aroclor1016	ND	0.50	-	-	-
Aroclor1221	ND	0.50	-	-	-
Aroclor1232	ND	0.50	-	-	-
Aroclor1242	ND	0.50	-	-	-
Aroclor1248	ND	0.50	-	-	-
Aroclor1254	ND	0.50	-	-	-
Aroclor1260	ND	0.50	-	-	-
PCBs, total	ND	0.50	-	-	-

Surrogate Recovery

Decachlorobiphenyl	1.238		1.25	99	70-130
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Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aroclor1016	3.45	3.60	3.75	92	96	70-130	4.21	20
Aroclor1260	3.74	3.90	3.75	100	104	70-130	4.34	20

Surrogate Recovery

Decachlorobiphenyl	1.24	1.24	1.25	99	99	70-130	0	20
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Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17
Instrument: GC9a
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134477
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L
Sample ID: MB/LCS/LCSD-134477

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	50	-	-	-
TPH-Motor Oil (C18-C36)	ND	250	-	-	-
Surrogate Recovery					
C9	587.4		625	94	74-107

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	1100	1120	1000	110	112	95-136	1.68	30
Surrogate Recovery								
C9	593	589	625	95	94	74-107	0.681	30



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17
Instrument: GC18
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134522
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS/LCSD-134522

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Acetone	ND	10	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.50	-	-	-
Benzene	ND	0.50	-	-	-
Bromobenzene	ND	0.50	-	-	-
Bromochloromethane	ND	0.50	-	-	-
Bromodichloromethane	ND	0.50	-	-	-
Bromoform	ND	0.50	-	-	-
Bromomethane	ND	0.50	-	-	-
2-Butanone (MEK)	ND	2.0	-	-	-
t-Butyl alcohol (TBA)	ND	2.0	-	-	-
n-Butyl benzene	ND	0.50	-	-	-
sec-Butyl benzene	ND	0.50	-	-	-
tert-Butyl benzene	ND	0.50	-	-	-
Carbon Disulfide	ND	0.50	-	-	-
Carbon Tetrachloride	ND	0.50	-	-	-
Chlorobenzene	ND	0.50	-	-	-
Chloroethane	ND	0.50	-	-	-
Chloroform	ND	0.50	-	-	-
Chloromethane	ND	0.50	-	-	-
2-Chlorotoluene	ND	0.50	-	-	-
4-Chlorotoluene	ND	0.50	-	-	-
Dibromochloromethane	ND	0.50	-	-	-
1,2-Dibromo-3-chloropropane	ND	0.20	-	-	-
1,2-Dibromoethane (EDB)	ND	0.50	-	-	-
Dibromomethane	ND	0.50	-	-	-
1,2-Dichlorobenzene	ND	0.50	-	-	-
1,3-Dichlorobenzene	ND	0.50	-	-	-
1,4-Dichlorobenzene	ND	0.50	-	-	-
Dichlorodifluoromethane	ND	0.50	-	-	-
1,1-Dichloroethane	ND	0.50	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.50	-	-	-
1,1-Dichloroethene	ND	0.50	-	-	-
cis-1,2-Dichloroethene	ND	0.50	-	-	-
trans-1,2-Dichloroethene	ND	0.50	-	-	-
1,2-Dichloropropane	ND	0.50	-	-	-
1,3-Dichloropropane	ND	0.50	-	-	-
2,2-Dichloropropane	ND	0.50	-	-	-
1,1-Dichloropropene	ND	0.50	-	-	-
cis-1,3-Dichloropropene	ND	0.50	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17
Instrument: GC18
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134522
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS/LCSD-134522

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
trans-1,3-Dichloropropene	ND	0.50	-	-	-
Diisopropyl ether (DIPE)	ND	0.50	-	-	-
Ethylbenzene	ND	0.50	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.50	-	-	-
Freon 113	ND	0.50	-	-	-
Hexachlorobutadiene	ND	0.50	-	-	-
Hexachloroethane	ND	0.50	-	-	-
2-Hexanone	ND	0.50	-	-	-
Isopropylbenzene	ND	0.50	-	-	-
4-Isopropyl toluene	ND	0.50	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.50	-	-	-
Methylene chloride	ND	0.50	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	0.50	-	-	-
Naphthalene	ND	0.50	-	-	-
n-Propyl benzene	ND	0.50	-	-	-
Styrene	ND	0.50	-	-	-
1,1,1,2-Tetrachloroethane	ND	0.50	-	-	-
1,1,2,2-Tetrachloroethane	ND	0.50	-	-	-
Tetrachloroethene	ND	0.50	-	-	-
Toluene	ND	0.50	-	-	-
1,2,3-Trichlorobenzene	ND	0.50	-	-	-
1,2,4-Trichlorobenzene	ND	0.50	-	-	-
1,1,1-Trichloroethane	ND	0.50	-	-	-
1,1,2-Trichloroethane	ND	0.50	-	-	-
Trichloroethene	ND	0.50	-	-	-
Trichlorofluoromethane	ND	0.50	-	-	-
1,2,3-Trichloropropane	ND	0.50	-	-	-
1,2,4-Trimethylbenzene	ND	0.50	-	-	-
1,3,5-Trimethylbenzene	ND	0.50	-	-	-
Vinyl Chloride	ND	0.50	-	-	-
Xylenes, Total	ND	0.50	-	-	-

Surrogate Recovery

Dibromofluoromethane	24.32	25	97	70-130
Toluene-d8	23.13	25	93	70-130
4-BFB	2.528	2.5	101	70-130

(Cont.)

NELAP 4033ORELAP

 QA/QC Officer



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17
Instrument: GC18
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134522
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS/LCSD-134522

QC Summary Report for SW8260B

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	9.35	9.83	10	93	98	54-140	4.96	20
Benzene	10.3	10.4	10	103	105	47-158	1.60	20
t-Butyl alcohol (TBA)	27.0	27.1	40	67	68	42-140	0.607	20
Chlorobenzene	10.2	10.4	10	102	104	43-157	2.16	20
1,2-Dibromoethane (EDB)	9.20	9.47	10	92	95	44-155	2.84	20
1,2-Dichloroethane (1,2-DCA)	9.53	9.76	10	95	98	66-125	2.35	20
1,1-Dichloroethene	10.9	11.1	10	109	111	47-149	2.25	20
Diisopropyl ether (DIPE)	9.99	10.1	10	100	101	57-136	1.21	20
Ethyl tert-butyl ether (ETBE)	9.15	9.59	10	91	96	55-137	4.68	20
Methyl-t-butyl ether (MTBE)	8.64	9.12	10	86	91	53-139	5.46	20
Toluene	10.4	10.6	10	104	106	52-137	1.69	20
Trichloroethene	10.5	10.8	10	105	108	43-157	2.63	20
Surrogate Recovery								
Dibromofluoromethane	24.4	24.2	25	97	97	70-130	0	20
Toluene-d8	23.3	23.2	25	93	93	70-130	0	20
4-BFB	2.65	2.61	2.5	106	105	70-130	1.35	20



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17 - 2/22/17
Instrument: GC21
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134496
Extraction Method: E625
Analytical Method: SW8270C
Unit: µg/L
Sample ID: MB/LCS/LCSD-134496

QC Summary Report for SW8270C

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Acenaphthene	ND	2.0	-	-	-
Acenaphthylene	ND	2.0	-	-	-
Acetochlor	ND	2.0	-	-	-
Anthracene	ND	2.0	-	-	-
Benzidine	ND	10	-	-	-
Benzo (a) anthracene	ND	2.0	-	-	-
Benzo (a) pyrene	ND	2.0	-	-	-
Benzo (b) fluoranthene	ND	2.0	-	-	-
Benzo (g,h,i) perylene	ND	2.0	-	-	-
Benzo (k) fluoranthene	ND	2.0	-	-	-
Benzyl Alcohol	ND	10	-	-	-
1,1-Biphenyl	ND	2.0	-	-	-
Bis (2-chloroethoxy) Methane	ND	2.0	-	-	-
Bis (2-chloroethyl) Ether	ND	2.0	-	-	-
Bis (2-chloroisopropyl) Ether	ND	2.0	-	-	-
Bis (2-ethylhexyl) Adipate	ND	2.0	-	-	-
Bis (2-ethylhexyl) Phthalate	ND	4.0	-	-	-
4-Bromophenyl Phenyl Ether	ND	10	-	-	-
Butylbenzyl Phthalate	ND	2.0	-	-	-
4-Chloroaniline	ND	4.0	-	-	-
4-Chloro-3-methylphenol	ND	10	-	-	-
2-Chloronaphthalene	ND	2.0	-	-	-
2-Chlorophenol	ND	2.0	-	-	-
4-Chlorophenyl Phenyl Ether	ND	2.0	-	-	-
Chrysene	ND	2.0	-	-	-
Dibenzo (a,h) anthracene	ND	2.0	-	-	-
Dibenzofuran	ND	2.0	-	-	-
Di-n-butyl Phthalate	ND	2.0	-	-	-
1,2-Dichlorobenzene	ND	2.0	-	-	-
1,3-Dichlorobenzene	ND	2.0	-	-	-
1,4-Dichlorobenzene	ND	2.0	-	-	-
3,3-Dichlorobenzidine	ND	4.0	-	-	-
2,4-Dichlorophenol	ND	2.0	-	-	-
Diethyl Phthalate	ND	2.0	-	-	-
2,4-Dimethylphenol	ND	2.0	-	-	-
Dimethyl Phthalate	ND	2.0	-	-	-
4,6-Dinitro-2-methylphenol	ND	10	-	-	-
2,4-Dinitrophenol	ND	25	-	-	-
2,4-Dinitrotoluene	ND	2.0	-	-	-

(Cont.)

NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17 - 2/22/17
Instrument: GC21
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134496
Extraction Method: E625
Analytical Method: SW8270C
Unit: µg/L
Sample ID: MB/LCS/LCSD-134496

QC Summary Report for SW8270C

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
2,6-Dinitrotoluene	ND	2.0	-	-	-
Di-n-octyl Phthalate	ND	2.0	-	-	-
1,2-Diphenylhydrazine	ND	2.0	-	-	-
Fluoranthene	ND	2.0	-	-	-
Fluorene	ND	2.0	-	-	-
Hexachlorobenzene	ND	2.0	-	-	-
Hexachlorobutadiene	ND	2.0	-	-	-
Hexachlorocyclopentadiene	ND	10	-	-	-
Hexachloroethane	ND	2.0	-	-	-
Indeno (1,2,3-cd) pyrene	ND	2.0	-	-	-
Isophorone	ND	2.0	-	-	-
2-Methylnaphthalene	ND	2.0	-	-	-
2-Methylphenol (o-Cresol)	ND	2.0	-	-	-
3 & 4-Methylphenol (m,p-Cresol)	ND	2.0	-	-	-
Naphthalene	ND	2.0	-	-	-
2-Nitroaniline	ND	10	-	-	-
3-Nitroaniline	ND	10	-	-	-
4-Nitroaniline	ND	10	-	-	-
Nitrobenzene	ND	2.0	-	-	-
2-Nitrophenol	ND	10	-	-	-
4-Nitrophenol	ND	10	-	-	-
N-Nitrosodiphenylamine	ND	2.0	-	-	-
N-Nitrosodi-n-propylamine	ND	2.0	-	-	-
Pentachlorophenol	ND	10	-	-	-
Phenanthrene	ND	2.0	-	-	-
Phenol	ND	2.0	-	-	-
Pyrene	ND	2.0	-	-	-
1,2,4-Trichlorobenzene	ND	2.0	-	-	-
2,4,5-Trichlorophenol	ND	2.0	-	-	-
2,4,6-Trichlorophenol	ND	2.0	-	-	-

Surrogate Recovery

2-Fluorophenol	8.081	20	40	8-130
Phenol-d5	5.736	20	29	5-130
Nitrobenzene-d5	12.8	20	64	20-140
2-Fluorobiphenyl	11.14	20	56	40-140
2,4,6-Tribromophenol	13.68	20	68	16-180
4-Terphenyl-d14	12.11	20	61	40-170

(Cont.)

NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17 - 2/22/17
Instrument: GC21
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134496
Extraction Method: E625
Analytical Method: SW8270C
Unit: µg/L
Sample ID: MB/LCS/LCSD-134496

QC Summary Report for SW8270C

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Acenaphthene	11.2	9.98	10	112	100	63-119	11.8	25
4-Chloro-3-methylphenol	9.17	8.82	10	92	88	69-127	3.91	25
2-Chlorophenol	8.11	8.33	10	81	83	49-119	2.64	25
1,4-Dichlorobenzene	8.22	8.45	10	82	84	43-114	2.75	25
2,4-Dinitrotoluene	11.7	10.7	10	117	107	68-125	9.27	25
4-Nitrophenol	26.9	23.2	50	54, F2	46, F2	60-126	14.4	25
N-Nitrosodi-n-propylamine	9.14	9.38	10	91	94	61-120	2.54	25
Pentachlorophenol	20.2	18.6	20	101	93	50-146	8.27	25
Phenol	4.15	4.11	10	41, F2	41, F2	52-119	0	25
Pyrene	10.9	10.4	10	109	104	67-132	5.36	25
1,2,4-Trichlorobenzene	8.39	8.76	10	84	88	50-121	4.26	25
Surrogate Recovery								
2-Fluorophenol	8.04	8.04	20	40	40	29-140	0	25
Phenol-d5	5.80	5.68	20	29, F3	28, F3	38-148	2.21	25
Nitrobenzene-d5	13.2	13.5	20	66	68	31-152	2.93	25
2-Fluorobiphenyl	12.5	12.1	20	62	61	40-140	2.72	25
2,4,6-Tribromophenol	12.2	12.7	20	61	63	39-150	3.41	25
4-Terphenyl-d14	12.5	12.4	20	62	62	38-147	0	25



Quality Control Report

Client: Langan
Date Prepared: 2/24/17
Date Analyzed: 2/24/17 - 2/27/17
Instrument: ICP-MS2, ICP-MS3
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134675
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L
Sample ID: MB/LCS-134675
1702C46-004DMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	52.3	0.50	50	-	105	85-115
Arsenic	ND	53.0	0.50	50	-	106	85-115
Barium	ND	544	5.0	500	-	109	85-115
Beryllium	ND	53.5	0.50	50	-	107	85-115
Cadmium	ND	52.0	0.25	50	-	104	85-115
Chromium	ND	52.2	0.50	50	-	104	85-115
Cobalt	ND	53.3	0.50	50	-	107	85-115
Copper	ND	51.1	2.0	50	-	102	85-115
Lead	ND	52.5	0.50	50	-	105	85-115
Mercury	ND	1.29	0.050	1.25	-	103	85-115
Molybdenum	ND	53.7	0.50	50	-	107	85-115
Nickel	ND	51.7	0.50	50	-	103	85-115
Selenium	ND	46.8	0.50	50	-	94	85-115
Silver	ND	52.6	0.19	50	-	105	85-115
Thallium	ND	50.7	0.50	50	-	101	85-115
Vanadium	ND	51.6	0.50	50	-	103	85-115
Zinc	ND	514	15	500	-	103	85-115
Surrogate Recovery							
Terbium	761.5	811		750	102	108	70-130

(Cont.)



Quality Control Report

Client: Langan
Date Prepared: 2/24/17
Date Analyzed: 2/24/17 - 2/27/17
Instrument: ICP-MS2, ICP-MS3
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134675
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L
Sample ID: MB/LCS-134675
1702C46-004DMS/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	48.9	49.1	50	0.6864	96	97	75-125	0.490	20
Arsenic	53.6	52.9	50	ND	107	106	75-125	1.45	20
Barium	509	511	500	ND	102	102	75-125	0	20
Beryllium	48.0	48.8	50	ND	96	98	75-125	1.57	20
Cadmium	68.3	67.7	50	15.48	106	104	75-125	0.941	20
Chromium	54.6	53.6	50	4.483	100	98	75-125	2.00	20
Cobalt	43.2	43.6	50	ND	86	87	75-125	0.783	20
Copper	218	212	50	156.3	122	112	75-125	2.42	20
Lead	50.5	50.5	50	1.090	99	99	75-125	0	20
Mercury	1.34	1.35	1.25	ND	105	107	75-125	1.12	20
Molybdenum	120,000	119,000	50	110,000	18800,F1	15200,F1	75-125	1.51	20
Nickel	57.3	56.2	50	4.756	105	103	75-125	1.88	20
Selenium	52.5	52.0	50	ND	105	104	75-125	0.899	20
Silver	44.9	45.2	50	ND	90	90	75-125	0	20
Thallium	44.6	44.7	50	ND	89	89	75-125	0	20
Vanadium	50.8	50.1	50	ND	101	100	75-125	1.31	20
Zinc	549	540	500	27.88	104	102	75-125	1.67	20

Surrogate Recovery

Terbium	717	731	750		96	97	70-130	1.85	20
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Analyte	DLT Result	DLTRef Val	%D	%D Limit
Antimony	ND<2.5	0.6864	-	-
Arsenic	ND<2.5	ND	-	-
Barium	ND<25	ND	-	-
Beryllium	ND<2.5	ND	-	-
Cadmium	15.6	15.48	0.775	20
Chromium	3.76	4.483	16.1	-
Cobalt	ND<2.5	ND	-	-
Copper	157	156.3	0.448	20
Lead	ND<2.5	1.090	-	-
Mercury	ND<0.25	ND	-	-
Molybdenum	115,000	110,000	4.55	20
Nickel	4.66	4.756	2.02	-
Selenium	ND<2.5	ND	-	-

(Cont.)



Quality Control Report

Client: Langan
Date Prepared: 2/24/17
Date Analyzed: 2/24/17 - 2/27/17
Instrument: ICP-MS2, ICP-MS3
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134675
Extraction Method: E200.8
Analytical Method: E200.8
Unit: µg/L
Sample ID: MB/LCS-134675
1702C46-004DMS/MSD

QC Summary Report for Metals

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Silver	ND<0.95	ND	-	-
Thallium	ND<2.5	ND	-	-
Vanadium	ND<2.5	ND	-	-
Zinc	ND<75	27.88	-	-

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



Quality Control Report

Client: Langan
Date Prepared: 2/23/17
Date Analyzed: 2/23/17
Instrument: GC3
Matrix: Water
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A52
BatchID: 134592
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-134592
1702B71-001BMS/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	61.8	40	60	-	103	85-112
MTBE	ND	10.0	5.0	10	-	101	74-127
Benzene	ND	9.87	0.50	10	-	99	81-124
Toluene	ND	10.1	0.50	10	-	101	79-131
Ethylbenzene	ND	10.4	0.50	10	-	104	86-127
Xylenes	ND	32.5	1.5	30	-	108	87-133
Surrogate Recovery							
aaa-TFT	10.08	9.95		10	101	100	87-117

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	54.2	52.2	60	ND	90	87	85-113	3.88	20
MTBE	9.58	9.50	10	ND	96	95	73-120	0.851	20
Benzene	9.60	9.29	10	ND	96	93	84-121	3.34	20
Toluene	9.89	9.54	10	ND	99	95	86-125	3.55	20
Ethylbenzene	10.2	9.76	10	ND	102	98	93-124	4.53	20
Xylenes	31.8	30.4	30	ND	106	101	93-130	4.63	20
Surrogate Recovery									
aaa-TFT	10.0	9.90	10		100	99	89-115	1.01	20



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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 1702A52

ClientCode: TRSJ

☐ WaterTrax☐ WriteOn☐ EDF☐ Excel☒ EQulS☒ Email☐ HardCopy☐ ThirdParty☐ J-flag**Report to:**

Peter Cusack
Langan
1 Almaden Blvd, Suite 590
San Jose, CA 95113
(408) 551-6700 FAX:

Email: pcusack@langan.com
cc/3rd Party: cmadsen@langan.com;
PO:
ProjectNo: 770638201; 199 Bassett Street

Bill to:

Accounts Payable
Langan
555 Montgomery St., Suite 1300
San Francisco, CA 94111
Langan_InvoiceCapture@concursolutio

Requested TAT: 5 days;**Date Received: 02/21/2017****Date Logged: 02/21/2017**

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
1702A52-001	LSB-6-GW	Water	2/20/2017 11:55	☐	D	B	C	E	A	A						

Test Legend:

1	8082_PCB_W	2	8260B_W	3	8270_W	4	CAM17MS_TTLC_W
5	G-MBTX_W	6	TPH(DMO)_W	7		8	
9		10		11		12	

Prepared by: Briana Cutino

The following SampleID: 001A contains testgroup Multi Range_W.

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.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: LANGAN
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Project: 770638201; 199 Bassett Street

Comments:

Work Order: 1702A52
QC Level: LEVEL 2
Date Logged: 2/21/2017

☐ 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
1702A52-001A	LSB-6-GW	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	☐	2/20/2017 11:55	5 days	Present	☐	
1702A52-001B	LSB-6-GW	Water	SW8260B (VOCs)	2	VOA w/ HCL	☐	2/20/2017 11:55	5 days	Present	☐	
1702A52-001C	LSB-6-GW	Water	SW8270C (SVOCs)	1	1LA	☐	2/20/2017 11:55	5 days	Present	☐	
1702A52-001D	LSB-6-GW	Water	SW8082 (PCBs Only)	2	aVOA	☐	2/20/2017 11:55	5 days	Present	☐	
1702A52-001E	LSB-6-GW	Water	E200.8 (CAM 17)	1	250mL HDPE w/ HNO3	☐	2/20/2017 11:55	5 days	Present	☐	

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

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



Sample Receipt Checklist

Client Name: **Langan**
Project Name: **770638201; 199 Bassett Street**
WorkOrder No: **1702A52** Matrix: Water
Carrier: David Shaver (MAI Courier)

Date and Time Received: **2/21/2017 15:40**
Date Logged: **2/21/2017**
Received by: **Briana Cutino**
Logged by: **Briana Cutino**

Chain of Custody (COC) Information

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

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☒
Shipping container/cooler in good condition?	Yes ☒	No ☐	
Samples in proper containers/bottles?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☒	No ☐	NA ☐
Sample/Temp Blank temperature	Temp: 2.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☒	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☒	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☒	No ☐	NA ☐
Samples Received on Ice?	Yes ☒	No ☐	

(Ice Type: WET ICE)

UCMR3 Samples:

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

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1702A53

Report Created for: Langan

1 Almaden Blvd, Suite 590
San Jose, CA 95113

Project Contact: Peter Cusack

Project P.O.:

Project Name: 770638201; 199 Bassett Street

Project Received: 02/21/2017

Analytical Report reviewed & approved for release on 02/28/2017 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: Langan
Project: 770638201; 199 Bassett Street
WorkOrder: 1702A53

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: Langan
Project: 770638201; 199 Bassett Street
WorkOrder: 1702A53

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.
d1	weakly modified or unmodified gasoline is significant
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
d9	no recognizable pattern
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validates the prep batch.
F2	LCS/LCSD recovery and/or RPD is out of acceptance criteria.



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	GC22	134485

Analytes	Result	RL	DE	Date Analyzed
Aldrin	ND	0.050	50	02/22/2017 14:07
a-BHC	ND	0.050	50	02/22/2017 14:07
b-BHC	ND	0.050	50	02/22/2017 14:07
d-BHC	ND	0.050	50	02/22/2017 14:07
g-BHC	ND	0.050	50	02/22/2017 14:07
Chlordane (Technical)	ND	1.2	50	02/22/2017 14:07
a-Chlordane	ND	0.050	50	02/22/2017 14:07
g-Chlordane	ND	0.050	50	02/22/2017 14:07
p,p-DDD	ND	0.050	50	02/22/2017 14:07
p,p-DDE	ND	0.050	50	02/22/2017 14:07
p,p-DDT	ND	0.050	50	02/22/2017 14:07
Dieldrin	ND	0.050	50	02/22/2017 14:07
Endosulfan I	ND	0.050	50	02/22/2017 14:07
Endosulfan II	ND	0.050	50	02/22/2017 14:07
Endosulfan sulfate	ND	0.050	50	02/22/2017 14:07
Endrin	ND	0.050	50	02/22/2017 14:07
Endrin aldehyde	ND	0.050	50	02/22/2017 14:07
Endrin ketone	ND	0.050	50	02/22/2017 14:07
Heptachlor	ND	0.050	50	02/22/2017 14:07
Heptachlor epoxide	ND	0.050	50	02/22/2017 14:07
Hexachlorobenzene	ND	0.50	50	02/22/2017 14:07
Hexachlorocyclopentadiene	ND	1.0	50	02/22/2017 14:07
Methoxychlor	ND	0.050	50	02/22/2017 14:07
Toxaphene	ND	2.5	50	02/22/2017 14:07
Aroclor1016	ND	2.5	50	02/22/2017 14:07
Aroclor1221	ND	2.5	50	02/22/2017 14:07
Aroclor1232	ND	2.5	50	02/22/2017 14:07
Aroclor1242	ND	2.5	50	02/22/2017 14:07
Aroclor1248	ND	2.5	50	02/22/2017 14:07
Aroclor1254	ND	2.5	50	02/22/2017 14:07
Aroclor1260	ND	2.5	50	02/22/2017 14:07
PCBs, total	ND	2.5	50	02/22/2017 14:07

Surrogates	REC (%)	Limits	
Decachlorobiphenyl	124	70-130	02/22/2017 14:07

Analyst(s): CK

Analytical Comments: a3

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg

Organochlorine Pesticides + PCBs

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-1.5	1702A53-028A	Soil	02/20/2017 11:55	GC22	134485

Analytes	Result	RL	DE	Date Analyzed
Aldrin	ND	0.0010	1	02/22/2017 14:41
a-BHC	ND	0.0010	1	02/22/2017 14:41
b-BHC	ND	0.0010	1	02/22/2017 14:41
d-BHC	ND	0.0010	1	02/22/2017 14:41
g-BHC	ND	0.0010	1	02/22/2017 14:41
Chlordane (Technical)	ND	0.025	1	02/22/2017 14:41
a-Chlordane	ND	0.0010	1	02/22/2017 14:41
g-Chlordane	ND	0.0010	1	02/22/2017 14:41
p,p-DDD	ND	0.0010	1	02/22/2017 14:41
p,p-DDE	ND	0.0010	1	02/22/2017 14:41
p,p-DDT	ND	0.0010	1	02/22/2017 14:41
Dieldrin	ND	0.0010	1	02/22/2017 14:41
Endosulfan I	ND	0.0010	1	02/22/2017 14:41
Endosulfan II	ND	0.0010	1	02/22/2017 14:41
Endosulfan sulfate	ND	0.0010	1	02/22/2017 14:41
Endrin	ND	0.0010	1	02/22/2017 14:41
Endrin aldehyde	ND	0.0010	1	02/22/2017 14:41
Endrin ketone	ND	0.0010	1	02/22/2017 14:41
Heptachlor	ND	0.0010	1	02/22/2017 14:41
Heptachlor epoxide	ND	0.0010	1	02/22/2017 14:41
Hexachlorobenzene	ND	0.010	1	02/22/2017 14:41
Hexachlorocyclopentadiene	ND	0.020	1	02/22/2017 14:41
Methoxychlor	ND	0.0010	1	02/22/2017 14:41
Toxaphene	ND	0.050	1	02/22/2017 14:41
Aroclor1016	ND	0.050	1	02/22/2017 14:41
Aroclor1221	ND	0.050	1	02/22/2017 14:41
Aroclor1232	ND	0.050	1	02/22/2017 14:41
Aroclor1242	ND	0.050	1	02/22/2017 14:41
Aroclor1248	ND	0.050	1	02/22/2017 14:41
Aroclor1254	ND	0.050	1	02/22/2017 14:41
Aroclor1260	ND	0.050	1	02/22/2017 14:41
PCBs, total	ND	0.050	1	02/22/2017 14:41

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	110	70-130	02/22/2017 14:41

Analyst(s): CK



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-1.5	1702A53-001A	Soil	02/20/2017 08:53	GC22	134485
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Aldrin	ND		0.020	20	02/22/2017 15:49
a-BHC	ND		0.020	20	02/22/2017 15:49
b-BHC	ND		0.020	20	02/22/2017 15:49
d-BHC	ND		0.020	20	02/22/2017 15:49
g-BHC	ND		0.020	20	02/22/2017 15:49
Chlordane (Technical)	ND		0.50	20	02/22/2017 15:49
a-Chlordane	ND		0.020	20	02/22/2017 15:49
g-Chlordane	ND		0.020	20	02/22/2017 15:49
p,p-DDD	ND		0.020	20	02/22/2017 15:49
p,p-DDE	ND		0.020	20	02/22/2017 15:49
p,p-DDT	ND		0.020	20	02/22/2017 15:49
Dieldrin	ND		0.020	20	02/22/2017 15:49
Endosulfan I	ND		0.020	20	02/22/2017 15:49
Endosulfan II	ND		0.020	20	02/22/2017 15:49
Endosulfan sulfate	ND		0.020	20	02/22/2017 15:49
Endrin	ND		0.020	20	02/22/2017 15:49
Endrin aldehyde	ND		0.020	20	02/22/2017 15:49
Endrin ketone	ND		0.020	20	02/22/2017 15:49
Heptachlor	ND		0.020	20	02/22/2017 15:49
Heptachlor epoxide	ND		0.020	20	02/22/2017 15:49
Hexachlorobenzene	ND		0.20	20	02/22/2017 15:49
Hexachlorocyclopentadiene	ND		0.40	20	02/22/2017 15:49
Methoxychlor	ND		0.020	20	02/22/2017 15:49
Toxaphene	ND		1.0	20	02/22/2017 15:49
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	113		70-130		02/22/2017 15:49
<u>Analyst(s):</u> CK		<u>Analytical Comments:</u> a3			

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-1.5	1702A53-018A	Soil	02/20/2017 08:55	GC22	134485
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Aldrin	ND		0.020	20	02/22/2017 19:35
a-BHC	ND		0.020	20	02/22/2017 19:35
b-BHC	ND		0.020	20	02/22/2017 19:35
d-BHC	ND		0.020	20	02/22/2017 19:35
g-BHC	ND		0.020	20	02/22/2017 19:35
Chlordane (Technical)	ND		0.50	20	02/22/2017 19:35
a-Chlordane	ND		0.020	20	02/22/2017 19:35
g-Chlordane	ND		0.020	20	02/22/2017 19:35
p,p-DDD	ND		0.020	20	02/22/2017 19:35
p,p-DDE	ND		0.020	20	02/22/2017 19:35
p,p-DDT	ND		0.020	20	02/22/2017 19:35
Dieldrin	ND		0.020	20	02/22/2017 19:35
Endosulfan I	ND		0.020	20	02/22/2017 19:35
Endosulfan II	ND		0.020	20	02/22/2017 19:35
Endosulfan sulfate	ND		0.020	20	02/22/2017 19:35
Endrin	ND		0.020	20	02/22/2017 19:35
Endrin aldehyde	ND		0.020	20	02/22/2017 19:35
Endrin ketone	ND		0.020	20	02/22/2017 19:35
Heptachlor	ND		0.020	20	02/22/2017 19:35
Heptachlor epoxide	ND		0.020	20	02/22/2017 19:35
Hexachlorobenzene	ND		0.20	20	02/22/2017 19:35
Hexachlorocyclopentadiene	ND		0.40	20	02/22/2017 19:35
Methoxychlor	ND		0.020	20	02/22/2017 19:35
Toxaphene	ND		1.0	20	02/22/2017 19:35
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	123		70-130		02/22/2017 19:35
<u>Analyst(s):</u> CK		<u>Analytical Comments:</u> a3			

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-1.5	1702A53-035A	Soil	02/20/2017 10:27	GC22	134485
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0010	1	02/22/2017 20:43
a-BHC	ND		0.0010	1	02/22/2017 20:43
b-BHC	ND		0.0010	1	02/22/2017 20:43
d-BHC	ND		0.0010	1	02/22/2017 20:43
g-BHC	ND		0.0010	1	02/22/2017 20:43
Chlordane (Technical)	ND		0.025	1	02/22/2017 20:43
a-Chlordane	ND		0.0010	1	02/22/2017 20:43
g-Chlordane	ND		0.0010	1	02/22/2017 20:43
p,p-DDD	ND		0.0010	1	02/22/2017 20:43
p,p-DDE	ND		0.0010	1	02/22/2017 20:43
p,p-DDT	ND		0.0010	1	02/22/2017 20:43
Dieldrin	ND		0.0010	1	02/22/2017 20:43
Endosulfan I	ND		0.0010	1	02/22/2017 20:43
Endosulfan II	ND		0.0010	1	02/22/2017 20:43
Endosulfan sulfate	ND		0.0010	1	02/22/2017 20:43
Endrin	ND		0.0010	1	02/22/2017 20:43
Endrin aldehyde	ND		0.0010	1	02/22/2017 20:43
Endrin ketone	ND		0.0010	1	02/22/2017 20:43
Heptachlor	ND		0.0010	1	02/22/2017 20:43
Heptachlor epoxide	ND		0.0010	1	02/22/2017 20:43
Hexachlorobenzene	ND		0.010	1	02/22/2017 20:43
Hexachlorocyclopentadiene	ND		0.020	1	02/22/2017 20:43
Methoxychlor	ND		0.0010	1	02/22/2017 20:43
Toxaphene	ND		0.050	1	02/22/2017 20:43
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	116		70-130		02/22/2017 20:43

Analyst(s): CK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8081A
Unit: mg/kg

Organochlorine Pesticides

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-20	1702A53-041A	Soil	02/20/2017 10:45	GC22	134485
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Aldrin	ND		0.0010	1	02/22/2017 20:09
a-BHC	ND		0.0010	1	02/22/2017 20:09
b-BHC	ND		0.0010	1	02/22/2017 20:09
d-BHC	ND		0.0010	1	02/22/2017 20:09
g-BHC	ND		0.0010	1	02/22/2017 20:09
Chlordane (Technical)	ND		0.025	1	02/22/2017 20:09
a-Chlordane	ND		0.0010	1	02/22/2017 20:09
g-Chlordane	ND		0.0010	1	02/22/2017 20:09
p,p-DDD	ND		0.0010	1	02/22/2017 20:09
p,p-DDE	ND		0.0010	1	02/22/2017 20:09
p,p-DDT	ND		0.0010	1	02/22/2017 20:09
Dieldrin	ND		0.0010	1	02/22/2017 20:09
Endosulfan I	ND		0.0010	1	02/22/2017 20:09
Endosulfan II	ND		0.0010	1	02/22/2017 20:09
Endosulfan sulfate	ND		0.0010	1	02/22/2017 20:09
Endrin	ND		0.0010	1	02/22/2017 20:09
Endrin aldehyde	ND		0.0010	1	02/22/2017 20:09
Endrin ketone	ND		0.0010	1	02/22/2017 20:09
Heptachlor	ND		0.0010	1	02/22/2017 20:09
Heptachlor epoxide	ND		0.0010	1	02/22/2017 20:09
Hexachlorobenzene	ND		0.010	1	02/22/2017 20:09
Hexachlorocyclopentadiene	ND		0.020	1	02/22/2017 20:09
Methoxychlor	ND		0.0010	1	02/22/2017 20:09
Toxaphene	ND		0.050	1	02/22/2017 20:09
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	117		70-130		02/22/2017 20:09
Analyst(s): CK					



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8082
Unit: mg/kg

Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-3	1702A53-019A	Soil	02/20/2017 09:05	GC23	134461
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Aroclor1016	ND		0.050	1	02/21/2017 23:32
Aroclor1221	ND		0.050	1	02/21/2017 23:32
Aroclor1232	ND		0.050	1	02/21/2017 23:32
Aroclor1242	ND		0.050	1	02/21/2017 23:32
Aroclor1248	ND		0.050	1	02/21/2017 23:32
Aroclor1254	ND		0.050	1	02/21/2017 23:32
Aroclor1260	ND		0.050	1	02/21/2017 23:32
PCBs, total	ND		0.050	1	02/21/2017 23:32
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Decachlorobiphenyl	93		70-130		02/21/2017 23:32
<u>Analyst(s):</u> SS					



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-5	1702A53-002A	Soil	02/20/2017 08:59	GC10	134454
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	02/22/2017 16:47
tert-Amyl methyl ether (TAME)	ND		0.0050	1	02/22/2017 16:47
Benzene	ND		0.0050	1	02/22/2017 16:47
Bromobenzene	ND		0.0050	1	02/22/2017 16:47
Bromochloromethane	ND		0.0050	1	02/22/2017 16:47
Bromodichloromethane	ND		0.0050	1	02/22/2017 16:47
Bromoform	ND		0.0050	1	02/22/2017 16:47
Bromomethane	ND		0.0050	1	02/22/2017 16:47
2-Butanone (MEK)	ND		0.020	1	02/22/2017 16:47
t-Butyl alcohol (TBA)	ND		0.050	1	02/22/2017 16:47
n-Butyl benzene	ND		0.0050	1	02/22/2017 16:47
sec-Butyl benzene	ND		0.0050	1	02/22/2017 16:47
tert-Butyl benzene	ND		0.0050	1	02/22/2017 16:47
Carbon Disulfide	ND		0.0050	1	02/22/2017 16:47
Carbon Tetrachloride	ND		0.0050	1	02/22/2017 16:47
Chlorobenzene	ND		0.0050	1	02/22/2017 16:47
Chloroethane	ND		0.0050	1	02/22/2017 16:47
Chloroform	ND		0.0050	1	02/22/2017 16:47
Chloromethane	ND		0.0050	1	02/22/2017 16:47
2-Chlorotoluene	ND		0.0050	1	02/22/2017 16:47
4-Chlorotoluene	ND		0.0050	1	02/22/2017 16:47
Dibromochloromethane	ND		0.0050	1	02/22/2017 16:47
1,2-Dibromo-3-chloropropane	ND		0.0040	1	02/22/2017 16:47
1,2-Dibromoethane (EDB)	ND		0.0040	1	02/22/2017 16:47
Dibromomethane	ND		0.0050	1	02/22/2017 16:47
1,2-Dichlorobenzene	ND		0.0050	1	02/22/2017 16:47
1,3-Dichlorobenzene	ND		0.0050	1	02/22/2017 16:47
1,4-Dichlorobenzene	ND		0.0050	1	02/22/2017 16:47
Dichlorodifluoromethane	ND		0.0050	1	02/22/2017 16:47
1,1-Dichloroethane	ND		0.0050	1	02/22/2017 16:47
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	02/22/2017 16:47
1,1-Dichloroethene	ND		0.0050	1	02/22/2017 16:47
cis-1,2-Dichloroethene	ND		0.0050	1	02/22/2017 16:47
trans-1,2-Dichloroethene	ND		0.0050	1	02/22/2017 16:47
1,2-Dichloropropane	ND		0.0050	1	02/22/2017 16:47
1,3-Dichloropropane	ND		0.0050	1	02/22/2017 16:47
2,2-Dichloropropane	ND		0.0050	1	02/22/2017 16:47

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-5	1702A53-002A	Soil	02/20/2017 08:59	GC10	134454
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	02/22/2017 16:47
cis-1,3-Dichloropropene	ND		0.0050	1	02/22/2017 16:47
trans-1,3-Dichloropropene	ND		0.0050	1	02/22/2017 16:47
Diisopropyl ether (DIPE)	ND		0.0050	1	02/22/2017 16:47
Ethylbenzene	ND		0.0050	1	02/22/2017 16:47
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/22/2017 16:47
Freon 113	ND		0.0050	1	02/22/2017 16:47
Hexachlorobutadiene	ND		0.0050	1	02/22/2017 16:47
Hexachloroethane	ND		0.0050	1	02/22/2017 16:47
2-Hexanone	ND		0.0050	1	02/22/2017 16:47
Isopropylbenzene	ND		0.0050	1	02/22/2017 16:47
4-Isopropyl toluene	ND		0.0050	1	02/22/2017 16:47
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/22/2017 16:47
Methylene chloride	ND		0.0050	1	02/22/2017 16:47
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/22/2017 16:47
Naphthalene	ND		0.0050	1	02/22/2017 16:47
n-Propyl benzene	ND		0.0050	1	02/22/2017 16:47
Styrene	ND		0.0050	1	02/22/2017 16:47
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/22/2017 16:47
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/22/2017 16:47
Tetrachloroethene	ND		0.0050	1	02/22/2017 16:47
Toluene	ND		0.0050	1	02/22/2017 16:47
1,2,3-Trichlorobenzene	ND		0.0050	1	02/22/2017 16:47
1,2,4-Trichlorobenzene	ND		0.0050	1	02/22/2017 16:47
1,1,1-Trichloroethane	ND		0.0050	1	02/22/2017 16:47
1,1,2-Trichloroethane	ND		0.0050	1	02/22/2017 16:47
Trichloroethene	ND		0.0050	1	02/22/2017 16:47
Trichlorofluoromethane	ND		0.0050	1	02/22/2017 16:47
1,2,3-Trichloropropane	ND		0.0050	1	02/22/2017 16:47
1,2,4-Trimethylbenzene	ND		0.0050	1	02/22/2017 16:47
1,3,5-Trimethylbenzene	ND		0.0050	1	02/22/2017 16:47
Vinyl Chloride	ND		0.0050	1	02/22/2017 16:47
Xylenes, Total	ND		0.0050	1	02/22/2017 16:47

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-5	1702A53-002A	Soil	02/20/2017 08:59	GC10	134454

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	101	70-130		02/22/2017 16:47
Toluene-d8	106	70-130		02/22/2017 16:47
4-BFB	104	70-130		02/22/2017 16:47
Benzene-d6	88	60-140		02/22/2017 16:47
Ethylbenzene-d10	98	60-140		02/22/2017 16:47
1,2-DCB-d4	73	60-140		02/22/2017 16:47

Analyst(s): KF



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	GC10	134454
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	02/24/2017 05:03
tert-Amyl methyl ether (TAME)	ND		0.0050	1	02/24/2017 05:03
Benzene	ND		0.0050	1	02/24/2017 05:03
Bromobenzene	ND		0.0050	1	02/24/2017 05:03
Bromochloromethane	ND		0.0050	1	02/24/2017 05:03
Bromodichloromethane	ND		0.0050	1	02/24/2017 05:03
Bromoform	ND		0.0050	1	02/24/2017 05:03
Bromomethane	ND		0.0050	1	02/24/2017 05:03
2-Butanone (MEK)	ND		0.020	1	02/24/2017 05:03
t-Butyl alcohol (TBA)	ND		0.050	1	02/24/2017 05:03
n-Butyl benzene	ND		0.0050	1	02/24/2017 05:03
sec-Butyl benzene	ND		0.0050	1	02/24/2017 05:03
tert-Butyl benzene	ND		0.0050	1	02/24/2017 05:03
Carbon Disulfide	ND		0.0050	1	02/24/2017 05:03
Carbon Tetrachloride	ND		0.0050	1	02/24/2017 05:03
Chlorobenzene	ND		0.0050	1	02/24/2017 05:03
Chloroethane	ND		0.0050	1	02/24/2017 05:03
Chloroform	ND		0.0050	1	02/24/2017 05:03
Chloromethane	ND		0.0050	1	02/24/2017 05:03
2-Chlorotoluene	ND		0.0050	1	02/24/2017 05:03
4-Chlorotoluene	ND		0.0050	1	02/24/2017 05:03
Dibromochloromethane	ND		0.0050	1	02/24/2017 05:03
1,2-Dibromo-3-chloropropane	ND		0.0040	1	02/24/2017 05:03
1,2-Dibromoethane (EDB)	ND		0.0040	1	02/24/2017 05:03
Dibromomethane	ND		0.0050	1	02/24/2017 05:03
1,2-Dichlorobenzene	ND		0.0050	1	02/24/2017 05:03
1,3-Dichlorobenzene	ND		0.0050	1	02/24/2017 05:03
1,4-Dichlorobenzene	ND		0.0050	1	02/24/2017 05:03
Dichlorodifluoromethane	ND		0.0050	1	02/24/2017 05:03
1,1-Dichloroethane	ND		0.0050	1	02/24/2017 05:03
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	02/24/2017 05:03
1,1-Dichloroethene	ND		0.0050	1	02/24/2017 05:03
cis-1,2-Dichloroethene	ND		0.0050	1	02/24/2017 05:03
trans-1,2-Dichloroethene	ND		0.0050	1	02/24/2017 05:03
1,2-Dichloropropane	ND		0.0050	1	02/24/2017 05:03
1,3-Dichloropropane	ND		0.0050	1	02/24/2017 05:03
2,2-Dichloropropane	ND		0.0050	1	02/24/2017 05:03

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	GC10	134454
<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 05:03
cis-1,3-Dichloropropene	ND		0.0050	1	02/24/2017 05:03
trans-1,3-Dichloropropene	ND		0.0050	1	02/24/2017 05:03
Diisopropyl ether (DIPE)	ND		0.0050	1	02/24/2017 05:03
Ethylbenzene	ND		0.0050	1	02/24/2017 05:03
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/24/2017 05:03
Freon 113	ND		0.0050	1	02/24/2017 05:03
Hexachlorobutadiene	ND		0.0050	1	02/24/2017 05:03
Hexachloroethane	ND		0.0050	1	02/24/2017 05:03
2-Hexanone	ND		0.0050	1	02/24/2017 05:03
Isopropylbenzene	ND		0.0050	1	02/24/2017 05:03
4-Isopropyl toluene	ND		0.0050	1	02/24/2017 05:03
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/24/2017 05:03
Methylene chloride	ND		0.0050	1	02/24/2017 05:03
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/24/2017 05:03
Naphthalene	ND		0.0050	1	02/24/2017 05:03
n-Propyl benzene	ND		0.0050	1	02/24/2017 05:03
Styrene	ND		0.0050	1	02/24/2017 05:03
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/24/2017 05:03
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/24/2017 05:03
Tetrachloroethene	ND		0.0050	1	02/24/2017 05:03
Toluene	ND		0.0050	1	02/24/2017 05:03
1,2,3-Trichlorobenzene	ND		0.0050	1	02/24/2017 05:03
1,2,4-Trichlorobenzene	ND		0.0050	1	02/24/2017 05:03
1,1,1-Trichloroethane	ND		0.0050	1	02/24/2017 05:03
1,1,2-Trichloroethane	ND		0.0050	1	02/24/2017 05:03
Trichloroethene	ND		0.0050	1	02/24/2017 05:03
Trichlorofluoromethane	ND		0.0050	1	02/24/2017 05:03
1,2,3-Trichloropropane	ND		0.0050	1	02/24/2017 05:03
1,2,4-Trimethylbenzene	ND		0.0050	1	02/24/2017 05:03
1,3,5-Trimethylbenzene	ND		0.0050	1	02/24/2017 05:03
Vinyl Chloride	ND		0.0050	1	02/24/2017 05:03
Xylenes, Total	ND		0.0050	1	02/24/2017 05:03

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	GC10	134454

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	102	70-130		02/24/2017 05:03
Toluene-d8	106	70-130		02/24/2017 05:03
4-BFB	109	70-130		02/24/2017 05:03
Benzene-d6	82	60-140		02/24/2017 05:03
Ethylbenzene-d10	83	60-140		02/24/2017 05:03
1,2-DCB-d4	69	60-140		02/24/2017 05:03

Analyst(s): AK



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-3	1702A53-019A	Soil	02/20/2017 09:05	GC10	134454
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	02/23/2017 04:15
tert-Amyl methyl ether (TAME)	ND		0.0050	1	02/23/2017 04:15
Benzene	ND		0.0050	1	02/23/2017 04:15
Bromobenzene	ND		0.0050	1	02/23/2017 04:15
Bromochloromethane	ND		0.0050	1	02/23/2017 04:15
Bromodichloromethane	ND		0.0050	1	02/23/2017 04:15
Bromoform	ND		0.0050	1	02/23/2017 04:15
Bromomethane	ND		0.0050	1	02/23/2017 04:15
2-Butanone (MEK)	ND		0.020	1	02/23/2017 04:15
t-Butyl alcohol (TBA)	ND		0.050	1	02/23/2017 04:15
n-Butyl benzene	ND		0.0050	1	02/23/2017 04:15
sec-Butyl benzene	ND		0.0050	1	02/23/2017 04:15
tert-Butyl benzene	ND		0.0050	1	02/23/2017 04:15
Carbon Disulfide	ND		0.0050	1	02/23/2017 04:15
Carbon Tetrachloride	ND		0.0050	1	02/23/2017 04:15
Chlorobenzene	ND		0.0050	1	02/23/2017 04:15
Chloroethane	ND		0.0050	1	02/23/2017 04:15
Chloroform	ND		0.0050	1	02/23/2017 04:15
Chloromethane	ND		0.0050	1	02/23/2017 04:15
2-Chlorotoluene	ND		0.0050	1	02/23/2017 04:15
4-Chlorotoluene	ND		0.0050	1	02/23/2017 04:15
Dibromochloromethane	ND		0.0050	1	02/23/2017 04:15
1,2-Dibromo-3-chloropropane	ND		0.0040	1	02/23/2017 04:15
1,2-Dibromoethane (EDB)	ND		0.0040	1	02/23/2017 04:15
Dibromomethane	ND		0.0050	1	02/23/2017 04:15
1,2-Dichlorobenzene	ND		0.0050	1	02/23/2017 04:15
1,3-Dichlorobenzene	ND		0.0050	1	02/23/2017 04:15
1,4-Dichlorobenzene	ND		0.0050	1	02/23/2017 04:15
Dichlorodifluoromethane	ND		0.0050	1	02/23/2017 04:15
1,1-Dichloroethane	ND		0.0050	1	02/23/2017 04:15
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	02/23/2017 04:15
1,1-Dichloroethene	ND		0.0050	1	02/23/2017 04:15
cis-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 04:15
trans-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 04:15
1,2-Dichloropropane	ND		0.0050	1	02/23/2017 04:15
1,3-Dichloropropane	ND		0.0050	1	02/23/2017 04:15
2,2-Dichloropropane	ND		0.0050	1	02/23/2017 04:15

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-3	1702A53-019A	Soil	02/20/2017 09:05	GC10	134454
<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 04:15
cis-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 04:15
trans-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 04:15
Diisopropyl ether (DIPE)	ND		0.0050	1	02/23/2017 04:15
Ethylbenzene	ND		0.0050	1	02/23/2017 04:15
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/23/2017 04:15
Freon 113	ND		0.0050	1	02/23/2017 04:15
Hexachlorobutadiene	ND		0.0050	1	02/23/2017 04:15
Hexachloroethane	ND		0.0050	1	02/23/2017 04:15
2-Hexanone	ND		0.0050	1	02/23/2017 04:15
Isopropylbenzene	ND		0.0050	1	02/23/2017 04:15
4-Isopropyl toluene	ND		0.0050	1	02/23/2017 04:15
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/23/2017 04:15
Methylene chloride	ND		0.0050	1	02/23/2017 04:15
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/23/2017 04:15
Naphthalene	ND		0.0050	1	02/23/2017 04:15
n-Propyl benzene	ND		0.0050	1	02/23/2017 04:15
Styrene	ND		0.0050	1	02/23/2017 04:15
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 04:15
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 04:15
Tetrachloroethene	ND		0.0050	1	02/23/2017 04:15
Toluene	ND		0.0050	1	02/23/2017 04:15
1,2,3-Trichlorobenzene	ND		0.0050	1	02/23/2017 04:15
1,2,4-Trichlorobenzene	ND		0.0050	1	02/23/2017 04:15
1,1,1-Trichloroethane	ND		0.0050	1	02/23/2017 04:15
1,1,2-Trichloroethane	ND		0.0050	1	02/23/2017 04:15
Trichloroethene	ND		0.0050	1	02/23/2017 04:15
Trichlorofluoromethane	ND		0.0050	1	02/23/2017 04:15
1,2,3-Trichloropropane	ND		0.0050	1	02/23/2017 04:15
1,2,4-Trimethylbenzene	ND		0.0050	1	02/23/2017 04:15
1,3,5-Trimethylbenzene	ND		0.0050	1	02/23/2017 04:15
Vinyl Chloride	ND		0.0050	1	02/23/2017 04:15
Xylenes, Total	ND		0.0050	1	02/23/2017 04:15

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-3	1702A53-019A	Soil	02/20/2017 09:05	GC10	134454

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	100	70-130		02/23/2017 04:15
Toluene-d8	107	70-130		02/23/2017 04:15
4-BFB	103	70-130		02/23/2017 04:15
Benzene-d6	92	60-140		02/23/2017 04:15
Ethylbenzene-d10	108	60-140		02/23/2017 04:15
1,2-DCB-d4	81	60-140		02/23/2017 04:15

Analyst(s): KF



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-25	1702A53-025A	Soil	02/20/2017 09:48	GC10	134454
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	02/23/2017 04:56
tert-Amyl methyl ether (TAME)	ND		0.0050	1	02/23/2017 04:56
Benzene	ND		0.0050	1	02/23/2017 04:56
Bromobenzene	ND		0.0050	1	02/23/2017 04:56
Bromochloromethane	ND		0.0050	1	02/23/2017 04:56
Bromodichloromethane	ND		0.0050	1	02/23/2017 04:56
Bromoform	ND		0.0050	1	02/23/2017 04:56
Bromomethane	ND		0.0050	1	02/23/2017 04:56
2-Butanone (MEK)	ND		0.020	1	02/23/2017 04:56
t-Butyl alcohol (TBA)	ND		0.050	1	02/23/2017 04:56
n-Butyl benzene	ND		0.0050	1	02/23/2017 04:56
sec-Butyl benzene	ND		0.0050	1	02/23/2017 04:56
tert-Butyl benzene	ND		0.0050	1	02/23/2017 04:56
Carbon Disulfide	ND		0.0050	1	02/23/2017 04:56
Carbon Tetrachloride	ND		0.0050	1	02/23/2017 04:56
Chlorobenzene	ND		0.0050	1	02/23/2017 04:56
Chloroethane	ND		0.0050	1	02/23/2017 04:56
Chloroform	ND		0.0050	1	02/23/2017 04:56
Chloromethane	ND		0.0050	1	02/23/2017 04:56
2-Chlorotoluene	ND		0.0050	1	02/23/2017 04:56
4-Chlorotoluene	ND		0.0050	1	02/23/2017 04:56
Dibromochloromethane	ND		0.0050	1	02/23/2017 04:56
1,2-Dibromo-3-chloropropane	ND		0.0040	1	02/23/2017 04:56
1,2-Dibromoethane (EDB)	ND		0.0040	1	02/23/2017 04:56
Dibromomethane	ND		0.0050	1	02/23/2017 04:56
1,2-Dichlorobenzene	ND		0.0050	1	02/23/2017 04:56
1,3-Dichlorobenzene	ND		0.0050	1	02/23/2017 04:56
1,4-Dichlorobenzene	ND		0.0050	1	02/23/2017 04:56
Dichlorodifluoromethane	ND		0.0050	1	02/23/2017 04:56
1,1-Dichloroethane	ND		0.0050	1	02/23/2017 04:56
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	02/23/2017 04:56
1,1-Dichloroethene	ND		0.0050	1	02/23/2017 04:56
cis-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 04:56
trans-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 04:56
1,2-Dichloropropane	ND		0.0050	1	02/23/2017 04:56
1,3-Dichloropropane	ND		0.0050	1	02/23/2017 04:56
2,2-Dichloropropane	ND		0.0050	1	02/23/2017 04:56

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-25	1702A53-025A	Soil	02/20/2017 09:48	GC10	134454
<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 04:56
cis-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 04:56
trans-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 04:56
Diisopropyl ether (DIPE)	ND		0.0050	1	02/23/2017 04:56
Ethylbenzene	ND		0.0050	1	02/23/2017 04:56
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/23/2017 04:56
Freon 113	ND		0.0050	1	02/23/2017 04:56
Hexachlorobutadiene	ND		0.0050	1	02/23/2017 04:56
Hexachloroethane	ND		0.0050	1	02/23/2017 04:56
2-Hexanone	ND		0.0050	1	02/23/2017 04:56
Isopropylbenzene	ND		0.0050	1	02/23/2017 04:56
4-Isopropyl toluene	ND		0.0050	1	02/23/2017 04:56
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/23/2017 04:56
Methylene chloride	ND		0.0050	1	02/23/2017 04:56
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/23/2017 04:56
Naphthalene	ND		0.0050	1	02/23/2017 04:56
n-Propyl benzene	ND		0.0050	1	02/23/2017 04:56
Styrene	ND		0.0050	1	02/23/2017 04:56
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 04:56
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 04:56
Tetrachloroethene	ND		0.0050	1	02/23/2017 04:56
Toluene	ND		0.0050	1	02/23/2017 04:56
1,2,3-Trichlorobenzene	ND		0.0050	1	02/23/2017 04:56
1,2,4-Trichlorobenzene	ND		0.0050	1	02/23/2017 04:56
1,1,1-Trichloroethane	ND		0.0050	1	02/23/2017 04:56
1,1,2-Trichloroethane	ND		0.0050	1	02/23/2017 04:56
Trichloroethene	ND		0.0050	1	02/23/2017 04:56
Trichlorofluoromethane	ND		0.0050	1	02/23/2017 04:56
1,2,3-Trichloropropane	ND		0.0050	1	02/23/2017 04:56
1,2,4-Trimethylbenzene	ND		0.0050	1	02/23/2017 04:56
1,3,5-Trimethylbenzene	ND		0.0050	1	02/23/2017 04:56
Vinyl Chloride	ND		0.0050	1	02/23/2017 04:56
Xylenes, Total	ND		0.0050	1	02/23/2017 04:56

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-25	1702A53-025A	Soil	02/20/2017 09:48	GC10	134454

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	99	70-130		02/23/2017 04:56
Toluene-d8	109	70-130		02/23/2017 04:56
4-BFB	103	70-130		02/23/2017 04:56
Benzene-d6	87	60-140		02/23/2017 04:56
Ethylbenzene-d10	101	60-140		02/23/2017 04:56
1,2-DCB-d4	78	60-140		02/23/2017 04:56

Analyst(s): KF



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-1.5	1702A53-028A	Soil	02/20/2017 11:55	GC16	134454
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	02/23/2017 00:13
tert-Amyl methyl ether (TAME)	ND		0.0050	1	02/23/2017 00:13
Benzene	ND		0.0050	1	02/23/2017 00:13
Bromobenzene	ND		0.0050	1	02/23/2017 00:13
Bromochloromethane	ND		0.0050	1	02/23/2017 00:13
Bromodichloromethane	ND		0.0050	1	02/23/2017 00:13
Bromoform	ND		0.0050	1	02/23/2017 00:13
Bromomethane	ND		0.0050	1	02/23/2017 00:13
2-Butanone (MEK)	ND		0.020	1	02/23/2017 00:13
t-Butyl alcohol (TBA)	ND		0.050	1	02/23/2017 00:13
n-Butyl benzene	ND		0.0050	1	02/23/2017 00:13
sec-Butyl benzene	ND		0.0050	1	02/23/2017 00:13
tert-Butyl benzene	ND		0.0050	1	02/23/2017 00:13
Carbon Disulfide	ND		0.0050	1	02/23/2017 00:13
Carbon Tetrachloride	ND		0.0050	1	02/23/2017 00:13
Chlorobenzene	ND		0.0050	1	02/23/2017 00:13
Chloroethane	ND		0.0050	1	02/23/2017 00:13
Chloroform	ND		0.0050	1	02/23/2017 00:13
Chloromethane	ND		0.0050	1	02/23/2017 00:13
2-Chlorotoluene	ND		0.0050	1	02/23/2017 00:13
4-Chlorotoluene	ND		0.0050	1	02/23/2017 00:13
Dibromochloromethane	ND		0.0050	1	02/23/2017 00:13
1,2-Dibromo-3-chloropropane	ND		0.0040	1	02/23/2017 00:13
1,2-Dibromoethane (EDB)	ND		0.0040	1	02/23/2017 00:13
Dibromomethane	ND		0.0050	1	02/23/2017 00:13
1,2-Dichlorobenzene	ND		0.0050	1	02/23/2017 00:13
1,3-Dichlorobenzene	ND		0.0050	1	02/23/2017 00:13
1,4-Dichlorobenzene	ND		0.0050	1	02/23/2017 00:13
Dichlorodifluoromethane	ND		0.0050	1	02/23/2017 00:13
1,1-Dichloroethane	ND		0.0050	1	02/23/2017 00:13
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	02/23/2017 00:13
1,1-Dichloroethene	ND		0.0050	1	02/23/2017 00:13
cis-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 00:13
trans-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 00:13
1,2-Dichloropropane	ND		0.0050	1	02/23/2017 00:13
1,3-Dichloropropane	ND		0.0050	1	02/23/2017 00:13
2,2-Dichloropropane	ND		0.0050	1	02/23/2017 00:13

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-1.5	1702A53-028A	Soil	02/20/2017 11:55	GC16	134454
<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 00:13
cis-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 00:13
trans-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 00:13
Diisopropyl ether (DIPE)	ND		0.0050	1	02/23/2017 00:13
Ethylbenzene	ND		0.0050	1	02/23/2017 00:13
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/23/2017 00:13
Freon 113	ND		0.0050	1	02/23/2017 00:13
Hexachlorobutadiene	ND		0.0050	1	02/23/2017 00:13
Hexachloroethane	ND		0.0050	1	02/23/2017 00:13
2-Hexanone	ND		0.0050	1	02/23/2017 00:13
Isopropylbenzene	ND		0.0050	1	02/23/2017 00:13
4-Isopropyl toluene	ND		0.0050	1	02/23/2017 00:13
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/23/2017 00:13
Methylene chloride	ND		0.0050	1	02/23/2017 00:13
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/23/2017 00:13
Naphthalene	ND		0.0050	1	02/23/2017 00:13
n-Propyl benzene	ND		0.0050	1	02/23/2017 00:13
Styrene	ND		0.0050	1	02/23/2017 00:13
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 00:13
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 00:13
Tetrachloroethene	ND		0.0050	1	02/23/2017 00:13
Toluene	ND		0.0050	1	02/23/2017 00:13
1,2,3-Trichlorobenzene	ND		0.0050	1	02/23/2017 00:13
1,2,4-Trichlorobenzene	ND		0.0050	1	02/23/2017 00:13
1,1,1-Trichloroethane	ND		0.0050	1	02/23/2017 00:13
1,1,2-Trichloroethane	ND		0.0050	1	02/23/2017 00:13
Trichloroethene	ND		0.0050	1	02/23/2017 00:13
Trichlorofluoromethane	ND		0.0050	1	02/23/2017 00:13
1,2,3-Trichloropropane	ND		0.0050	1	02/23/2017 00:13
1,2,4-Trimethylbenzene	ND		0.0050	1	02/23/2017 00:13
1,3,5-Trimethylbenzene	ND		0.0050	1	02/23/2017 00:13
Vinyl Chloride	ND		0.0050	1	02/23/2017 00:13
Xylenes, Total	ND		0.0050	1	02/23/2017 00:13

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-1.5	1702A53-028A	Soil	02/20/2017 11:55	GC16	134454

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	92	70-130		02/23/2017 00:13
Toluene-d8	102	70-130		02/23/2017 00:13
4-BFB	106	70-130		02/23/2017 00:13
Benzene-d6	98	60-140		02/23/2017 00:13
Ethylbenzene-d10	108	60-140		02/23/2017 00:13
1,2-DCB-d4	73	60-140		02/23/2017 00:13

Analyst(s): HK



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-10	1702A53-032A	Soil	02/20/2017 12:12	GC10	134454

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	02/23/2017 22:55
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/23/2017 22:55
Benzene	ND	0.0050	1	02/23/2017 22:55
Bromobenzene	ND	0.0050	1	02/23/2017 22:55
Bromochloromethane	ND	0.0050	1	02/23/2017 22:55
Bromodichloromethane	ND	0.0050	1	02/23/2017 22:55
Bromoform	ND	0.0050	1	02/23/2017 22:55
Bromomethane	ND	0.0050	1	02/23/2017 22:55
2-Butanone (MEK)	ND	0.020	1	02/23/2017 22:55
t-Butyl alcohol (TBA)	ND	0.050	1	02/23/2017 22:55
n-Butyl benzene	ND	0.0050	1	02/23/2017 22:55
sec-Butyl benzene	ND	0.0050	1	02/23/2017 22:55
tert-Butyl benzene	ND	0.0050	1	02/23/2017 22:55
Carbon Disulfide	ND	0.0050	1	02/23/2017 22:55
Carbon Tetrachloride	ND	0.0050	1	02/23/2017 22:55
Chlorobenzene	ND	0.0050	1	02/23/2017 22:55
Chloroethane	ND	0.0050	1	02/23/2017 22:55
Chloroform	ND	0.0050	1	02/23/2017 22:55
Chloromethane	ND	0.0050	1	02/23/2017 22:55
2-Chlorotoluene	ND	0.0050	1	02/23/2017 22:55
4-Chlorotoluene	ND	0.0050	1	02/23/2017 22:55
Dibromochloromethane	ND	0.0050	1	02/23/2017 22:55
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/23/2017 22:55
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/23/2017 22:55
Dibromomethane	ND	0.0050	1	02/23/2017 22:55
1,2-Dichlorobenzene	ND	0.0050	1	02/23/2017 22:55
1,3-Dichlorobenzene	ND	0.0050	1	02/23/2017 22:55
1,4-Dichlorobenzene	ND	0.0050	1	02/23/2017 22:55
Dichlorodifluoromethane	ND	0.0050	1	02/23/2017 22:55
1,1-Dichloroethane	ND	0.0050	1	02/23/2017 22:55
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/23/2017 22:55
1,1-Dichloroethene	ND	0.0050	1	02/23/2017 22:55
cis-1,2-Dichloroethene	ND	0.0050	1	02/23/2017 22:55
trans-1,2-Dichloroethene	ND	0.0050	1	02/23/2017 22:55
1,2-Dichloropropane	ND	0.0050	1	02/23/2017 22:55
1,3-Dichloropropane	ND	0.0050	1	02/23/2017 22:55
2,2-Dichloropropane	ND	0.0050	1	02/23/2017 22:55

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-10	1702A53-032A	Soil	02/20/2017 12:12	GC10	134454
<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 22:55
cis-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 22:55
trans-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 22:55
Diisopropyl ether (DIPE)	ND		0.0050	1	02/23/2017 22:55
Ethylbenzene	ND		0.0050	1	02/23/2017 22:55
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/23/2017 22:55
Freon 113	ND		0.0050	1	02/23/2017 22:55
Hexachlorobutadiene	ND		0.0050	1	02/23/2017 22:55
Hexachloroethane	ND		0.0050	1	02/23/2017 22:55
2-Hexanone	ND		0.0050	1	02/23/2017 22:55
Isopropylbenzene	ND		0.0050	1	02/23/2017 22:55
4-Isopropyl toluene	ND		0.0050	1	02/23/2017 22:55
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/23/2017 22:55
Methylene chloride	ND		0.0050	1	02/23/2017 22:55
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/23/2017 22:55
Naphthalene	ND		0.0050	1	02/23/2017 22:55
n-Propyl benzene	ND		0.0050	1	02/23/2017 22:55
Styrene	ND		0.0050	1	02/23/2017 22:55
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 22:55
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 22:55
Tetrachloroethene	ND		0.0050	1	02/23/2017 22:55
Toluene	ND		0.0050	1	02/23/2017 22:55
1,2,3-Trichlorobenzene	ND		0.0050	1	02/23/2017 22:55
1,2,4-Trichlorobenzene	ND		0.0050	1	02/23/2017 22:55
1,1,1-Trichloroethane	ND		0.0050	1	02/23/2017 22:55
1,1,2-Trichloroethane	ND		0.0050	1	02/23/2017 22:55
Trichloroethene	ND		0.0050	1	02/23/2017 22:55
Trichlorofluoromethane	ND		0.0050	1	02/23/2017 22:55
1,2,3-Trichloropropane	ND		0.0050	1	02/23/2017 22:55
1,2,4-Trimethylbenzene	ND		0.0050	1	02/23/2017 22:55
1,3,5-Trimethylbenzene	ND		0.0050	1	02/23/2017 22:55
Vinyl Chloride	ND		0.0050	1	02/23/2017 22:55
Xylenes, Total	ND		0.0050	1	02/23/2017 22:55

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-10	1702A53-032A	Soil	02/20/2017 12:12	GC10	134454

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	99	70-130		02/23/2017 22:55
Toluene-d8	107	70-130		02/23/2017 22:55
4-BFB	104	70-130		02/23/2017 22:55
Benzene-d6	97	60-140		02/23/2017 22:55
Ethylbenzene-d10	111	60-140		02/23/2017 22:55
1,2-DCB-d4	81	60-140		02/23/2017 22:55

Analyst(s): AK



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-15	1702A53-040A	Soil	02/20/2017 10:44	GC10	134454
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	02/23/2017 10:33
tert-Amyl methyl ether (TAME)	ND		0.0050	1	02/23/2017 10:33
Benzene	ND		0.0050	1	02/23/2017 10:33
Bromobenzene	ND		0.0050	1	02/23/2017 10:33
Bromochloromethane	ND		0.0050	1	02/23/2017 10:33
Bromodichloromethane	ND		0.0050	1	02/23/2017 10:33
Bromoform	ND		0.0050	1	02/23/2017 10:33
Bromomethane	ND		0.0050	1	02/23/2017 10:33
2-Butanone (MEK)	ND		0.020	1	02/23/2017 10:33
t-Butyl alcohol (TBA)	ND		0.050	1	02/23/2017 10:33
n-Butyl benzene	ND		0.0050	1	02/23/2017 10:33
sec-Butyl benzene	ND		0.0050	1	02/23/2017 10:33
tert-Butyl benzene	ND		0.0050	1	02/23/2017 10:33
Carbon Disulfide	ND		0.0050	1	02/23/2017 10:33
Carbon Tetrachloride	ND		0.0050	1	02/23/2017 10:33
Chlorobenzene	ND		0.0050	1	02/23/2017 10:33
Chloroethane	ND		0.0050	1	02/23/2017 10:33
Chloroform	ND		0.0050	1	02/23/2017 10:33
Chloromethane	ND		0.0050	1	02/23/2017 10:33
2-Chlorotoluene	ND		0.0050	1	02/23/2017 10:33
4-Chlorotoluene	ND		0.0050	1	02/23/2017 10:33
Dibromochloromethane	ND		0.0050	1	02/23/2017 10:33
1,2-Dibromo-3-chloropropane	ND		0.0040	1	02/23/2017 10:33
1,2-Dibromoethane (EDB)	ND		0.0040	1	02/23/2017 10:33
Dibromomethane	ND		0.0050	1	02/23/2017 10:33
1,2-Dichlorobenzene	ND		0.0050	1	02/23/2017 10:33
1,3-Dichlorobenzene	ND		0.0050	1	02/23/2017 10:33
1,4-Dichlorobenzene	ND		0.0050	1	02/23/2017 10:33
Dichlorodifluoromethane	ND		0.0050	1	02/23/2017 10:33
1,1-Dichloroethane	ND		0.0050	1	02/23/2017 10:33
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	02/23/2017 10:33
1,1-Dichloroethene	ND		0.0050	1	02/23/2017 10:33
cis-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 10:33
trans-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 10:33
1,2-Dichloropropane	ND		0.0050	1	02/23/2017 10:33
1,3-Dichloropropane	ND		0.0050	1	02/23/2017 10:33
2,2-Dichloropropane	ND		0.0050	1	02/23/2017 10:33

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-15	1702A53-040A	Soil	02/20/2017 10:44	GC10	134454
<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 10:33
cis-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 10:33
trans-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 10:33
Diisopropyl ether (DIPE)	ND		0.0050	1	02/23/2017 10:33
Ethylbenzene	ND		0.0050	1	02/23/2017 10:33
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/23/2017 10:33
Freon 113	ND		0.0050	1	02/23/2017 10:33
Hexachlorobutadiene	ND		0.0050	1	02/23/2017 10:33
Hexachloroethane	ND		0.0050	1	02/23/2017 10:33
2-Hexanone	ND		0.0050	1	02/23/2017 10:33
Isopropylbenzene	ND		0.0050	1	02/23/2017 10:33
4-Isopropyl toluene	ND		0.0050	1	02/23/2017 10:33
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/23/2017 10:33
Methylene chloride	ND		0.0050	1	02/23/2017 10:33
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/23/2017 10:33
Naphthalene	ND		0.0050	1	02/23/2017 10:33
n-Propyl benzene	ND		0.0050	1	02/23/2017 10:33
Styrene	ND		0.0050	1	02/23/2017 10:33
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 10:33
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 10:33
Tetrachloroethene	ND		0.0050	1	02/23/2017 10:33
Toluene	ND		0.0050	1	02/23/2017 10:33
1,2,3-Trichlorobenzene	ND		0.0050	1	02/23/2017 10:33
1,2,4-Trichlorobenzene	ND		0.0050	1	02/23/2017 10:33
1,1,1-Trichloroethane	ND		0.0050	1	02/23/2017 10:33
1,1,2-Trichloroethane	ND		0.0050	1	02/23/2017 10:33
Trichloroethene	ND		0.0050	1	02/23/2017 10:33
Trichlorofluoromethane	ND		0.0050	1	02/23/2017 10:33
1,2,3-Trichloropropane	ND		0.0050	1	02/23/2017 10:33
1,2,4-Trimethylbenzene	ND		0.0050	1	02/23/2017 10:33
1,3,5-Trimethylbenzene	ND		0.0050	1	02/23/2017 10:33
Vinyl Chloride	ND		0.0050	1	02/23/2017 10:33
Xylenes, Total	ND		0.0050	1	02/23/2017 10:33

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-15	1702A53-040A	Soil	02/20/2017 10:44	GC10	134454

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	101	70-130		02/23/2017 10:33
Toluene-d8	107	70-130		02/23/2017 10:33
4-BFB	103	70-130		02/23/2017 10:33
Benzene-d6	88	60-140		02/23/2017 10:33
Ethylbenzene-d10	102	60-140		02/23/2017 10:33
1,2-DCB-d4	79	60-140		02/23/2017 10:33

Analyst(s): KF



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-3	1702A53-043A	Soil	02/20/2017 11:18	GC10	134454
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	02/23/2017 11:13
tert-Amyl methyl ether (TAME)	ND		0.0050	1	02/23/2017 11:13
Benzene	ND		0.0050	1	02/23/2017 11:13
Bromobenzene	ND		0.0050	1	02/23/2017 11:13
Bromochloromethane	ND		0.0050	1	02/23/2017 11:13
Bromodichloromethane	ND		0.0050	1	02/23/2017 11:13
Bromoform	ND		0.0050	1	02/23/2017 11:13
Bromomethane	ND		0.0050	1	02/23/2017 11:13
2-Butanone (MEK)	ND		0.020	1	02/23/2017 11:13
t-Butyl alcohol (TBA)	ND		0.050	1	02/23/2017 11:13
n-Butyl benzene	ND		0.0050	1	02/23/2017 11:13
sec-Butyl benzene	ND		0.0050	1	02/23/2017 11:13
tert-Butyl benzene	ND		0.0050	1	02/23/2017 11:13
Carbon Disulfide	ND		0.0050	1	02/23/2017 11:13
Carbon Tetrachloride	ND		0.0050	1	02/23/2017 11:13
Chlorobenzene	ND		0.0050	1	02/23/2017 11:13
Chloroethane	ND		0.0050	1	02/23/2017 11:13
Chloroform	ND		0.0050	1	02/23/2017 11:13
Chloromethane	ND		0.0050	1	02/23/2017 11:13
2-Chlorotoluene	ND		0.0050	1	02/23/2017 11:13
4-Chlorotoluene	ND		0.0050	1	02/23/2017 11:13
Dibromochloromethane	ND		0.0050	1	02/23/2017 11:13
1,2-Dibromo-3-chloropropane	ND		0.0040	1	02/23/2017 11:13
1,2-Dibromoethane (EDB)	ND		0.0040	1	02/23/2017 11:13
Dibromomethane	ND		0.0050	1	02/23/2017 11:13
1,2-Dichlorobenzene	ND		0.0050	1	02/23/2017 11:13
1,3-Dichlorobenzene	ND		0.0050	1	02/23/2017 11:13
1,4-Dichlorobenzene	ND		0.0050	1	02/23/2017 11:13
Dichlorodifluoromethane	ND		0.0050	1	02/23/2017 11:13
1,1-Dichloroethane	ND		0.0050	1	02/23/2017 11:13
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	02/23/2017 11:13
1,1-Dichloroethene	ND		0.0050	1	02/23/2017 11:13
cis-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 11:13
trans-1,2-Dichloroethene	ND		0.0050	1	02/23/2017 11:13
1,2-Dichloropropane	ND		0.0050	1	02/23/2017 11:13
1,3-Dichloropropane	ND		0.0050	1	02/23/2017 11:13
2,2-Dichloropropane	ND		0.0050	1	02/23/2017 11:13

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-3	1702A53-043A	Soil	02/20/2017 11:18	GC10	134454
<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 11:13
cis-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 11:13
trans-1,3-Dichloropropene	ND		0.0050	1	02/23/2017 11:13
Diisopropyl ether (DIPE)	ND		0.0050	1	02/23/2017 11:13
Ethylbenzene	ND		0.0050	1	02/23/2017 11:13
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	02/23/2017 11:13
Freon 113	ND		0.0050	1	02/23/2017 11:13
Hexachlorobutadiene	ND		0.0050	1	02/23/2017 11:13
Hexachloroethane	ND		0.0050	1	02/23/2017 11:13
2-Hexanone	ND		0.0050	1	02/23/2017 11:13
Isopropylbenzene	ND		0.0050	1	02/23/2017 11:13
4-Isopropyl toluene	ND		0.0050	1	02/23/2017 11:13
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	02/23/2017 11:13
Methylene chloride	ND		0.0050	1	02/23/2017 11:13
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	02/23/2017 11:13
Naphthalene	ND		0.0050	1	02/23/2017 11:13
n-Propyl benzene	ND		0.0050	1	02/23/2017 11:13
Styrene	ND		0.0050	1	02/23/2017 11:13
1,1,1,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 11:13
1,1,2,2-Tetrachloroethane	ND		0.0050	1	02/23/2017 11:13
Tetrachloroethene	ND		0.0050	1	02/23/2017 11:13
Toluene	ND		0.0050	1	02/23/2017 11:13
1,2,3-Trichlorobenzene	ND		0.0050	1	02/23/2017 11:13
1,2,4-Trichlorobenzene	ND		0.0050	1	02/23/2017 11:13
1,1,1-Trichloroethane	ND		0.0050	1	02/23/2017 11:13
1,1,2-Trichloroethane	ND		0.0050	1	02/23/2017 11:13
Trichloroethene	ND		0.0050	1	02/23/2017 11:13
Trichlorofluoromethane	ND		0.0050	1	02/23/2017 11:13
1,2,3-Trichloropropane	ND		0.0050	1	02/23/2017 11:13
1,2,4-Trimethylbenzene	ND		0.0050	1	02/23/2017 11:13
1,3,5-Trimethylbenzene	ND		0.0050	1	02/23/2017 11:13
Vinyl Chloride	ND		0.0050	1	02/23/2017 11:13
Xylenes, Total	ND		0.0050	1	02/23/2017 11:13

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-3	1702A53-043A	Soil	02/20/2017 11:18	GC10	134454

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	100	70-130		02/23/2017 11:13
Toluene-d8	108	70-130		02/23/2017 11:13
4-BFB	103	70-130		02/23/2017 11:13
Benzene-d6	92	60-140		02/23/2017 11:13
Ethylbenzene-d10	109	60-140		02/23/2017 11:13
1,2-DCB-d4	82	60-140		02/23/2017 11:13

Analyst(s): KF



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-5	1702A53-002A	Soil	02/20/2017 08:59	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		2.0	1	02/22/2017 17:54
Acenaphthylene	ND		2.0	1	02/22/2017 17:54
Acetochlor	ND		2.0	1	02/22/2017 17:54
Anthracene	ND		2.0	1	02/22/2017 17:54
Benzidine	ND		10	1	02/22/2017 17:54
Benzo (a) anthracene	ND		2.0	1	02/22/2017 17:54
Benzo (a) pyrene	ND		2.0	1	02/22/2017 17:54
Benzo (b) fluoranthene	ND		2.0	1	02/22/2017 17:54
Benzo (g,h,i) perylene	ND		2.0	1	02/22/2017 17:54
Benzo (k) fluoranthene	ND		2.0	1	02/22/2017 17:54
Benzyl Alcohol	ND		10	1	02/22/2017 17:54
1,1-Biphenyl	ND		2.0	1	02/22/2017 17:54
Bis (2-chloroethoxy) Methane	ND		2.0	1	02/22/2017 17:54
Bis (2-chloroethyl) Ether	ND		2.0	1	02/22/2017 17:54
Bis (2-chloroisopropyl) Ether	ND		2.0	1	02/22/2017 17:54
Bis (2-ethylhexyl) Adipate	ND		2.0	1	02/22/2017 17:54
Bis (2-ethylhexyl) Phthalate	ND		2.0	1	02/22/2017 17:54
4-Bromophenyl Phenyl Ether	ND		2.0	1	02/22/2017 17:54
Butylbenzyl Phthalate	ND		2.0	1	02/22/2017 17:54
4-Chloroaniline	ND		4.0	1	02/22/2017 17:54
4-Chloro-3-methylphenol	ND		2.0	1	02/22/2017 17:54
2-Chloronaphthalene	ND		2.0	1	02/22/2017 17:54
2-Chlorophenol	ND		2.0	1	02/22/2017 17:54
4-Chlorophenyl Phenyl Ether	ND		2.0	1	02/22/2017 17:54
Chrysene	ND		2.0	1	02/22/2017 17:54
Dibenzo (a,h) anthracene	ND		2.0	1	02/22/2017 17:54
Dibenzofuran	ND		2.0	1	02/22/2017 17:54
Di-n-butyl Phthalate	ND		2.0	1	02/22/2017 17:54
1,2-Dichlorobenzene	ND		2.0	1	02/22/2017 17:54
1,3-Dichlorobenzene	ND		2.0	1	02/22/2017 17:54
1,4-Dichlorobenzene	ND		2.0	1	02/22/2017 17:54
3,3-Dichlorobenzidine	ND		4.0	1	02/22/2017 17:54
2,4-Dichlorophenol	ND		2.0	1	02/22/2017 17:54
Diethyl Phthalate	ND		2.0	1	02/22/2017 17:54
2,4-Dimethylphenol	ND		2.0	1	02/22/2017 17:54
Dimethyl Phthalate	ND		2.0	1	02/22/2017 17:54
4,6-Dinitro-2-methylphenol	ND		10	1	02/22/2017 17:54

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-5	1702A53-002A	Soil	02/20/2017 08:59	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		50	1	02/22/2017 17:54
2,4-Dinitrotoluene	ND		2.0	1	02/22/2017 17:54
2,6-Dinitrotoluene	ND		2.0	1	02/22/2017 17:54
Di-n-octyl Phthalate	ND		4.0	1	02/22/2017 17:54
1,2-Diphenylhydrazine	ND		2.0	1	02/22/2017 17:54
Fluoranthene	ND		2.0	1	02/22/2017 17:54
Fluorene	ND		2.0	1	02/22/2017 17:54
Hexachlorobenzene	ND		2.0	1	02/22/2017 17:54
Hexachlorobutadiene	ND		2.0	1	02/22/2017 17:54
Hexachlorocyclopentadiene	ND		10	1	02/22/2017 17:54
Hexachloroethane	ND		2.0	1	02/22/2017 17:54
Indeno (1,2,3-cd) pyrene	ND		2.0	1	02/22/2017 17:54
Isophorone	ND		2.0	1	02/22/2017 17:54
2-Methylnaphthalene	ND		2.0	1	02/22/2017 17:54
2-Methylphenol (o-Cresol)	ND		2.0	1	02/22/2017 17:54
3 & 4-Methylphenol (m,p-Cresol)	ND		2.0	1	02/22/2017 17:54
Naphthalene	ND		2.0	1	02/22/2017 17:54
2-Nitroaniline	ND		10	1	02/22/2017 17:54
3-Nitroaniline	ND		10	1	02/22/2017 17:54
4-Nitroaniline	ND		10	1	02/22/2017 17:54
Nitrobenzene	ND		2.0	1	02/22/2017 17:54
2-Nitrophenol	ND		10	1	02/22/2017 17:54
4-Nitrophenol	ND		10	1	02/22/2017 17:54
N-Nitrosodiphenylamine	ND		2.0	1	02/22/2017 17:54
N-Nitrosodi-n-propylamine	ND		2.0	1	02/22/2017 17:54
Pentachlorophenol	ND		10	1	02/22/2017 17:54
Phenanthrene	ND		2.0	1	02/22/2017 17:54
Phenol	ND		2.0	1	02/22/2017 17:54
Pyrene	ND		2.0	1	02/22/2017 17:54
1,2,4-Trichlorobenzene	ND		2.0	1	02/22/2017 17:54
2,4,5-Trichlorophenol	ND		2.0	1	02/22/2017 17:54
2,4,6-Trichlorophenol	ND		2.0	1	02/22/2017 17:54

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-5	1702A53-002A	Soil	02/20/2017 08:59	GC21	134490

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	74	30-130		02/22/2017 17:54
Phenol-d5	66	30-130		02/22/2017 17:54
Nitrobenzene-d5	61	30-130		02/22/2017 17:54
2-Fluorobiphenyl	51	30-130		02/22/2017 17:54
2,4,6-Tribromophenol	63	16-130		02/22/2017 17:54
4-Terphenyl-d14	54	30-130		02/22/2017 17:54
Analyst(s): REB		Analytical Comments: a4		



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		20	10	02/24/2017 00:28
Acenaphthylene	ND		20	10	02/24/2017 00:28
Acetochlor	ND		20	10	02/24/2017 00:28
Anthracene	ND		20	10	02/24/2017 00:28
Benzidine	ND		100	10	02/24/2017 00:28
Benzo (a) anthracene	ND		20	10	02/24/2017 00:28
Benzo (a) pyrene	ND		20	10	02/24/2017 00:28
Benzo (b) fluoranthene	ND		20	10	02/24/2017 00:28
Benzo (g,h,i) perylene	ND		20	10	02/24/2017 00:28
Benzo (k) fluoranthene	ND		20	10	02/24/2017 00:28
Benzyl Alcohol	ND		100	10	02/24/2017 00:28
1,1-Biphenyl	ND		20	10	02/24/2017 00:28
Bis (2-chloroethoxy) Methane	ND		20	10	02/24/2017 00:28
Bis (2-chloroethyl) Ether	ND		20	10	02/24/2017 00:28
Bis (2-chloroisopropyl) Ether	ND		20	10	02/24/2017 00:28
Bis (2-ethylhexyl) Adipate	ND		20	10	02/24/2017 00:28
Bis (2-ethylhexyl) Phthalate	ND		20	10	02/24/2017 00:28
4-Bromophenyl Phenyl Ether	ND		20	10	02/24/2017 00:28
Butylbenzyl Phthalate	ND		20	10	02/24/2017 00:28
4-Chloroaniline	ND		40	10	02/24/2017 00:28
4-Chloro-3-methylphenol	ND		20	10	02/24/2017 00:28
2-Chloronaphthalene	ND		20	10	02/24/2017 00:28
2-Chlorophenol	ND		20	10	02/24/2017 00:28
4-Chlorophenyl Phenyl Ether	ND		20	10	02/24/2017 00:28
Chrysene	ND		20	10	02/24/2017 00:28
Dibenzo (a,h) anthracene	ND		20	10	02/24/2017 00:28
Dibenzofuran	ND		20	10	02/24/2017 00:28
Di-n-butyl Phthalate	ND		20	10	02/24/2017 00:28
1,2-Dichlorobenzene	ND		20	10	02/24/2017 00:28
1,3-Dichlorobenzene	ND		20	10	02/24/2017 00:28
1,4-Dichlorobenzene	ND		20	10	02/24/2017 00:28
3,3-Dichlorobenzidine	ND		40	10	02/24/2017 00:28
2,4-Dichlorophenol	ND		20	10	02/24/2017 00:28
Diethyl Phthalate	ND		20	10	02/24/2017 00:28
2,4-Dimethylphenol	ND		20	10	02/24/2017 00:28
Dimethyl Phthalate	ND		20	10	02/24/2017 00:28
4,6-Dinitro-2-methylphenol	ND		100	10	02/24/2017 00:28

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		500	10	02/24/2017 00:28
2,4-Dinitrotoluene	ND		20	10	02/24/2017 00:28
2,6-Dinitrotoluene	ND		20	10	02/24/2017 00:28
Di-n-octyl Phthalate	ND		40	10	02/24/2017 00:28
1,2-Diphenylhydrazine	ND		20	10	02/24/2017 00:28
Fluoranthene	ND		20	10	02/24/2017 00:28
Fluorene	ND		20	10	02/24/2017 00:28
Hexachlorobenzene	ND		20	10	02/24/2017 00:28
Hexachlorobutadiene	ND		20	10	02/24/2017 00:28
Hexachlorocyclopentadiene	ND		100	10	02/24/2017 00:28
Hexachloroethane	ND		20	10	02/24/2017 00:28
Indeno (1,2,3-cd) pyrene	ND		20	10	02/24/2017 00:28
Isophorone	ND		20	10	02/24/2017 00:28
2-Methylnaphthalene	ND		20	10	02/24/2017 00:28
2-Methylphenol (o-Cresol)	ND		20	10	02/24/2017 00:28
3 & 4-Methylphenol (m,p-Cresol)	ND		20	10	02/24/2017 00:28
Naphthalene	ND		20	10	02/24/2017 00:28
2-Nitroaniline	ND		100	10	02/24/2017 00:28
3-Nitroaniline	ND		100	10	02/24/2017 00:28
4-Nitroaniline	ND		100	10	02/24/2017 00:28
Nitrobenzene	ND		20	10	02/24/2017 00:28
2-Nitrophenol	ND		100	10	02/24/2017 00:28
4-Nitrophenol	ND		100	10	02/24/2017 00:28
N-Nitrosodiphenylamine	ND		20	10	02/24/2017 00:28
N-Nitrosodi-n-propylamine	ND		20	10	02/24/2017 00:28
Pentachlorophenol	ND		100	10	02/24/2017 00:28
Phenanthrene	ND		20	10	02/24/2017 00:28
Phenol	ND		20	10	02/24/2017 00:28
Pyrene	ND		20	10	02/24/2017 00:28
1,2,4-Trichlorobenzene	ND		20	10	02/24/2017 00:28
2,4,5-Trichlorophenol	ND		20	10	02/24/2017 00:28
2,4,6-Trichlorophenol	ND		20	10	02/24/2017 00:28

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	GC21	134490

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	73	30-130		02/24/2017 00:28
Phenol-d5	72	30-130		02/24/2017 00:28
Nitrobenzene-d5	79	30-130		02/24/2017 00:28
2-Fluorobiphenyl	65	30-130		02/24/2017 00:28
2,4,6-Tribromophenol	51	16-130		02/24/2017 00:28
4-Terphenyl-d14	57	30-130		02/24/2017 00:28

Analyst(s): REB

Analytical Comments: a3,a4



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-3	1702A53-019A	Soil	02/20/2017 09:05	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	02/22/2017 18:22
Acenaphthylene	ND		0.25	1	02/22/2017 18:22
Acetochlor	ND		0.25	1	02/22/2017 18:22
Anthracene	ND		0.25	1	02/22/2017 18:22
Benzidine	ND		1.3	1	02/22/2017 18:22
Benzo (a) anthracene	ND		0.25	1	02/22/2017 18:22
Benzo (a) pyrene	ND		0.25	1	02/22/2017 18:22
Benzo (b) fluoranthene	ND		0.25	1	02/22/2017 18:22
Benzo (g,h,i) perylene	ND		0.25	1	02/22/2017 18:22
Benzo (k) fluoranthene	ND		0.25	1	02/22/2017 18:22
Benzyl Alcohol	ND		1.3	1	02/22/2017 18:22
1,1-Biphenyl	ND		0.25	1	02/22/2017 18:22
Bis (2-chloroethoxy) Methane	ND		0.25	1	02/22/2017 18:22
Bis (2-chloroethyl) Ether	ND		0.25	1	02/22/2017 18:22
Bis (2-chloroisopropyl) Ether	ND		0.25	1	02/22/2017 18:22
Bis (2-ethylhexyl) Adipate	ND		0.25	1	02/22/2017 18:22
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	02/22/2017 18:22
4-Bromophenyl Phenyl Ether	ND		0.25	1	02/22/2017 18:22
Butylbenzyl Phthalate	ND		0.25	1	02/22/2017 18:22
4-Chloroaniline	ND		0.50	1	02/22/2017 18:22
4-Chloro-3-methylphenol	ND		0.25	1	02/22/2017 18:22
2-Chloronaphthalene	ND		0.25	1	02/22/2017 18:22
2-Chlorophenol	ND		0.25	1	02/22/2017 18:22
4-Chlorophenyl Phenyl Ether	ND		0.25	1	02/22/2017 18:22
Chrysene	ND		0.25	1	02/22/2017 18:22
Dibenzo (a,h) anthracene	ND		0.25	1	02/22/2017 18:22
Dibenzofuran	ND		0.25	1	02/22/2017 18:22
Di-n-butyl Phthalate	ND		0.25	1	02/22/2017 18:22
1,2-Dichlorobenzene	ND		0.25	1	02/22/2017 18:22
1,3-Dichlorobenzene	ND		0.25	1	02/22/2017 18:22
1,4-Dichlorobenzene	ND		0.25	1	02/22/2017 18:22
3,3-Dichlorobenzidine	ND		0.50	1	02/22/2017 18:22
2,4-Dichlorophenol	ND		0.25	1	02/22/2017 18:22
Diethyl Phthalate	ND		0.25	1	02/22/2017 18:22
2,4-Dimethylphenol	ND		0.25	1	02/22/2017 18:22
Dimethyl Phthalate	ND		0.25	1	02/22/2017 18:22
4,6-Dinitro-2-methylphenol	ND		1.3	1	02/22/2017 18:22

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-3	1702A53-019A	Soil	02/20/2017 09:05	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		6.3	1	02/22/2017 18:22
2,4-Dinitrotoluene	ND		0.25	1	02/22/2017 18:22
2,6-Dinitrotoluene	ND		0.25	1	02/22/2017 18:22
Di-n-octyl Phthalate	ND		0.50	1	02/22/2017 18:22
1,2-Diphenylhydrazine	ND		0.25	1	02/22/2017 18:22
Fluoranthene	ND		0.25	1	02/22/2017 18:22
Fluorene	ND		0.25	1	02/22/2017 18:22
Hexachlorobenzene	ND		0.25	1	02/22/2017 18:22
Hexachlorobutadiene	ND		0.25	1	02/22/2017 18:22
Hexachlorocyclopentadiene	ND		1.3	1	02/22/2017 18:22
Hexachloroethane	ND		0.25	1	02/22/2017 18:22
Indeno (1,2,3-cd) pyrene	ND		0.25	1	02/22/2017 18:22
Isophorone	ND		0.25	1	02/22/2017 18:22
2-Methylnaphthalene	ND		0.25	1	02/22/2017 18:22
2-Methylphenol (o-Cresol)	ND		0.25	1	02/22/2017 18:22
3 & 4-Methylphenol (m,p-Cresol)	ND		0.25	1	02/22/2017 18:22
Naphthalene	ND		0.25	1	02/22/2017 18:22
2-Nitroaniline	ND		1.3	1	02/22/2017 18:22
3-Nitroaniline	ND		1.3	1	02/22/2017 18:22
4-Nitroaniline	ND		1.3	1	02/22/2017 18:22
Nitrobenzene	ND		0.25	1	02/22/2017 18:22
2-Nitrophenol	ND		1.3	1	02/22/2017 18:22
4-Nitrophenol	ND		1.3	1	02/22/2017 18:22
N-Nitrosodiphenylamine	ND		0.25	1	02/22/2017 18:22
N-Nitrosodi-n-propylamine	ND		0.25	1	02/22/2017 18:22
Pentachlorophenol	ND		1.3	1	02/22/2017 18:22
Phenanthrene	ND		0.25	1	02/22/2017 18:22
Phenol	ND		0.25	1	02/22/2017 18:22
Pyrene	ND		0.25	1	02/22/2017 18:22
1,2,4-Trichlorobenzene	ND		0.25	1	02/22/2017 18:22
2,4,5-Trichlorophenol	ND		0.25	1	02/22/2017 18:22
2,4,6-Trichlorophenol	ND		0.25	1	02/22/2017 18:22

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-3	1702A53-019A	Soil	02/20/2017 09:05	GC21	134490

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	73	30-130		02/22/2017 18:22
Phenol-d5	69	30-130		02/22/2017 18:22
Nitrobenzene-d5	59	30-130		02/22/2017 18:22
2-Fluorobiphenyl	49	30-130		02/22/2017 18:22
2,4,6-Tribromophenol	61	16-130		02/22/2017 18:22
4-Terphenyl-d14	58	30-130		02/22/2017 18:22

Analyst(s): REB



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-25	1702A53-025A	Soil	02/20/2017 09:48	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	02/22/2017 18:50
Acenaphthylene	ND		0.25	1	02/22/2017 18:50
Acetochlor	ND		0.25	1	02/22/2017 18:50
Anthracene	ND		0.25	1	02/22/2017 18:50
Benzidine	ND		1.3	1	02/22/2017 18:50
Benzo (a) anthracene	ND		0.25	1	02/22/2017 18:50
Benzo (a) pyrene	ND		0.25	1	02/22/2017 18:50
Benzo (b) fluoranthene	ND		0.25	1	02/22/2017 18:50
Benzo (g,h,i) perylene	ND		0.25	1	02/22/2017 18:50
Benzo (k) fluoranthene	ND		0.25	1	02/22/2017 18:50
Benzyl Alcohol	ND		1.3	1	02/22/2017 18:50
1,1-Biphenyl	ND		0.25	1	02/22/2017 18:50
Bis (2-chloroethoxy) Methane	ND		0.25	1	02/22/2017 18:50
Bis (2-chloroethyl) Ether	ND		0.25	1	02/22/2017 18:50
Bis (2-chloroisopropyl) Ether	ND		0.25	1	02/22/2017 18:50
Bis (2-ethylhexyl) Adipate	ND		0.25	1	02/22/2017 18:50
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	02/22/2017 18:50
4-Bromophenyl Phenyl Ether	ND		0.25	1	02/22/2017 18:50
Butylbenzyl Phthalate	ND		0.25	1	02/22/2017 18:50
4-Chloroaniline	ND		0.50	1	02/22/2017 18:50
4-Chloro-3-methylphenol	ND		0.25	1	02/22/2017 18:50
2-Chloronaphthalene	ND		0.25	1	02/22/2017 18:50
2-Chlorophenol	ND		0.25	1	02/22/2017 18:50
4-Chlorophenyl Phenyl Ether	ND		0.25	1	02/22/2017 18:50
Chrysene	ND		0.25	1	02/22/2017 18:50
Dibenzo (a,h) anthracene	ND		0.25	1	02/22/2017 18:50
Dibenzofuran	ND		0.25	1	02/22/2017 18:50
Di-n-butyl Phthalate	ND		0.25	1	02/22/2017 18:50
1,2-Dichlorobenzene	ND		0.25	1	02/22/2017 18:50
1,3-Dichlorobenzene	ND		0.25	1	02/22/2017 18:50
1,4-Dichlorobenzene	ND		0.25	1	02/22/2017 18:50
3,3-Dichlorobenzidine	ND		0.50	1	02/22/2017 18:50
2,4-Dichlorophenol	ND		0.25	1	02/22/2017 18:50
Diethyl Phthalate	ND		0.25	1	02/22/2017 18:50
2,4-Dimethylphenol	ND		0.25	1	02/22/2017 18:50
Dimethyl Phthalate	ND		0.25	1	02/22/2017 18:50
4,6-Dinitro-2-methylphenol	ND		1.3	1	02/22/2017 18:50

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-25	1702A53-025A	Soil	02/20/2017 09:48	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		6.3	1	02/22/2017 18:50
2,4-Dinitrotoluene	ND		0.25	1	02/22/2017 18:50
2,6-Dinitrotoluene	ND		0.25	1	02/22/2017 18:50
Di-n-octyl Phthalate	ND		0.50	1	02/22/2017 18:50
1,2-Diphenylhydrazine	ND		0.25	1	02/22/2017 18:50
Fluoranthene	ND		0.25	1	02/22/2017 18:50
Fluorene	ND		0.25	1	02/22/2017 18:50
Hexachlorobenzene	ND		0.25	1	02/22/2017 18:50
Hexachlorobutadiene	ND		0.25	1	02/22/2017 18:50
Hexachlorocyclopentadiene	ND		1.3	1	02/22/2017 18:50
Hexachloroethane	ND		0.25	1	02/22/2017 18:50
Indeno (1,2,3-cd) pyrene	ND		0.25	1	02/22/2017 18:50
Isophorone	ND		0.25	1	02/22/2017 18:50
2-Methylnaphthalene	ND		0.25	1	02/22/2017 18:50
2-Methylphenol (o-Cresol)	ND		0.25	1	02/22/2017 18:50
3 & 4-Methylphenol (m,p-Cresol)	ND		0.25	1	02/22/2017 18:50
Naphthalene	ND		0.25	1	02/22/2017 18:50
2-Nitroaniline	ND		1.3	1	02/22/2017 18:50
3-Nitroaniline	ND		1.3	1	02/22/2017 18:50
4-Nitroaniline	ND		1.3	1	02/22/2017 18:50
Nitrobenzene	ND		0.25	1	02/22/2017 18:50
2-Nitrophenol	ND		1.3	1	02/22/2017 18:50
4-Nitrophenol	ND		1.3	1	02/22/2017 18:50
N-Nitrosodiphenylamine	ND		0.25	1	02/22/2017 18:50
N-Nitrosodi-n-propylamine	ND		0.25	1	02/22/2017 18:50
Pentachlorophenol	ND		1.3	1	02/22/2017 18:50
Phenanthrene	ND		0.25	1	02/22/2017 18:50
Phenol	ND		0.25	1	02/22/2017 18:50
Pyrene	ND		0.25	1	02/22/2017 18:50
1,2,4-Trichlorobenzene	ND		0.25	1	02/22/2017 18:50
2,4,5-Trichlorophenol	ND		0.25	1	02/22/2017 18:50
2,4,6-Trichlorophenol	ND		0.25	1	02/22/2017 18:50

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-25	1702A53-025A	Soil	02/20/2017 09:48	GC21	134490

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	74	30-130		02/22/2017 18:50
Phenol-d5	70	30-130		02/22/2017 18:50
Nitrobenzene-d5	63	30-130		02/22/2017 18:50
2-Fluorobiphenyl	52	30-130		02/22/2017 18:50
2,4,6-Tribromophenol	60	16-130		02/22/2017 18:50
4-Terphenyl-d14	57	30-130		02/22/2017 18:50

Analyst(s): REB



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-1.5	1702A53-028A	Soil	02/20/2017 11:55	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	02/24/2017 00:01
Acenaphthylene	ND		0.25	1	02/24/2017 00:01
Acetochlor	ND		0.25	1	02/24/2017 00:01
Anthracene	ND		0.25	1	02/24/2017 00:01
Benzidine	ND		1.3	1	02/24/2017 00:01
Benzo (a) anthracene	ND		0.25	1	02/24/2017 00:01
Benzo (a) pyrene	ND		0.25	1	02/24/2017 00:01
Benzo (b) fluoranthene	ND		0.25	1	02/24/2017 00:01
Benzo (g,h,i) perylene	ND		0.25	1	02/24/2017 00:01
Benzo (k) fluoranthene	ND		0.25	1	02/24/2017 00:01
Benzyl Alcohol	ND		1.3	1	02/24/2017 00:01
1,1-Biphenyl	ND		0.25	1	02/24/2017 00:01
Bis (2-chloroethoxy) Methane	ND		0.25	1	02/24/2017 00:01
Bis (2-chloroethyl) Ether	ND		0.25	1	02/24/2017 00:01
Bis (2-chloroisopropyl) Ether	ND		0.25	1	02/24/2017 00:01
Bis (2-ethylhexyl) Adipate	ND		0.25	1	02/24/2017 00:01
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	02/24/2017 00:01
4-Bromophenyl Phenyl Ether	ND		0.25	1	02/24/2017 00:01
Butylbenzyl Phthalate	ND		0.25	1	02/24/2017 00:01
4-Chloroaniline	ND		0.50	1	02/24/2017 00:01
4-Chloro-3-methylphenol	ND		0.25	1	02/24/2017 00:01
2-Chloronaphthalene	ND		0.25	1	02/24/2017 00:01
2-Chlorophenol	ND		0.25	1	02/24/2017 00:01
4-Chlorophenyl Phenyl Ether	ND		0.25	1	02/24/2017 00:01
Chrysene	ND		0.25	1	02/24/2017 00:01
Dibenzo (a,h) anthracene	ND		0.25	1	02/24/2017 00:01
Dibenzofuran	ND		0.25	1	02/24/2017 00:01
Di-n-butyl Phthalate	ND		0.25	1	02/24/2017 00:01
1,2-Dichlorobenzene	ND		0.25	1	02/24/2017 00:01
1,3-Dichlorobenzene	ND		0.25	1	02/24/2017 00:01
1,4-Dichlorobenzene	ND		0.25	1	02/24/2017 00:01
3,3-Dichlorobenzidine	ND		0.50	1	02/24/2017 00:01
2,4-Dichlorophenol	ND		0.25	1	02/24/2017 00:01
Diethyl Phthalate	ND		0.25	1	02/24/2017 00:01
2,4-Dimethylphenol	ND		0.25	1	02/24/2017 00:01
Dimethyl Phthalate	ND		0.25	1	02/24/2017 00:01
4,6-Dinitro-2-methylphenol	ND		1.3	1	02/24/2017 00:01

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-1.5	1702A53-028A	Soil	02/20/2017 11:55	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		6.3	1	02/24/2017 00:01
2,4-Dinitrotoluene	ND		0.25	1	02/24/2017 00:01
2,6-Dinitrotoluene	ND		0.25	1	02/24/2017 00:01
Di-n-octyl Phthalate	ND		0.50	1	02/24/2017 00:01
1,2-Diphenylhydrazine	ND		0.25	1	02/24/2017 00:01
Fluoranthene	ND		0.25	1	02/24/2017 00:01
Fluorene	ND		0.25	1	02/24/2017 00:01
Hexachlorobenzene	ND		0.25	1	02/24/2017 00:01
Hexachlorobutadiene	ND		0.25	1	02/24/2017 00:01
Hexachlorocyclopentadiene	ND		1.3	1	02/24/2017 00:01
Hexachloroethane	ND		0.25	1	02/24/2017 00:01
Indeno (1,2,3-cd) pyrene	ND		0.25	1	02/24/2017 00:01
Isophorone	ND		0.25	1	02/24/2017 00:01
2-Methylnaphthalene	ND		0.25	1	02/24/2017 00:01
2-Methylphenol (o-Cresol)	ND		0.25	1	02/24/2017 00:01
3 & 4-Methylphenol (m,p-Cresol)	ND		0.25	1	02/24/2017 00:01
Naphthalene	ND		0.25	1	02/24/2017 00:01
2-Nitroaniline	ND		1.3	1	02/24/2017 00:01
3-Nitroaniline	ND		1.3	1	02/24/2017 00:01
4-Nitroaniline	ND		1.3	1	02/24/2017 00:01
Nitrobenzene	ND		0.25	1	02/24/2017 00:01
2-Nitrophenol	ND		1.3	1	02/24/2017 00:01
4-Nitrophenol	ND		1.3	1	02/24/2017 00:01
N-Nitrosodiphenylamine	ND		0.25	1	02/24/2017 00:01
N-Nitrosodi-n-propylamine	ND		0.25	1	02/24/2017 00:01
Pentachlorophenol	ND		1.3	1	02/24/2017 00:01
Phenanthrene	ND		0.25	1	02/24/2017 00:01
Phenol	ND		0.25	1	02/24/2017 00:01
Pyrene	ND		0.25	1	02/24/2017 00:01
1,2,4-Trichlorobenzene	ND		0.25	1	02/24/2017 00:01
2,4,5-Trichlorophenol	ND		0.25	1	02/24/2017 00:01
2,4,6-Trichlorophenol	ND		0.25	1	02/24/2017 00:01

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-1.5	1702A53-028A	Soil	02/20/2017 11:55	GC21	134490

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	80	30-130		02/24/2017 00:01
Phenol-d5	73	30-130		02/24/2017 00:01
Nitrobenzene-d5	69	30-130		02/24/2017 00:01
2-Fluorobiphenyl	66	30-130		02/24/2017 00:01
2,4,6-Tribromophenol	36	16-130		02/24/2017 00:01
4-Terphenyl-d14	76	30-130		02/24/2017 00:01

Analyst(s): REB



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-10	1702A53-032A	Soil	02/20/2017 12:12	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	02/22/2017 20:39
Acenaphthylene	ND		0.25	1	02/22/2017 20:39
Acetochlor	ND		0.25	1	02/22/2017 20:39
Anthracene	ND		0.25	1	02/22/2017 20:39
Benzidine	ND		1.3	1	02/22/2017 20:39
Benzo (a) anthracene	ND		0.25	1	02/22/2017 20:39
Benzo (a) pyrene	ND		0.25	1	02/22/2017 20:39
Benzo (b) fluoranthene	ND		0.25	1	02/22/2017 20:39
Benzo (g,h,i) perylene	ND		0.25	1	02/22/2017 20:39
Benzo (k) fluoranthene	ND		0.25	1	02/22/2017 20:39
Benzyl Alcohol	ND		1.3	1	02/22/2017 20:39
1,1-Biphenyl	ND		0.25	1	02/22/2017 20:39
Bis (2-chloroethoxy) Methane	ND		0.25	1	02/22/2017 20:39
Bis (2-chloroethyl) Ether	ND		0.25	1	02/22/2017 20:39
Bis (2-chloroisopropyl) Ether	ND		0.25	1	02/22/2017 20:39
Bis (2-ethylhexyl) Adipate	ND		0.25	1	02/22/2017 20:39
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	02/22/2017 20:39
4-Bromophenyl Phenyl Ether	ND		0.25	1	02/22/2017 20:39
Butylbenzyl Phthalate	ND		0.25	1	02/22/2017 20:39
4-Chloroaniline	ND		0.50	1	02/22/2017 20:39
4-Chloro-3-methylphenol	ND		0.25	1	02/22/2017 20:39
2-Chloronaphthalene	ND		0.25	1	02/22/2017 20:39
2-Chlorophenol	ND		0.25	1	02/22/2017 20:39
4-Chlorophenyl Phenyl Ether	ND		0.25	1	02/22/2017 20:39
Chrysene	ND		0.25	1	02/22/2017 20:39
Dibenzo (a,h) anthracene	ND		0.25	1	02/22/2017 20:39
Dibenzofuran	ND		0.25	1	02/22/2017 20:39
Di-n-butyl Phthalate	ND		0.25	1	02/22/2017 20:39
1,2-Dichlorobenzene	ND		0.25	1	02/22/2017 20:39
1,3-Dichlorobenzene	ND		0.25	1	02/22/2017 20:39
1,4-Dichlorobenzene	ND		0.25	1	02/22/2017 20:39
3,3-Dichlorobenzidine	ND		0.50	1	02/22/2017 20:39
2,4-Dichlorophenol	ND		0.25	1	02/22/2017 20:39
Diethyl Phthalate	ND		0.25	1	02/22/2017 20:39
2,4-Dimethylphenol	ND		0.25	1	02/22/2017 20:39
Dimethyl Phthalate	ND		0.25	1	02/22/2017 20:39
4,6-Dinitro-2-methylphenol	ND		1.3	1	02/22/2017 20:39

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-10	1702A53-032A	Soil	02/20/2017 12:12	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		6.3	1	02/22/2017 20:39
2,4-Dinitrotoluene	ND		0.25	1	02/22/2017 20:39
2,6-Dinitrotoluene	ND		0.25	1	02/22/2017 20:39
Di-n-octyl Phthalate	ND		0.50	1	02/22/2017 20:39
1,2-Diphenylhydrazine	ND		0.25	1	02/22/2017 20:39
Fluoranthene	ND		0.25	1	02/22/2017 20:39
Fluorene	ND		0.25	1	02/22/2017 20:39
Hexachlorobenzene	ND		0.25	1	02/22/2017 20:39
Hexachlorobutadiene	ND		0.25	1	02/22/2017 20:39
Hexachlorocyclopentadiene	ND		1.3	1	02/22/2017 20:39
Hexachloroethane	ND		0.25	1	02/22/2017 20:39
Indeno (1,2,3-cd) pyrene	ND		0.25	1	02/22/2017 20:39
Isophorone	ND		0.25	1	02/22/2017 20:39
2-Methylnaphthalene	ND		0.25	1	02/22/2017 20:39
2-Methylphenol (o-Cresol)	ND		0.25	1	02/22/2017 20:39
3 & 4-Methylphenol (m,p-Cresol)	ND		0.25	1	02/22/2017 20:39
Naphthalene	ND		0.25	1	02/22/2017 20:39
2-Nitroaniline	ND		1.3	1	02/22/2017 20:39
3-Nitroaniline	ND		1.3	1	02/22/2017 20:39
4-Nitroaniline	ND		1.3	1	02/22/2017 20:39
Nitrobenzene	ND		0.25	1	02/22/2017 20:39
2-Nitrophenol	ND		1.3	1	02/22/2017 20:39
4-Nitrophenol	ND		1.3	1	02/22/2017 20:39
N-Nitrosodiphenylamine	ND		0.25	1	02/22/2017 20:39
N-Nitrosodi-n-propylamine	ND		0.25	1	02/22/2017 20:39
Pentachlorophenol	ND		1.3	1	02/22/2017 20:39
Phenanthrene	ND		0.25	1	02/22/2017 20:39
Phenol	ND		0.25	1	02/22/2017 20:39
Pyrene	ND		0.25	1	02/22/2017 20:39
1,2,4-Trichlorobenzene	ND		0.25	1	02/22/2017 20:39
2,4,5-Trichlorophenol	ND		0.25	1	02/22/2017 20:39
2,4,6-Trichlorophenol	ND		0.25	1	02/22/2017 20:39

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-10	1702A53-032A	Soil	02/20/2017 12:12	GC21	134490

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	78	30-130		02/22/2017 20:39
Phenol-d5	77	30-130		02/22/2017 20:39
Nitrobenzene-d5	66	30-130		02/22/2017 20:39
2-Fluorobiphenyl	55	30-130		02/22/2017 20:39
2,4,6-Tribromophenol	59	16-130		02/22/2017 20:39
4-Terphenyl-d14	68	30-130		02/22/2017 20:39

Analyst(s): REB



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-15	1702A53-040A	Soil	02/20/2017 10:44	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	02/22/2017 19:44
Acenaphthylene	ND		0.25	1	02/22/2017 19:44
Acetochlor	ND		0.25	1	02/22/2017 19:44
Anthracene	ND		0.25	1	02/22/2017 19:44
Benzidine	ND		1.3	1	02/22/2017 19:44
Benzo (a) anthracene	ND		0.25	1	02/22/2017 19:44
Benzo (a) pyrene	ND		0.25	1	02/22/2017 19:44
Benzo (b) fluoranthene	ND		0.25	1	02/22/2017 19:44
Benzo (g,h,i) perylene	ND		0.25	1	02/22/2017 19:44
Benzo (k) fluoranthene	ND		0.25	1	02/22/2017 19:44
Benzyl Alcohol	ND		1.3	1	02/22/2017 19:44
1,1-Biphenyl	ND		0.25	1	02/22/2017 19:44
Bis (2-chloroethoxy) Methane	ND		0.25	1	02/22/2017 19:44
Bis (2-chloroethyl) Ether	ND		0.25	1	02/22/2017 19:44
Bis (2-chloroisopropyl) Ether	ND		0.25	1	02/22/2017 19:44
Bis (2-ethylhexyl) Adipate	ND		0.25	1	02/22/2017 19:44
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	02/22/2017 19:44
4-Bromophenyl Phenyl Ether	ND		0.25	1	02/22/2017 19:44
Butylbenzyl Phthalate	ND		0.25	1	02/22/2017 19:44
4-Chloroaniline	ND		0.50	1	02/22/2017 19:44
4-Chloro-3-methylphenol	ND		0.25	1	02/22/2017 19:44
2-Chloronaphthalene	ND		0.25	1	02/22/2017 19:44
2-Chlorophenol	ND		0.25	1	02/22/2017 19:44
4-Chlorophenyl Phenyl Ether	ND		0.25	1	02/22/2017 19:44
Chrysene	ND		0.25	1	02/22/2017 19:44
Dibenzo (a,h) anthracene	ND		0.25	1	02/22/2017 19:44
Dibenzofuran	ND		0.25	1	02/22/2017 19:44
Di-n-butyl Phthalate	ND		0.25	1	02/22/2017 19:44
1,2-Dichlorobenzene	ND		0.25	1	02/22/2017 19:44
1,3-Dichlorobenzene	ND		0.25	1	02/22/2017 19:44
1,4-Dichlorobenzene	ND		0.25	1	02/22/2017 19:44
3,3-Dichlorobenzidine	ND		0.50	1	02/22/2017 19:44
2,4-Dichlorophenol	ND		0.25	1	02/22/2017 19:44
Diethyl Phthalate	ND		0.25	1	02/22/2017 19:44
2,4-Dimethylphenol	ND		0.25	1	02/22/2017 19:44
Dimethyl Phthalate	ND		0.25	1	02/22/2017 19:44
4,6-Dinitro-2-methylphenol	ND		1.3	1	02/22/2017 19:44

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-15	1702A53-040A	Soil	02/20/2017 10:44	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		6.3	1	02/22/2017 19:44
2,4-Dinitrotoluene	ND		0.25	1	02/22/2017 19:44
2,6-Dinitrotoluene	ND		0.25	1	02/22/2017 19:44
Di-n-octyl Phthalate	ND		0.50	1	02/22/2017 19:44
1,2-Diphenylhydrazine	ND		0.25	1	02/22/2017 19:44
Fluoranthene	ND		0.25	1	02/22/2017 19:44
Fluorene	ND		0.25	1	02/22/2017 19:44
Hexachlorobenzene	ND		0.25	1	02/22/2017 19:44
Hexachlorobutadiene	ND		0.25	1	02/22/2017 19:44
Hexachlorocyclopentadiene	ND		1.3	1	02/22/2017 19:44
Hexachloroethane	ND		0.25	1	02/22/2017 19:44
Indeno (1,2,3-cd) pyrene	ND		0.25	1	02/22/2017 19:44
Isophorone	ND		0.25	1	02/22/2017 19:44
2-Methylnaphthalene	ND		0.25	1	02/22/2017 19:44
2-Methylphenol (o-Cresol)	ND		0.25	1	02/22/2017 19:44
3 & 4-Methylphenol (m,p-Cresol)	ND		0.25	1	02/22/2017 19:44
Naphthalene	ND		0.25	1	02/22/2017 19:44
2-Nitroaniline	ND		1.3	1	02/22/2017 19:44
3-Nitroaniline	ND		1.3	1	02/22/2017 19:44
4-Nitroaniline	ND		1.3	1	02/22/2017 19:44
Nitrobenzene	ND		0.25	1	02/22/2017 19:44
2-Nitrophenol	ND		1.3	1	02/22/2017 19:44
4-Nitrophenol	ND		1.3	1	02/22/2017 19:44
N-Nitrosodiphenylamine	ND		0.25	1	02/22/2017 19:44
N-Nitrosodi-n-propylamine	ND		0.25	1	02/22/2017 19:44
Pentachlorophenol	ND		1.3	1	02/22/2017 19:44
Phenanthrene	ND		0.25	1	02/22/2017 19:44
Phenol	ND		0.25	1	02/22/2017 19:44
Pyrene	ND		0.25	1	02/22/2017 19:44
1,2,4-Trichlorobenzene	ND		0.25	1	02/22/2017 19:44
2,4,5-Trichlorophenol	ND		0.25	1	02/22/2017 19:44
2,4,6-Trichlorophenol	ND		0.25	1	02/22/2017 19:44

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-15	1702A53-040A	Soil	02/20/2017 10:44	GC21	134490

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	80	30-130		02/22/2017 19:44
Phenol-d5	76	30-130		02/22/2017 19:44
Nitrobenzene-d5	69	30-130		02/22/2017 19:44
2-Fluorobiphenyl	58	30-130		02/22/2017 19:44
2,4,6-Tribromophenol	68	16-130		02/22/2017 19:44
4-Terphenyl-d14	69	30-130		02/22/2017 19:44

Analyst(s): REB



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-3	1702A53-043A	Soil	02/20/2017 11:18	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acenaphthene	ND		0.25	1	02/22/2017 20:12
Acenaphthylene	ND		0.25	1	02/22/2017 20:12
Acetochlor	ND		0.25	1	02/22/2017 20:12
Anthracene	ND		0.25	1	02/22/2017 20:12
Benzidine	ND		1.3	1	02/22/2017 20:12
Benzo (a) anthracene	ND		0.25	1	02/22/2017 20:12
Benzo (a) pyrene	ND		0.25	1	02/22/2017 20:12
Benzo (b) fluoranthene	ND		0.25	1	02/22/2017 20:12
Benzo (g,h,i) perylene	ND		0.25	1	02/22/2017 20:12
Benzo (k) fluoranthene	ND		0.25	1	02/22/2017 20:12
Benzyl Alcohol	ND		1.3	1	02/22/2017 20:12
1,1-Biphenyl	ND		0.25	1	02/22/2017 20:12
Bis (2-chloroethoxy) Methane	ND		0.25	1	02/22/2017 20:12
Bis (2-chloroethyl) Ether	ND		0.25	1	02/22/2017 20:12
Bis (2-chloroisopropyl) Ether	ND		0.25	1	02/22/2017 20:12
Bis (2-ethylhexyl) Adipate	ND		0.25	1	02/22/2017 20:12
Bis (2-ethylhexyl) Phthalate	ND		0.25	1	02/22/2017 20:12
4-Bromophenyl Phenyl Ether	ND		0.25	1	02/22/2017 20:12
Butylbenzyl Phthalate	ND		0.25	1	02/22/2017 20:12
4-Chloroaniline	ND		0.50	1	02/22/2017 20:12
4-Chloro-3-methylphenol	ND		0.25	1	02/22/2017 20:12
2-Chloronaphthalene	ND		0.25	1	02/22/2017 20:12
2-Chlorophenol	ND		0.25	1	02/22/2017 20:12
4-Chlorophenyl Phenyl Ether	ND		0.25	1	02/22/2017 20:12
Chrysene	ND		0.25	1	02/22/2017 20:12
Dibenzo (a,h) anthracene	ND		0.25	1	02/22/2017 20:12
Dibenzofuran	ND		0.25	1	02/22/2017 20:12
Di-n-butyl Phthalate	ND		0.25	1	02/22/2017 20:12
1,2-Dichlorobenzene	ND		0.25	1	02/22/2017 20:12
1,3-Dichlorobenzene	ND		0.25	1	02/22/2017 20:12
1,4-Dichlorobenzene	ND		0.25	1	02/22/2017 20:12
3,3-Dichlorobenzidine	ND		0.50	1	02/22/2017 20:12
2,4-Dichlorophenol	ND		0.25	1	02/22/2017 20:12
Diethyl Phthalate	ND		0.25	1	02/22/2017 20:12
2,4-Dimethylphenol	ND		0.25	1	02/22/2017 20:12
Dimethyl Phthalate	ND		0.25	1	02/22/2017 20:12
4,6-Dinitro-2-methylphenol	ND		1.3	1	02/22/2017 20:12

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-3	1702A53-043A	Soil	02/20/2017 11:18	GC21	134490
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
2,4-Dinitrophenol	ND		6.3	1	02/22/2017 20:12
2,4-Dinitrotoluene	ND		0.25	1	02/22/2017 20:12
2,6-Dinitrotoluene	ND		0.25	1	02/22/2017 20:12
Di-n-octyl Phthalate	ND		0.50	1	02/22/2017 20:12
1,2-Diphenylhydrazine	ND		0.25	1	02/22/2017 20:12
Fluoranthene	ND		0.25	1	02/22/2017 20:12
Fluorene	ND		0.25	1	02/22/2017 20:12
Hexachlorobenzene	ND		0.25	1	02/22/2017 20:12
Hexachlorobutadiene	ND		0.25	1	02/22/2017 20:12
Hexachlorocyclopentadiene	ND		1.3	1	02/22/2017 20:12
Hexachloroethane	ND		0.25	1	02/22/2017 20:12
Indeno (1,2,3-cd) pyrene	ND		0.25	1	02/22/2017 20:12
Isophorone	ND		0.25	1	02/22/2017 20:12
2-Methylnaphthalene	ND		0.25	1	02/22/2017 20:12
2-Methylphenol (o-Cresol)	ND		0.25	1	02/22/2017 20:12
3 & 4-Methylphenol (m,p-Cresol)	ND		0.25	1	02/22/2017 20:12
Naphthalene	ND		0.25	1	02/22/2017 20:12
2-Nitroaniline	ND		1.3	1	02/22/2017 20:12
3-Nitroaniline	ND		1.3	1	02/22/2017 20:12
4-Nitroaniline	ND		1.3	1	02/22/2017 20:12
Nitrobenzene	ND		0.25	1	02/22/2017 20:12
2-Nitrophenol	ND		1.3	1	02/22/2017 20:12
4-Nitrophenol	ND		1.3	1	02/22/2017 20:12
N-Nitrosodiphenylamine	ND		0.25	1	02/22/2017 20:12
N-Nitrosodi-n-propylamine	ND		0.25	1	02/22/2017 20:12
Pentachlorophenol	ND		1.3	1	02/22/2017 20:12
Phenanthrene	ND		0.25	1	02/22/2017 20:12
Phenol	ND		0.25	1	02/22/2017 20:12
Pyrene	ND		0.25	1	02/22/2017 20:12
1,2,4-Trichlorobenzene	ND		0.25	1	02/22/2017 20:12
2,4,5-Trichlorophenol	ND		0.25	1	02/22/2017 20:12
2,4,6-Trichlorophenol	ND		0.25	1	02/22/2017 20:12

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/22/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg

Semi-Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-3	1702A53-043A	Soil	02/20/2017 11:18	GC21	134490

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorophenol	73	30-130		02/22/2017 20:12
Phenol-d5	67	30-130		02/22/2017 20:12
Nitrobenzene-d5	64	30-130		02/22/2017 20:12
2-Fluorobiphenyl	53	30-130		02/22/2017 20:12
2,4,6-Tribromophenol	58	16-130		02/22/2017 20:12
4-Terphenyl-d14	57	30-130		02/22/2017 20:12

Analyst(s): REB



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-1.5	1702A53-001A	Soil	02/20/2017 08:53	ICP-MS1	134455
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	1.2		0.50	1	02/22/2017 15:44
Arsenic	5.8		0.50	1	02/22/2017 15:44
Barium	130		5.0	1	02/22/2017 15:44
Beryllium	ND		0.50	1	02/22/2017 15:44
Cadmium	0.40		0.25	1	02/22/2017 15:44
Chromium	41		0.50	1	02/22/2017 15:44
Cobalt	12		0.50	1	02/22/2017 15:44
Copper	52		0.50	1	02/22/2017 15:44
Lead	28		0.50	1	02/22/2017 15:44
Mercury	1.8		0.050	1	02/22/2017 15:44
Molybdenum	ND		0.50	1	02/22/2017 15:44
Nickel	70		0.50	1	02/22/2017 15:44
Selenium	ND		0.50	1	02/22/2017 15:44
Silver	ND		0.50	1	02/22/2017 15:44
Thallium	ND		0.50	1	02/22/2017 15:44
Vanadium	29		0.50	1	02/22/2017 15:44
Zinc	900		5.0	1	02/22/2017 15:44
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	104		70-130		02/22/2017 15:44

Analyst(s): MIG



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-5	1702A53-002A	Soil	02/20/2017 08:59	ICP-MS1	134455
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	3.7		0.50	1	02/22/2017 15:50
Arsenic	7.0		0.50	1	02/22/2017 15:50
Barium	140		5.0	1	02/22/2017 15:50
Beryllium	ND		0.50	1	02/22/2017 15:50
Cadmium	ND		0.25	1	02/22/2017 15:50
Chromium	47		0.50	1	02/22/2017 15:50
Cobalt	12		0.50	1	02/22/2017 15:50
Copper	59		0.50	1	02/22/2017 15:50
Lead	61		0.50	1	02/22/2017 15:50
Mercury	0.88		0.050	1	02/22/2017 15:50
Molybdenum	ND		0.50	1	02/22/2017 15:50
Nickel	76		0.50	1	02/22/2017 15:50
Selenium	ND		0.50	1	02/22/2017 15:50
Silver	ND		0.50	1	02/22/2017 15:50
Thallium	ND		0.50	1	02/22/2017 15:50
Vanadium	42		0.50	1	02/22/2017 15:50
Zinc	540		5.0	1	02/22/2017 15:50
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	104		70-130		02/22/2017 15:50

Analyst(s): MIG



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	ICP-MS1	134455
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	24		0.50	1	02/22/2017 17:15
Arsenic	10		0.50	1	02/22/2017 17:15
Barium	130		5.0	1	02/22/2017 17:15
Beryllium	ND		0.50	1	02/22/2017 17:15
Cadmium	ND		0.25	1	02/22/2017 17:15
Chromium	23		0.50	1	02/22/2017 17:15
Cobalt	8.8		0.50	1	02/22/2017 17:15
Copper	130		0.50	1	02/22/2017 17:15
Lead	430		0.50	1	02/22/2017 17:15
Mercury	1.1		0.050	1	02/22/2017 17:15
Molybdenum	ND		0.50	1	02/22/2017 17:15
Nickel	22		0.50	1	02/22/2017 17:15
Selenium	ND		0.50	1	02/22/2017 17:15
Silver	ND		0.50	1	02/22/2017 17:15
Thallium	ND		0.50	1	02/22/2017 17:15
Vanadium	73		0.50	1	02/22/2017 17:15
Zinc	77		5.0	1	02/22/2017 17:15
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	93		70-130		02/22/2017 17:15
<u>Analyst(s):</u> DVH					

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Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-1.5	1702A53-018A	Soil	02/20/2017 08:55	ICP-MS1	134486
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	12		0.50	1	02/22/2017 17:46
Arsenic	8.9		0.50	1	02/22/2017 17:46
Barium	320		5.0	1	02/22/2017 17:46
Beryllium	ND		0.50	1	02/22/2017 17:46
Cadmium	ND		0.25	1	02/22/2017 17:46
Chromium	20		0.50	1	02/22/2017 17:46
Cobalt	5.4		0.50	1	02/22/2017 17:46
Copper	84		0.50	1	02/22/2017 17:46
Lead	410		5.0	10	02/23/2017 05:18
Mercury	18		0.50	10	02/23/2017 05:18
Molybdenum	0.56		0.50	1	02/22/2017 17:46
Nickel	28		0.50	1	02/22/2017 17:46
Selenium	ND		0.50	1	02/22/2017 17:46
Silver	ND		0.50	1	02/22/2017 17:46
Thallium	ND		0.50	1	02/22/2017 17:46
Vanadium	32		0.50	1	02/22/2017 17:46
Zinc	54		5.0	1	02/22/2017 17:46
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	101		70-130		02/22/2017 17:46
<u>Analyst(s):</u> DVH, MIG					

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Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-3	1702A53-019A	Soil	02/20/2017 09:05	ICP-MS2	134486
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	2.1		0.50	1	02/23/2017 04:16
Arsenic	6.9		0.50	1	02/23/2017 04:16
Barium	110		5.0	1	02/23/2017 04:16
Beryllium	ND		0.50	1	02/23/2017 04:16
Cadmium	ND		0.25	1	02/23/2017 04:16
Chromium	50		0.50	1	02/23/2017 04:16
Cobalt	9.9		0.50	1	02/23/2017 04:16
Copper	24		0.50	1	02/23/2017 04:16
Lead	8.8		0.50	1	02/23/2017 04:16
Mercury	0.19		0.050	1	02/23/2017 04:16
Molybdenum	ND		0.50	1	02/23/2017 04:16
Nickel	81		0.50	1	02/23/2017 04:16
Selenium	ND		0.50	1	02/23/2017 04:16
Silver	ND		0.50	1	02/23/2017 04:16
Thallium	ND		0.50	1	02/23/2017 04:16
Vanadium	32		0.50	1	02/23/2017 04:16
Zinc	80		5.0	1	02/23/2017 04:16
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	97		70-130		02/23/2017 04:16
<u>Analyst(s):</u> DVH					

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Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-32	1702A53-027A	Soil	02/20/2017 09:52	ICP-MS2	134486
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	02/23/2017 04:41
Arsenic	4.1		0.50	1	02/23/2017 04:41
Barium	60		5.0	1	02/23/2017 04:41
Beryllium	ND		0.50	1	02/23/2017 04:41
Cadmium	ND		0.25	1	02/23/2017 04:41
Chromium	35		0.50	1	02/23/2017 04:41
Cobalt	5.9		0.50	1	02/23/2017 04:41
Copper	11		0.50	1	02/23/2017 04:41
Lead	2.8		0.50	1	02/23/2017 04:41
Mercury	ND		0.050	1	02/23/2017 04:41
Molybdenum	ND		0.50	1	02/23/2017 04:41
Nickel	41		0.50	1	02/23/2017 04:41
Selenium	ND		0.50	1	02/23/2017 04:41
Silver	ND		0.50	1	02/23/2017 04:41
Thallium	ND		0.50	1	02/23/2017 04:41
Vanadium	30		0.50	1	02/23/2017 04:41
Zinc	31		5.0	1	02/23/2017 04:41
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	83		70-130		02/23/2017 04:41
<u>Analyst(s):</u> DVH					

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Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-1.5	1702A53-028A	Soil	02/20/2017 11:55	ICP-MS2	134486
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	0.54		0.50	1	02/23/2017 04:47
Arsenic	6.6		0.50	1	02/23/2017 04:47
Barium	130		5.0	1	02/23/2017 04:47
Beryllium	ND		0.50	1	02/23/2017 04:47
Cadmium	ND		0.25	1	02/23/2017 04:47
Chromium	46		0.50	1	02/23/2017 04:47
Cobalt	9.2		0.50	1	02/23/2017 04:47
Copper	22		0.50	1	02/23/2017 04:47
Lead	6.9		0.50	1	02/23/2017 04:47
Mercury	ND		0.050	1	02/23/2017 04:47
Molybdenum	ND		0.50	1	02/23/2017 04:47
Nickel	71		0.50	1	02/23/2017 04:47
Selenium	ND		0.50	1	02/23/2017 04:47
Silver	ND		0.50	1	02/23/2017 04:47
Thallium	ND		0.50	1	02/23/2017 04:47
Vanadium	29		0.50	1	02/23/2017 04:47
Zinc	49		5.0	1	02/23/2017 04:47
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	85		70-130		02/23/2017 04:47
<u>Analyst(s):</u> DVH					

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Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-10	1702A53-032A	Soil	02/20/2017 12:12	ICP-MS2	134486
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	02/23/2017 04:53
Arsenic	5.8		0.50	1	02/23/2017 04:53
Barium	89		5.0	1	02/23/2017 04:53
Beryllium	ND		0.50	1	02/23/2017 04:53
Cadmium	ND		0.25	1	02/23/2017 04:53
Chromium	46		0.50	1	02/23/2017 04:53
Cobalt	7.7		0.50	1	02/23/2017 04:53
Copper	17		0.50	1	02/23/2017 04:53
Lead	5.1		0.50	1	02/23/2017 04:53
Mercury	ND		0.050	1	02/23/2017 04:53
Molybdenum	ND		0.50	1	02/23/2017 04:53
Nickel	76		0.50	1	02/23/2017 04:53
Selenium	ND		0.50	1	02/23/2017 04:53
Silver	ND		0.50	1	02/23/2017 04:53
Thallium	ND		0.50	1	02/23/2017 04:53
Vanadium	26		0.50	1	02/23/2017 04:53
Zinc	43		5.0	1	02/23/2017 04:53
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	97		70-130		02/23/2017 04:53
<u>Analyst(s):</u> DVH					

(Cont.)



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-1.5	1702A53-035A	Soil	02/20/2017 10:27	ICP-MS2	134486
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	0.58		0.50	1	02/23/2017 04:59
Arsenic	6.8		0.50	1	02/23/2017 04:59
Barium	140		5.0	1	02/23/2017 04:59
Beryllium	ND		0.50	1	02/23/2017 04:59
Cadmium	ND		0.25	1	02/23/2017 04:59
Chromium	46		0.50	1	02/23/2017 04:59
Cobalt	10		0.50	1	02/23/2017 04:59
Copper	22		0.50	1	02/23/2017 04:59
Lead	8.8		0.50	1	02/23/2017 04:59
Mercury	0.063		0.050	1	02/23/2017 04:59
Molybdenum	ND		0.50	1	02/23/2017 04:59
Nickel	72		0.50	1	02/23/2017 04:59
Selenium	ND		0.50	1	02/23/2017 04:59
Silver	ND		0.50	1	02/23/2017 04:59
Thallium	ND		0.50	1	02/23/2017 04:59
Vanadium	30		0.50	1	02/23/2017 04:59
Zinc	50		5.0	1	02/23/2017 04:59
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	102		70-130		02/23/2017 04:59
<u>Analyst(s):</u> DVH					

(Cont.)



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-3	1702A53-036A	Soil	02/20/2017 10:30	ICP-MS2	134486
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	0.57		0.50	1	02/23/2017 05:05
Arsenic	7.1		0.50	1	02/23/2017 05:05
Barium	120		5.0	1	02/23/2017 05:05
Beryllium	ND		0.50	1	02/23/2017 05:05
Cadmium	ND		0.25	1	02/23/2017 05:05
Chromium	52		0.50	1	02/23/2017 05:05
Cobalt	10		0.50	1	02/23/2017 05:05
Copper	22		0.50	1	02/23/2017 05:05
Lead	8.8		0.50	1	02/23/2017 05:05
Mercury	0.069		0.050	1	02/23/2017 05:05
Molybdenum	ND		0.50	1	02/23/2017 05:05
Nickel	77		0.50	1	02/23/2017 05:05
Selenium	ND		0.50	1	02/23/2017 05:05
Silver	ND		0.50	1	02/23/2017 05:05
Thallium	ND		0.50	1	02/23/2017 05:05
Vanadium	32		0.50	1	02/23/2017 05:05
Zinc	54		5.0	1	02/23/2017 05:05
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	96		70-130		02/23/2017 05:05
<u>Analyst(s):</u> DVH					

(Cont.)



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-20	1702A53-041A	Soil	02/20/2017 10:45	ICP-MS2	134486
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	02/23/2017 05:11
Arsenic	3.1		0.50	1	02/23/2017 05:11
Barium	150		5.0	1	02/23/2017 05:11
Beryllium	0.68		0.50	1	02/23/2017 05:11
Cadmium	ND		0.25	1	02/23/2017 05:11
Chromium	61		0.50	1	02/23/2017 05:11
Cobalt	12		0.50	1	02/23/2017 05:11
Copper	27		0.50	1	02/23/2017 05:11
Lead	7.4		0.50	1	02/23/2017 05:11
Mercury	0.056		0.050	1	02/23/2017 05:11
Molybdenum	0.55		0.50	1	02/23/2017 05:11
Nickel	77		0.50	1	02/23/2017 05:11
Selenium	ND		0.50	1	02/23/2017 05:11
Silver	ND		0.50	1	02/23/2017 05:11
Thallium	ND		0.50	1	02/23/2017 05:11
Vanadium	36		0.50	1	02/23/2017 05:11
Zinc	63		5.0	1	02/23/2017 05:11
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	92		70-130		02/23/2017 05:11

Analyst(s): DVH



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-1.5	1702A53-042A	Soil	02/20/2017 11:14	ICP-MS1	134486
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	0.57		0.50	1	02/22/2017 19:04
Arsenic	6.5		0.50	1	02/22/2017 19:04
Barium	110		5.0	1	02/22/2017 19:04
Beryllium	ND		0.50	1	02/22/2017 19:04
Cadmium	ND		0.25	1	02/22/2017 19:04
Chromium	47		0.50	1	02/22/2017 19:04
Cobalt	9.9		0.50	1	02/22/2017 19:04
Copper	26		0.50	1	02/22/2017 19:04
Lead	30		0.50	1	02/22/2017 19:04
Mercury	0.26		0.050	1	02/22/2017 19:04
Molybdenum	0.57		0.50	1	02/22/2017 19:04
Nickel	70		0.50	1	02/22/2017 19:04
Selenium	ND		0.50	1	02/22/2017 19:04
Silver	ND		0.50	1	02/22/2017 19:04
Thallium	ND		0.50	1	02/22/2017 19:04
Vanadium	33		0.50	1	02/22/2017 19:04
Zinc	78		5.0	1	02/22/2017 19:04
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	103		70-130		02/22/2017 19:04
<u>Analyst(s):</u> MIG					

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Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

CAM / CCR 17 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-10	1702A53-046A	Soil	02/20/2017 11:28	ICP-MS1	134486
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
Antimony	ND		0.50	1	02/22/2017 19:10
Arsenic	6.3		0.50	1	02/22/2017 19:10
Barium	110		5.0	1	02/22/2017 19:10
Beryllium	ND		0.50	1	02/22/2017 19:10
Cadmium	ND		0.25	1	02/22/2017 19:10
Chromium	46		0.50	1	02/22/2017 19:10
Cobalt	8.5		0.50	1	02/22/2017 19:10
Copper	18		0.50	1	02/22/2017 19:10
Lead	5.5		0.50	1	02/22/2017 19:10
Mercury	0.082		0.050	1	02/22/2017 19:10
Molybdenum	ND		0.50	1	02/22/2017 19:10
Nickel	67		0.50	1	02/22/2017 19:10
Selenium	ND		0.50	1	02/22/2017 19:10
Silver	ND		0.50	1	02/22/2017 19:10
Thallium	ND		0.50	1	02/22/2017 19:10
Vanadium	29		0.50	1	02/22/2017 19:10
Zinc	44		5.0	1	02/22/2017 19:10
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	96		70-130		02/22/2017 19:10
<u>Analyst(s):</u> MIG					



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17-2/28/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
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
LSB-1-1.5	1702A53-001A	Soil	02/20/2017 08:53	GC19	134453
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/24/2017 04:31
MTBE	---		0.050	1	02/24/2017 04:31
Benzene	---		0.0050	1	02/24/2017 04:31
Toluene	---		0.0050	1	02/24/2017 04:31
Ethylbenzene	---		0.0050	1	02/24/2017 04:31
Xylenes	---		0.015	1	02/24/2017 04:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	90		69-117		02/24/2017 04:31
<u>Analyst(s):</u> IA					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-5	1702A53-002A	Soil	02/20/2017 08:59	GC19	134453
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/24/2017 05:01
MTBE	---		0.050	1	02/24/2017 05:01
Benzene	---		0.0050	1	02/24/2017 05:01
Toluene	---		0.0050	1	02/24/2017 05:01
Ethylbenzene	---		0.0050	1	02/24/2017 05:01
Xylenes	---		0.015	1	02/24/2017 05:01
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	91		69-117		02/24/2017 05:01
<u>Analyst(s):</u> IA					

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 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17-2/28/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
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
LSB-1-20	1702A53-006A	Soil	02/20/2017 09:17	GC19	134453

Analytes	Result	RL	DE	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	02/24/2017 06:01
MTBE	---	0.050	1	02/24/2017 06:01
Benzene	---	0.0050	1	02/24/2017 06:01
Toluene	---	0.0050	1	02/24/2017 06:01
Ethylbenzene	---	0.0050	1	02/24/2017 06:01
Xylenes	---	0.015	1	02/24/2017 06:01

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	85	69-117	02/24/2017 06:01

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	GC19	134453

Analytes	Result	RL	DE	Date Analyzed
TPH(g) (C6-C12)	3.8	1.0	1	02/26/2017 14:59
MTBE	---	0.050	1	02/26/2017 14:59
Benzene	---	0.0050	1	02/26/2017 14:59
Toluene	---	0.0050	1	02/26/2017 14:59
Ethylbenzene	---	0.0050	1	02/26/2017 14:59
Xylenes	---	0.015	1	02/26/2017 14:59

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	83	69-117	02/26/2017 14:59

Analyst(s): TD

Analytical Comments: d7,d9

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17-2/28/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
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
LSB-2-3	1702A53-012A	Soil	02/20/2017 10:17	GC19	134484
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/24/2017 06:30
MTBE	---		0.050	1	02/24/2017 06:30
Benzene	---		0.0050	1	02/24/2017 06:30
Toluene	---		0.0050	1	02/24/2017 06:30
Ethylbenzene	---		0.0050	1	02/24/2017 06:30
Xylenes	---		0.015	1	02/24/2017 06:30
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	89		69-117		02/24/2017 06:30
<u>Analyst(s):</u> IA					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-7.5	1702A53-014A	Soil	02/20/2017 10:20	GC19	134484
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/24/2017 07:00
MTBE	---		0.050	1	02/24/2017 07:00
Benzene	---		0.0050	1	02/24/2017 07:00
Toluene	---		0.0050	1	02/24/2017 07:00
Ethylbenzene	---		0.0050	1	02/24/2017 07:00
Xylenes	---		0.015	1	02/24/2017 07:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	95		69-117		02/24/2017 07:00
<u>Analyst(s):</u> IA					

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 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17-2/28/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
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
LSB-3-1.5	1702A53-018A	Soil	02/20/2017 08:55	GC19	134484
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	6.4		1.0	1	02/25/2017 15:00
MTBE	---		0.050	1	02/25/2017 15:00
Benzene	---		0.0050	1	02/25/2017 15:00
Toluene	---		0.0050	1	02/25/2017 15:00
Ethylbenzene	---		0.0050	1	02/25/2017 15:00
Xylenes	---		0.015	1	02/25/2017 15:00
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	74		69-117		02/25/2017 15:00
<u>Analyst(s):</u> LT		<u>Analytical Comments:</u> d7,d1			

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-3	1702A53-019A	Soil	02/20/2017 09:05	GC3	134746
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/28/2017 14:34
MTBE	---		0.050	1	02/28/2017 14:34
Benzene	---		0.0050	1	02/28/2017 14:34
Toluene	---		0.0050	1	02/28/2017 14:34
Ethylbenzene	---		0.0050	1	02/28/2017 14:34
Xylenes	---		0.015	1	02/28/2017 14:34
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	86		69-117		02/28/2017 14:34
<u>Analyst(s):</u> IA					



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17-2/28/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
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
LSB-3-25	1702A53-025A	Soil	02/20/2017 09:48	GC19	134681

Analytes	Result	RL	DE	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	02/25/2017 13:59
MTBE	---	0.050	1	02/25/2017 13:59
Benzene	---	0.0050	1	02/25/2017 13:59
Toluene	---	0.0050	1	02/25/2017 13:59
Ethylbenzene	---	0.0050	1	02/25/2017 13:59
Xylenes	---	0.015	1	02/25/2017 13:59

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	86	69-117	02/25/2017 13:59

Analyst(s): LT

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-32	1702A53-027A	Soil	02/20/2017 09:52	GC19	134484

Analytes	Result	RL	DE	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	02/25/2017 15:31
MTBE	---	0.050	1	02/25/2017 15:31
Benzene	---	0.0050	1	02/25/2017 15:31
Toluene	---	0.0050	1	02/25/2017 15:31
Ethylbenzene	---	0.0050	1	02/25/2017 15:31
Xylenes	---	0.015	1	02/25/2017 15:31

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	71	69-117	02/25/2017 15:31

Analyst(s): LT



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17-2/28/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
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
LSB-4-1.5	1702A53-028A	Soil	02/20/2017 11:55	GC19	134484
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/25/2017 16:02
MTBE	---		0.050	1	02/25/2017 16:02
Benzene	---		0.0050	1	02/25/2017 16:02
Toluene	---		0.0050	1	02/25/2017 16:02
Ethylbenzene	---		0.0050	1	02/25/2017 16:02
Xylenes	---		0.015	1	02/25/2017 16:02
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	89		69-117		02/25/2017 16:02
<u>Analyst(s):</u> LT					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-3	1702A53-029A	Soil	02/20/2017 11:56	GC19	134681
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/25/2017 08:56
MTBE	---		0.050	1	02/25/2017 08:56
Benzene	---		0.0050	1	02/25/2017 08:56
Toluene	---		0.0050	1	02/25/2017 08:56
Ethylbenzene	---		0.0050	1	02/25/2017 08:56
Xylenes	---		0.015	1	02/25/2017 08:56
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	95		69-117		02/25/2017 08:56
<u>Analyst(s):</u> IA					

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17-2/28/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
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
LSB-4-10	1702A53-032A	Soil	02/20/2017 12:12	GC19	134484
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/25/2017 16:33
MTBE	---		0.050	1	02/25/2017 16:33
Benzene	---		0.0050	1	02/25/2017 16:33
Toluene	---		0.0050	1	02/25/2017 16:33
Ethylbenzene	---		0.0050	1	02/25/2017 16:33
Xylenes	---		0.015	1	02/25/2017 16:33
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	90		69-117		02/25/2017 16:33
<u>Analyst(s):</u> LT					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-1.5	1702A53-035A	Soil	02/20/2017 10:27	GC19	134484
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/24/2017 05:31
MTBE	---		0.050	1	02/24/2017 05:31
Benzene	---		0.0050	1	02/24/2017 05:31
Toluene	---		0.0050	1	02/24/2017 05:31
Ethylbenzene	---		0.0050	1	02/24/2017 05:31
Xylenes	---		0.015	1	02/24/2017 05:31
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	87		69-117		02/24/2017 05:31
<u>Analyst(s):</u> IA					

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17-2/28/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
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
LSB-5-3	1702A53-036A	Soil	02/20/2017 10:30	GC19	134484

Analytes	Result	RL	DE	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	02/25/2017 17:04
MTBE	---	0.050	1	02/25/2017 17:04
Benzene	---	0.0050	1	02/25/2017 17:04
Toluene	---	0.0050	1	02/25/2017 17:04
Ethylbenzene	---	0.0050	1	02/25/2017 17:04
Xylenes	---	0.015	1	02/25/2017 17:04

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	87	69-117	02/25/2017 17:04

Analyst(s): LT

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-15	1702A53-040A	Soil	02/20/2017 10:44	GC19	134484

Analytes	Result	RL	DE	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	02/25/2017 17:34
MTBE	---	0.050	1	02/25/2017 17:34
Benzene	---	0.0050	1	02/25/2017 17:34
Toluene	---	0.0050	1	02/25/2017 17:34
Ethylbenzene	---	0.0050	1	02/25/2017 17:34
Xylenes	---	0.015	1	02/25/2017 17:34

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	81	69-117	02/25/2017 17:34

Analyst(s): LT

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17-2/28/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
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
LSB-6-1.5	1702A53-042A	Soil	02/20/2017 11:14	GC19	134484
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/25/2017 18:36
MTBE	---		0.050	1	02/25/2017 18:36
Benzene	---		0.0050	1	02/25/2017 18:36
Toluene	---		0.0050	1	02/25/2017 18:36
Ethylbenzene	---		0.0050	1	02/25/2017 18:36
Xylenes	---		0.015	1	02/25/2017 18:36
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	88		69-117		02/25/2017 18:36
<u>Analyst(s):</u> LT					

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-3	1702A53-043A	Soil	02/20/2017 11:18	GC19	134484
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/25/2017 19:06
MTBE	---		0.050	1	02/25/2017 19:06
Benzene	---		0.0050	1	02/25/2017 19:06
Toluene	---		0.0050	1	02/25/2017 19:06
Ethylbenzene	---		0.0050	1	02/25/2017 19:06
Xylenes	---		0.015	1	02/25/2017 19:06
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	88		69-117		02/25/2017 19:06
<u>Analyst(s):</u> LT					

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17-2/28/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
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
LSB-6-10	1702A53-046A	Soil	02/20/2017 11:28	GC19	134681
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DE</u>	<u>Date Analyzed</u>
TPH(g) (C6-C12)	ND		1.0	1	02/25/2017 09:26
MTBE	---		0.050	1	02/25/2017 09:26
Benzene	---		0.0050	1	02/25/2017 09:26
Toluene	---		0.0050	1	02/25/2017 09:26
Ethylbenzene	---		0.0050	1	02/25/2017 09:26
Xylenes	---		0.015	1	02/25/2017 09:26
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
2-Fluorotoluene	95		69-117		02/25/2017 09:26
<u>Analyst(s):</u> IA					



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-20	1702A53-006A	Soil	02/20/2017 09:17	ICP-MS1	134455

Analytes	Result	RL	DE	Date Analyzed
Cadmium	ND	0.25	1	02/22/2017 15:56
Chromium	56	0.50	1	02/22/2017 15:56
Lead	10	0.50	1	02/22/2017 15:56
Nickel	92	0.50	1	02/22/2017 15:56
Zinc	73	5.0	1	02/22/2017 15:56

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	106	70-130	02/22/2017 15:56

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-40	1702A53-010A	Soil	02/20/2017 09:43	ICP-MS1	134455

Analytes	Result	RL	DE	Date Analyzed
Cadmium	0.27	0.25	1	02/22/2017 16:02
Chromium	51	0.50	1	02/22/2017 16:02
Lead	9.7	0.50	1	02/22/2017 16:02
Nickel	78	0.50	1	02/22/2017 16:02
Zinc	84	5.0	1	02/22/2017 16:02

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	103	70-130	02/22/2017 16:02

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-3	1702A53-012A	Soil	02/20/2017 10:17	ICP-MS1	134455

Analytes	Result	RL	DE	Date Analyzed
Cadmium	ND	0.25	1	02/22/2017 17:21
Chromium	60	0.50	1	02/22/2017 17:21
Lead	23	0.50	1	02/22/2017 17:21
Nickel	100	0.50	1	02/22/2017 17:21
Zinc	79	5.0	1	02/22/2017 17:21

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	102	70-130	02/22/2017 17:21

Analyst(s): DVH

(Cont.)



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-7.5	1702A53-014A	Soil	02/20/2017 10:20	ICP-MS3	134486

Analytes	Result	RL	DE	Date Analyzed
Cadmium	ND	0.25	1	02/22/2017 12:29
Chromium	43	0.50	1	02/22/2017 12:29
Lead	7.5	0.50	1	02/22/2017 12:29
Nickel	73	0.50	1	02/22/2017 12:29
Zinc	52	5.0	1	02/22/2017 12:29

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	108	70-130	02/22/2017 12:29

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-25	1702A53-025A	Soil	02/20/2017 09:48	ICP-MS1	134486

Analytes	Result	RL	DE	Date Analyzed
Cadmium	ND	0.25	1	02/22/2017 17:58
Chromium	43	0.50	1	02/22/2017 17:58
Lead	3.3	0.50	1	02/22/2017 17:58
Nickel	47	0.50	1	02/22/2017 17:58
Zinc	35	5.0	1	02/22/2017 17:58

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	94	70-130	02/22/2017 17:58

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-3	1702A53-029A	Soil	02/20/2017 11:56	ICP-MS1	134486

Analytes	Result	RL	DE	Date Analyzed
Cadmium	ND	0.25	1	02/22/2017 18:16
Chromium	52	0.50	1	02/22/2017 18:16
Lead	7.7	0.50	1	02/22/2017 18:16
Nickel	86	0.50	1	02/22/2017 18:16
Zinc	56	5.0	1	02/22/2017 18:16

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	100	70-130	02/22/2017 18:16

Analyst(s): MIG



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-1.5	1702A53-001A	Soil	02/20/2017 08:53	GC6A	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/24/2017 09:55
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/24/2017 09:55

Surrogates	REC (%)	Limits	
C9	94	72-114	02/24/2017 09:55

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-5	1702A53-002A	Soil	02/20/2017 08:59	GC6A	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	3.3	1.0	1	02/24/2017 10:34
TPH-Motor Oil (C18-C36)	23	5.0	1	02/24/2017 10:34

Surrogates	REC (%)	Limits	
C9	94	72-114	02/24/2017 10:34

Analyst(s): TK

Analytical Comments: e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-20	1702A53-006A	Soil	02/20/2017 09:17	GC9b	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/22/2017 09:14
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/22/2017 09:14

Surrogates	REC (%)	Limits	
C9	94	72-114	02/22/2017 09:14

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	GC6A	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	230	10	10	02/26/2017 02:07
TPH-Motor Oil (C18-C36)	1000	50	10	02/26/2017 02:07

Surrogates	REC (%)	Limits	
C9	94	72-114	02/26/2017 02:07

Analyst(s): TK

Analytical Comments: e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-3	1702A53-012A	Soil	02/20/2017 10:17	GC6A	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	8.4	1.0	1	02/24/2017 11:52
TPH-Motor Oil (C18-C36)	40	5.0	1	02/24/2017 11:52

Surrogates	REC (%)	Limits	
C9	94	72-114	02/24/2017 11:52

Analyst(s): TK

Analytical Comments: e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-7.5	1702A53-014A	Soil	02/20/2017 10:20	GC6A	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 06:03
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/25/2017 06:03

Surrogates	REC (%)	Limits	
C9	94	72-114	02/25/2017 06:03

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-1.5	1702A53-018A	Soil	02/20/2017 08:55	GC6A	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	3.8	2.0	2	02/24/2017 14:27
TPH-Motor Oil (C18-C36)	41	10	2	02/24/2017 14:27

Surrogates	REC (%)	Limits	
C9	91	72-114	02/24/2017 14:27

Analyst(s): TK

Analytical Comments: e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-3	1702A53-019A	Soil	02/20/2017 09:05	GC6A	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 14:28
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/25/2017 14:28

Surrogates	REC (%)	Limits	
C9	94	72-114	02/25/2017 14:28

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-25	1702A53-025A	Soil	02/20/2017 09:48	GC9b	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/22/2017 07:56
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/22/2017 07:56

Surrogates	REC (%)	Limits	
C9	93	72-114	02/22/2017 07:56

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-32	1702A53-027A	Soil	02/20/2017 09:52	GC6A	134459

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

Surrogates	REC (%)	Limits	
C9	94	72-114	02/25/2017 13:11

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-1.5	1702A53-028A	Soil	02/20/2017 11:55	GC6A	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 15:46
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/25/2017 15:46

Surrogates	REC (%)	Limits	
C9	94	72-114	02/25/2017 15:46

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-3	1702A53-029A	Soil	02/20/2017 11:56	GC6A	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 09:18
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/25/2017 09:18

Surrogates	REC (%)	Limits	
C9	93	72-114	02/25/2017 09:18

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-10	1702A53-032A	Soil	02/20/2017 12:12	GC6A	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 10:35
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/25/2017 10:35

Surrogates	REC (%)	Limits	
C9	94	72-114	02/25/2017 10:35

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-1.5	1702A53-035A	Soil	02/20/2017 10:27	GC6A	134459

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 20:56
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/25/2017 20:56

Surrogates	REC (%)	Limits	
C9	95	72-114	02/25/2017 20:56

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-3	1702A53-036A	Soil	02/20/2017 10:30	GC9a	134483

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/22/2017 04:03
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/22/2017 04:03

Surrogates	REC (%)	Limits	
C9	93	72-114	02/22/2017 04:03

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-15	1702A53-040A	Soil	02/20/2017 10:44	GC6A	134483

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 17:03
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/25/2017 17:03

Surrogates	REC (%)	Limits	
C9	95	72-114	02/25/2017 17:03

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-1.5	1702A53-042A	Soil	02/20/2017 11:14	GC6A	134483

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 11:53
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/25/2017 11:53

Surrogates	REC (%)	Limits	
C9	94	72-114	02/25/2017 11:53

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-3	1702A53-043A	Soil	02/20/2017 11:18	GC6A	134483

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 19:39
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/25/2017 19:39

Surrogates	REC (%)	Limits	
C9	95	72-114	02/25/2017 19:39

Analyst(s): TK

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 2/21/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-6-10	1702A53-046A	Soil	02/20/2017 11:28	GC6A	134483

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/25/2017 22:14
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/25/2017 22:14

Surrogates	REC (%)	Limits	
C9	95	72-114	02/25/2017 22:14

Analyst(s): TK



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17 - 2/27/17
Instrument: GC20, GC22
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134485
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS/LCSD-134485
1702A53-001AMS/MSD

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	0.0581		0.050	116	70-130



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17 - 2/27/17
Instrument: GC20, GC22
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134485
Extraction Method: SW3550B
Analytical Method: SW8081A/8082
Unit: mg/kg
Sample ID: MB/LCS/LCSD-134485
1702A53-001AMS/MSD

QC Summary Report for SW8081A/8082

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aldrin	0.0501	-	0.050	100	-	70-130	-	-
g-BHC	0.0525	-	0.050	105	-	70-130	-	-
p,p-DDT	0.0501	-	0.050	100	-	70-130	-	-
Dieldrin	0.0585	-	0.050	117	-	70-130	-	-
Endrin	0.0510	-	0.050	102	-	70-130	-	-
Heptachlor	0.0545	-	0.050	109	-	70-130	-	-
Aroclor1016	0.156	0.154	0.15	104	103	70-130	1.01	20
Aroclor1260	0.192	0.190	0.15	128	127	70-130	0.862	20

Surrogate Recovery

Decachlorobiphenyl	0.0464	0.0582	0.050	93	116	70-130	1.50	20
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Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	NR	NR		ND<0.02	NR	NR	-	NR	
g-BHC	NR	NR		ND<0.02	NR	NR	-	NR	
p,p-DDT	NR	NR		ND<0.02	NR	NR	-	NR	
Dieldrin	NR	NR		ND<0.02	NR	NR	-	NR	
Endrin	NR	NR		ND<0.02	NR	NR	-	NR	
Heptachlor	NR	NR		ND<0.02	NR	NR	-	NR	
Aroclor1016	N/A	N/A		N/A	N/A	N/A	-	N/A	
Aroclor1260	N/A	N/A		N/A	N/A	N/A	-	N/A	

Surrogate Recovery

Decachlorobiphenyl	NR	NR			NR	NR	-	NR	
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Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17 - 2/27/17
Instrument: GC20, GC22
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134485
Extraction Method: SW3550B
Analytical Method: SW8081A
Unit: mg/kg
Sample ID: MB/LCS-134485
1702A53-001AMS/MSD

QC Summary Report for SW8081A

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aldrin	ND	0.0501	0.0010	0.050	-	100	70-130
a-BHC	ND	-	0.0010	-	-	-	-
b-BHC	ND	-	0.0010	-	-	-	-
d-BHC	ND	-	0.0010	-	-	-	-
g-BHC	ND	0.0525	0.0010	0.050	-	105	70-130
Chlordane (Technical)	ND	-	0.025	-	-	-	-
a-Chlordane	ND	-	0.0010	-	-	-	-
g-Chlordane	ND	-	0.0010	-	-	-	-
p,p-DDD	ND	-	0.0010	-	-	-	-
p,p-DDE	ND	-	0.0010	-	-	-	-
p,p-DDT	ND	0.0501	0.0010	0.050	-	100	70-130
Dieldrin	ND	0.0585	0.0010	0.050	-	117	70-130
Endosulfan I	ND	-	0.0010	-	-	-	-
Endosulfan II	ND	-	0.0010	-	-	-	-
Endosulfan sulfate	ND	-	0.0010	-	-	-	-
Endrin	ND	0.0510	0.0010	0.050	-	102	70-130
Endrin aldehyde	ND	-	0.0010	-	-	-	-
Endrin ketone	ND	-	0.0010	-	-	-	-
Heptachlor	ND	0.0545	0.0010	0.050	-	109	70-130
Heptachlor epoxide	ND	-	0.0010	-	-	-	-
Hexachlorobenzene	ND	-	0.010	-	-	-	-
Hexachlorocyclopentadiene	ND	-	0.020	-	-	-	-
Methoxychlor	ND	-	0.0010	-	-	-	-
Toxaphene	ND	-	0.050	-	-	-	-
Aroclor1016	ND	-	0.050	-	-	-	-
Aroclor1221	ND	-	0.050	-	-	-	-
Aroclor1232	ND	-	0.050	-	-	-	-
Aroclor1242	ND	-	0.050	-	-	-	-
Aroclor1248	ND	-	0.050	-	-	-	-
Aroclor1254	ND	-	0.050	-	-	-	-
Aroclor1260	ND	-	0.050	-	-	-	-
PCBs, total	ND	-	0.050	-	-	-	-
Surrogate Recovery							
Decachlorobiphenyl	0.0581	0.0464		0.050	116	93	70-130

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17 - 2/27/17
Instrument: GC20, GC22
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134485
Extraction Method: SW3550B
Analytical Method: SW8081A
Unit: mg/kg
Sample ID: MB/LCS-134485
1702A53-001AMS/MSD

QC Summary Report for SW8081A

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aldrin	NR	NR		ND<0.02	NR	NR	-	NR	
g-BHC	NR	NR		ND<0.02	NR	NR	-	NR	
p,p-DDT	NR	NR		ND<0.02	NR	NR	-	NR	
Dieldrin	NR	NR		ND<0.02	NR	NR	-	NR	
Endrin	NR	NR		ND<0.02	NR	NR	-	NR	
Heptachlor	NR	NR		ND<0.02	NR	NR	-	NR	
Surrogate Recovery									
Decachlorobiphenyl	NR	NR			NR	NR	-	NR	



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17
Instrument: GC23
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134461
Extraction Method: SW3550B
Analytical Method: SW8082
Unit: mg/kg
Sample ID: MB/LCS/LCSD-134461

QC Summary Report for SW8082

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
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	0.05032	0.050	101	70-130
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Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
Aroclor1016	0.146	0.145	0.15	98	96	70-130	1.17	20
Aroclor1260	0.157	0.157	0.15	105	105	70-130	0	20

Surrogate Recovery

Decachlorobiphenyl	0.0471	0.0471	0.050	94	94	70-130	0	20
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Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17 - 2/22/17
Instrument: GC10
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134454
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-134454
1702A03-003AMS/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	0.0413	0.0050	0.050	-	83	53-116
Benzene	ND	0.0477	0.0050	0.050	-	95	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	0.147	0.050	0.20	-	74	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	0.0474	0.0050	0.050	-	95	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	0.0457	0.0040	0.050	-	91	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	0.0435	0.0040	0.050	-	87	58-135
1,1-Dichloroethene	ND	0.0513	0.0050	0.050	-	103	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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QA/QC Officer



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17 - 2/22/17
Instrument: GC10
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134454
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-134454
1702A03-003AMS/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	0.0432	0.0050	0.050	-	86	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0431	0.0050	0.050	-	86	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	0.0417	0.0050	0.050	-	83	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	0.0515	0.0050	0.050	-	103	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	0.0504	0.0050	0.050	-	101	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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QA/QC Officer



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17 - 2/22/17
Instrument: GC10
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134454
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-134454
1702A03-003AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.1229	0.127		0.12	98	101	70-130
Toluene-d8	0.1369	0.135		0.12	110	108	70-130
4-BFB	0.01434	0.0149		0.012	115	119	70-130
Benzene-d6	0.09789	0.0982		0.10	98	98	60-140
Ethylbenzene-d10	0.1155	0.114		0.10	116	114	60-140
1,2-DCB-d4	0.08368	0.0818		0.10	84	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)	0.0370	0.0335	0.050	ND	74	67	53-116	9.94	20
Benzene	0.0421	0.0379	0.050	ND	84	76	63-137	10.6	20
t-Butyl alcohol (TBA)	0.124	0.112	0.20	ND	62	56	41-135	10.7	20
Chlorobenzene	0.0420	0.0374	0.050	ND	84	75,F1	77-121	11.5	20
1,2-Dibromoethane (EDB)	0.0406	0.0359	0.050	ND	81	72	67-119	12.5	20
1,2-Dichloroethane (1,2-DCA)	0.0388	0.0352	0.050	ND	78	70	58-135	9.71	20
1,1-Dichloroethene	0.0439	0.0387	0.050	ND	88	77	42-145	12.6	20
Diisopropyl ether (DIPE)	0.0381	0.0347	0.050	ND	76	69	52-129	9.43	20
Ethyl tert-butyl ether (ETBE)	0.0379	0.0345	0.050	ND	76	69	53-125	9.49	20
Methyl-t-butyl ether (MTBE)	0.0365	0.0330	0.050	ND	73	66	58-122	9.99	20
Toluene	0.0452	0.0399	0.050	ND	90	80	76-130	12.6	20
Trichloroethene	0.0444	0.0397	0.050	ND	89	79	72-132	11.1	20
Surrogate Recovery									
Dibromofluoromethane	0.127	0.129	0.12		101	103	70-130	1.68	20
Toluene-d8	0.134	0.133	0.12		107	106	70-130	0.965	20
4-BFB	0.0148	0.0144	0.012		118	116	70-130	2.27	20
Benzene-d6	0.0884	0.0823	0.10		88	82	60-140	7.15	20
Ethylbenzene-d10	0.101	0.0905	0.10		101	91	60-140	10.5	20
1,2-DCB-d4	0.0775	0.0718	0.10		77	72	60-140	7.57	20



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17 - 2/22/17
Instrument: GC21
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134490
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-134490

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	3.42	0.25	5	-	68	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	3.80	0.25	5	-	76	49-123
2-Chloronaphthalene	ND	-	0.25	-	-	-	-
2-Chlorophenol	ND	3.92	0.25	5	-	78	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	3.19	0.25	5	-	64	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	-	-	-	-

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17 - 2/22/17
Instrument: GC21
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134490
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-134490

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	3.86	0.25	5	-	77	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	4.04	1.3	5	-	81	40-102
N-Nitrosodiphenylamine	ND	-	0.25	-	-	-	-
N-Nitrosodi-n-propylamine	ND	3.52	0.25	5	-	70	47-108
Pentachlorophenol	ND	2.56	1.3	5	-	51	39-134
Phenanthrene	ND	-	0.25	-	-	-	-
Phenol	ND	3.62	0.25	5	-	72	49-107
Pyrene	ND	3.38	0.25	5	-	68	55-124
1,2,4-Trichlorobenzene	ND	3.56	0.25	5	-	71	51-121
2,4,5-Trichlorophenol	ND	-	0.25	-	-	-	-
2,4,6-Trichlorophenol	ND	-	0.25	-	-	-	-

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17 - 2/22/17
Instrument: GC21
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134490
Extraction Method: SW3550B
Analytical Method: SW8270C
Unit: mg/Kg
Sample ID: MB/LCS-134490

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
2-Fluorophenol	3.617	2.54		5	72	51	47-125
Phenol-d5	3.506	2.63		5	70	53	45-117
Nitrobenzene-d5	3.153	2.40		5	63	48	39-121
2-Fluorobiphenyl	2.664	2.00		5	53	40	35-120
2,4,6-Tribromophenol	3.131	2.22		5	63	44	32-111
4-Terphenyl-d14	2.978	1.95		5	60	39	32-128



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17
Instrument: ICP-MS2
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134455
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134455
1702A03-006AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	41.8	0.50	50	-	84	75-125
Arsenic	ND	46.3	0.50	50	-	93	75-125
Barium	ND	422	5.0	500	-	84	75-125
Beryllium	ND	44.1	0.50	50	-	88	75-125
Cadmium	ND	42.8	0.25	50	-	86	75-125
Chromium	ND	44.7	0.50	50	-	89	75-125
Cobalt	ND	39.1	0.50	50	-	78	75-125
Copper	ND	43.5	0.50	50	-	87	75-125
Lead	ND	42.3	0.50	50	-	85	75-125
Mercury	ND	1.15	0.050	1.25	-	92	75-125
Molybdenum	ND	41.7	0.50	50	-	83	75-125
Nickel	ND	43.5	0.50	50	-	87	75-125
Selenium	ND	41.7	0.50	50	-	83	75-125
Silver	ND	38.9	0.50	50	-	78	75-125
Thallium	ND	39.2	0.50	50	-	78	75-125
Vanadium	ND	43.6	0.50	50	-	87	75-125
Zinc	ND	434	5.0	500	-	87	75-125
Surrogate Recovery							
Terbium	478.5	421		500	96	84	70-130

(Cont.)



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17
Instrument: ICP-MS2
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134455
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134455
1702A03-006AMS/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	50.2	44.5	50	ND	100	88	75-125	12.1	20
Arsenic	57.5	51.8	50	5.8	103	92	75-125	10.4	20
Barium	628	566	500	100	105	93	75-125	10.3	20
Beryllium	50.9	45.1	50	ND	101	89	75-125	12.0	20
Cadmium	48.3	44.4	50	ND	96	88	75-125	8.44	20
Chromium	67.6	61.8	50	17	101	90	75-125	8.92	20
Cobalt	55.3	45.5	50	6.5	97	78	75-125	19.5	20
Copper	63.9	58.2	50	15	97	86	75-125	9.40	20
Lead	55.9	50.1	50	5.0	102	90	75-125	11.0	20
Mercury	1.30	1.24	1.25	0.052	100	95	75-125	4.89	20
Molybdenum	50.2	44.9	50	0.65	99	88	75-125	11.1	20
Nickel	65.3	60.2	50	17	96	86	75-125	8.23	20
Selenium	51.7	48.4	50	ND	103	96	75-125	6.69	20
Silver	46.5	40.5	50	ND	93	81	75-125	13.8	20
Thallium	46.8	41.6	50	ND	93	83	75-125	11.7	20
Vanadium	104	87.8	50	43	124	90	75-125	17.3	20
Zinc	519	484	500	37	96	89	75-125	6.90	20

Surrogate Recovery

Terbium	501	449	500		100	90	70-130	11.0	20
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Analyte	DLT Result	DLTRef Val	%D	%D Limit
Antimony	ND<2.5	ND	-	-
Arsenic	5.36	5.8	7.59	-
Barium	101	100	1.00	-
Beryllium	ND<2.5	ND	-	-
Cadmium	ND<1.2	ND	-	-
Chromium	16.6	17	2.35	20
Cobalt	6.85	6.5	5.38	-
Copper	15.4	15	2.67	20
Lead	5.18	5.0	3.60	-
Mercury	ND<0.25	0.052	-	-
Molybdenum	ND<2.5	0.65	-	-
Nickel	16.8	17	1.18	20
Selenium	ND<2.5	ND	-	-

(Cont.)



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17
Instrument: ICP-MS2
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134455
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134455
1702A03-006AMS/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	42.4	43	1.40	20
Zinc	40.6	37	9.73	-

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



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17
Instrument: ICP-MS3
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134486
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134486
1702A53-014AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Antimony	ND	49.7	0.50	50	-	99	75-125
Arsenic	ND	51.0	0.50	50	-	102	75-125
Barium	ND	521	5.0	500	-	104	75-125
Beryllium	ND	51.8	0.50	50	-	104	75-125
Cadmium	ND	49.1	0.25	50	-	98	75-125
Chromium	ND	47.8	0.50	50	-	96	75-125
Cobalt	ND	52.0	0.50	50	-	104	75-125
Copper	ND	49.3	0.50	50	-	99	75-125
Lead	ND	50.8	0.50	50	-	102	75-125
Mercury	ND	1.27	0.050	1.25	-	102	75-125
Molybdenum	ND	51.7	0.50	50	-	103	75-125
Nickel	ND	50.2	0.50	50	-	100	75-125
Selenium	ND	51.2	0.50	50	-	102	75-125
Silver	ND	49.4	0.50	50	-	99	75-125
Thallium	ND	49.6	0.50	50	-	99	75-125
Vanadium	ND	48.1	0.50	50	-	96	75-125
Zinc	ND	502	5.0	500	-	100	75-125
Surrogate Recovery							
Terbium	512	530		500	102	106	70-130

(Cont.)



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17
Instrument: ICP-MS3
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134486
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134486
1702A53-014AMS/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	50.1	49.5	50	0.70	99	98	75-125	1.31	20
Arsenic	57.6	57.7	50	7.4	100	101	75-125	0.191	20
Barium	664	642	500	150	103	98	75-125	3.41	20
Beryllium	49.4	48.7	50	ND	98	97	75-125	1.53	20
Cadmium	48.5	48.2	50	ND	97	96	75-125	0.476	20
Chromium	92.5	92.0	50	42.73	100	99	75-125	0.531	20
Cobalt	59.5	58.8	50	10	99	97	75-125	1.13	20
Copper	69.2	69.0	50	22	95	95	75-125	0	20
Lead	57.2	57.4	50	7.542	99	100	75-125	0.349	20
Mercury	1.36	1.34	1.25	0.16	96	95	75-125	1.55	20
Molybdenum	51.7	51.3	50	ND	103	102	75-125	0.835	20
Nickel	124	124	50	73.11	101	101	75-125	0	20
Selenium	50.0	49.8	50	ND	100	99	75-125	0.381	20
Silver	48.7	48.3	50	ND	97	97	75-125	0	20
Thallium	49.4	49.5	50	ND	99	99	75-125	0	20
Vanadium	82.1	82.0	50	31	103	103	75-125	0	20
Zinc	538	539	500	51.66	97	97	75-125	0	20

Surrogate Recovery

Terbium	529	519	500		106	104	70-130	2.00	20
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Analyte	DLT Result	DLTRef Val	%D	%D Limit
Antimony	ND<2.5	0.70	-	-
Arsenic	7.19	7.4	2.84	-
Barium	152	150	1.33	20
Beryllium	ND<2.5	ND	-	-
Cadmium	ND<1.2	ND	-	-
Chromium	44.8	42.73	4.84	20
Cobalt	10.9	10	9.00	-
Copper	21.7	22	1.36	20
Lead	9.00	7.542	19.3	-
Mercury	ND<0.25	0.16	-	-
Molybdenum	ND<2.5	ND	-	-
Nickel	74.0	73.11	1.22	20
Selenium	ND<2.5	ND	-	-

(Cont.)



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17
Instrument: ICP-MS3
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134486
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134486
1702A53-014AMS/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	31.9	31	2.90	20
Zinc	52.1	51.66	0.852	-

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



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17 - 2/27/17
Instrument: GC19
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134453
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-134453
1702A03-004AMS/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	0.604	0.40	0.60	-	101	89-118
MTBE	ND	0.0930	0.050	0.10	-	93	68-116
Benzene	ND	0.112	0.0050	0.10	-	112	85-118
Toluene	ND	0.110	0.0050	0.10	-	110	87-121
Ethylbenzene	ND	0.107	0.0050	0.10	-	107	91-124
Xylenes	ND	0.299	0.015	0.30	-	100	92-126
Surrogate Recovery							
2-Fluorotoluene	0.09694	0.0898		0.10	97	90	88-119

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.557	0.550	0.60	ND	93	92	66-122	1.26	20
MTBE	0.0987	0.101	0.10	ND	99	101	58-106	2.66	20
Benzene	0.111	0.110	0.10	ND	111	110	63-116	0.583	20
Toluene	0.112	0.111	0.10	ND	111	110	66-118	0.799	20
Ethylbenzene	0.109	0.108	0.10	ND	109	108	69-121	1.29	20
Xylenes	0.309	0.307	0.30	ND	103	102	70-125	0.804	20
Surrogate Recovery									
2-Fluorotoluene	0.0901	0.0898	0.10		90	90	69-117	0	20



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17 - 2/27/17
Instrument: GC19
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134484
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-134484
1702A53-012AMS/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	0.630	0.40	0.60	-	105	89-118
MTBE	ND	0.110	0.050	0.10	-	110	68-116
Benzene	ND	0.121	0.0050	0.10	-	121, F2	85-118
Toluene	ND	0.120	0.0050	0.10	-	120	87-121
Ethylbenzene	ND	0.118	0.0050	0.10	-	118	91-124
Xylenes	ND	0.333	0.015	0.30	-	111	92-126
Surrogate Recovery							
2-Fluorotoluene	0.09656	0.0960		0.10	97	96	88-119

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.619	0.585	0.60	ND	103	98	66-122	5.62	20
MTBE	0.110	0.108	0.10	ND	110,F1	108,F1	58-106	1.98	20
Benzene	0.118	0.113	0.10	ND	116	111	63-116	4.92	20
Toluene	0.120	0.114	0.10	ND	119,F1	114	66-118	4.57	20
Ethylbenzene	0.116	0.110	0.10	ND	116	110	69-121	5.10	20
Xylenes	0.329	0.312	0.30	ND	107	101	70-125	5.22	20
Surrogate Recovery									
2-Fluorotoluene	0.0951	0.0916	0.10		95	92	69-117	3.83	20



Quality Control Report

Client: Langan
Date Prepared: 2/24/17
Date Analyzed: 2/25/17
Instrument: GC3
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134681
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-134681
1702C52-007AMS/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	0.599	0.40	0.60	-	100	89-118
MTBE	ND	0.0932	0.050	0.10	-	93	68-116
Benzene	ND	0.112	0.0050	0.10	-	112	85-118
Toluene	ND	0.116	0.0050	0.10	-	116	87-121
Ethylbenzene	ND	0.109	0.0050	0.10	-	109	91-124
Xylenes	ND	0.338	0.015	0.30	-	113	92-126
Surrogate Recovery							
2-Fluorotoluene	0.1107	0.107		0.10	111	107	88-119

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.546	0.554	0.60	ND	91	92	66-122	1.57	20
MTBE	0.0836	0.0823	0.10	ND	84	82	58-106	1.65	20
Benzene	0.0960	0.0968	0.10	ND	96	97	63-116	0.880	20
Toluene	0.0996	0.101	0.10	ND	98	99	66-118	1.53	20
Ethylbenzene	0.102	0.104	0.10	ND	102	104	69-121	2.18	20
Xylenes	0.323	0.330	0.30	ND	108	110	70-125	2.13	20
Surrogate Recovery									
2-Fluorotoluene	0.0981	0.101	0.10		98	101	69-117	2.83	20



Quality Control Report

Client: Langan
Date Prepared: 2/27/17
Date Analyzed: 2/27/17
Instrument: GC19
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134746
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-134746

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.592	0.40	0.60	-	99	89-118
MTBE	ND	0.0973	0.050	0.10	-	97	68-116
Benzene	ND	0.110	0.0050	0.10	-	111	85-118
Toluene	ND	0.110	0.0050	0.10	-	110	87-121
Ethylbenzene	ND	0.107	0.0050	0.10	-	107	91-124
Xylenes	ND	0.298	0.015	0.30	-	99	92-126
Surrogate Recovery							
2-Fluorotoluene	0.1065	0.0876		0.10	106	88	88-119



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17
Instrument: ICP-MS2
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134455
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134455
1702A03-006AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	42.8	0.25	50	-	86	75-125
Chromium	ND	44.7	0.50	50	-	89	75-125
Lead	ND	42.3	0.50	50	-	85	75-125
Nickel	ND	43.5	0.50	50	-	87	75-125
Zinc	ND	434	5.0	500	-	87	75-125
Surrogate Recovery							
Terbium	478.5	421		500	96	84	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	48.3	44.4	50	ND	96	88	75-125	8.44	20
Chromium	67.6	61.8	50	17	101	90	75-125	8.92	20
Lead	55.9	50.1	50	5.0	102	90	75-125	11.0	20
Nickel	65.3	60.2	50	17	96	86	75-125	8.23	20
Zinc	519	484	500	37	96	89	75-125	6.90	20
Surrogate Recovery									
Terbium	501	449	500		100	90	70-130	11.0	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Cadmium	ND<1.2	ND	-	-
Chromium	16.6	17	2.35	20
Lead	5.18	5.0	3.60	-
Nickel	16.8	17	1.18	20
Zinc	40.6	37	9.73	-

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

(Cont.)



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17
Instrument: ICP-MS3
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134486
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134486
1702A53-014AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	49.1	0.25	50	-	98	75-125
Chromium	ND	47.8	0.50	50	-	96	75-125
Lead	ND	50.8	0.50	50	-	102	75-125
Nickel	ND	50.2	0.50	50	-	100	75-125
Zinc	ND	502	5.0	500	-	100	75-125
Surrogate Recovery							
Terbium	512	530		500	102	106	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	48.5	48.2	50	ND	97	96	75-125	0.476	20
Chromium	92.5	92.0	50	42.73	100	99	75-125	0.531	20
Lead	57.2	57.4	50	7.542	99	100	75-125	0.349	20
Nickel	124	124	50	73.11	101	101	75-125	0	20
Zinc	538	539	500	51.66	97	97	75-125	0	20
Surrogate Recovery									
Terbium	529	519	500		106	104	70-130	2.00	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Cadmium	ND<1.2	ND	-	-
Chromium	44.8	42.73	4.84	20
Lead	9.00	7.542	19.3	-
Nickel	74.0	73.11	1.22	20
Zinc	52.1	51.66	0.852	-

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



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/21/17 - 2/22/17
Instrument: GC9a, GC9b
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134459
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-134459
1702A46-001AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	35.9	1.0	40	-	90, F2	91-127
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	25.88	24.9		25	104	100	74-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	46.7	43.4	40	ND	117	109	74-143	7.36	30
Surrogate Recovery									
C9	23.5	23.5	25		94	94	72-114	0	30



Quality Control Report

Client: Langan
Date Prepared: 2/21/17
Date Analyzed: 2/22/17
Instrument: GC9a
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134483
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-134483
1702A53-036AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	42.2	1.0	40	-	105	91-127
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	23.46	23.5		25	94	94	74-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	40.5	46.0	40	ND	101	115	74-143	12.7	30
Surrogate Recovery									
C9	23.5	23.3	25		94	93	72-114	0.884	30



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1702A53

ClientCode: TRSJ

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Report to:

Peter Cusack
Langan
1 Almaden Blvd, Suite 590
San Jose, CA 95113
(408) 551-6700 FAX:

Email: pcusack@langan.com
cc/3rd Party: cmadsen@langan.com;
PO:
ProjectNo: 770638201; 199 Bassett Street

Bill to:

Accounts Payable
Langan
555 Montgomery St., Suite 1300
San Francisco, CA 94111
Langan_InvoiceCapture@concursolutio

Requested TAT: 5 days;

Date Received: 02/21/2017

Date Logged: 02/21/2017

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
1702A53-001	LSB-1-1.5	Soil	2/20/2017 08:53	☐	A						A	A		A		
1702A53-002	LSB-1-5	Soil	2/20/2017 08:59	☐				A	A		A	A		A		
1702A53-006	LSB-1-20	Soil	2/20/2017 09:17	☐						A		A	A	A		
1702A53-010	LSB-1-40	Soil	2/20/2017 09:43	☐									A			
1702A53-011	LSB-2-1.5	Soil	2/20/2017 10:15	☐		A		A	A		A	A		A		
1702A53-012	LSB-2-3	Soil	2/20/2017 10:17	☐						A		A	A	A		
1702A53-014	LSB-2-7.5	Soil	2/20/2017 10:20	☐								A	A	A		
1702A53-018	LSB-3-1.5	Soil	2/20/2017 08:55	☐	A						A	A		A		
1702A53-019	LSB-3-3	Soil	2/20/2017 09:05	☐			A	A	A		A	A		A		
1702A53-025	LSB-3-25	Soil	2/20/2017 09:48	☐				A	A			A	A	A		
1702A53-027	LSB-3-32	Soil	2/20/2017 09:52	☐							A	A		A		
1702A53-028	LSB-4-1.5	Soil	2/20/2017 11:55	☐		A		A	A		A	A		A		
1702A53-029	LSB-4-3	Soil	2/20/2017 11:56	☐								A	A	A		
1702A53-032	LSB-4-10	Soil	2/20/2017 12:12	☐				A	A	A	A	A		A		
1702A53-035	LSB-5-1.5	Soil	2/20/2017 10:27	☐	A						A	A		A		

Test Legend:

1	8081_S	2	8081PCB_S	3	8082_PCB_S	4	8260B_S
5	8270_S	6	ASBESTOS_E600PLM_S	7	CAM17MS_TTLC_S	8	G-MBTX_S
9	LUFTMS_6020_TTLC_S	10	TPH(DMO)_S	11		12	

Prepared by: Briana Cutino

The following SampleIDs: 001A, 002A, 006A, 011A, 012A, 014A, 018A, 019A, 025A, 027A, 028A, 029A, 032A, 035A, 036A, 040A, 042A, 043A, 046A contain testgroup Multi Range_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.



CHAIN-OF-CUSTODY RECORD

WorkOrder: 1702A53

ClientCode: TRSJ

☐ WaterTrax☐ WriteOn☐ EDF☐ Excel☒ EQulS☒ Email☐ HardCopy☐ ThirdParty☐ J-flag**Report to:**

Peter Cusack
Langan
1 Almaden Blvd, Suite 590
San Jose, CA 95113
(408) 551-6700 FAX:

Email: pcusack@langan.com
cc/3rd Party: cmadsen@langan.com;
PO:
ProjectNo: 770638201; 199 Bassett Street

Bill to:

Accounts Payable
Langan
555 Montgomery St., Suite 1300
San Francisco, CA 94111
Langan_InvoiceCapture@concursolutio

Requested TAT: 5 days;

Date Received: 02/21/2017

Date Logged: 02/21/2017

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
1702A53-036	LSB-5-3	Soil	2/20/2017 10:30	☐							A	A		A		
1702A53-040	LSB-5-15	Soil	2/20/2017 10:44	☐				A	A			A		A		
1702A53-041	LSB-5-20	Soil	2/20/2017 10:45	☐	A						A					
1702A53-042	LSB-6-1.5	Soil	2/20/2017 11:14	☐						A	A	A		A		
1702A53-043	LSB-6-3	Soil	2/20/2017 11:18	☐				A	A			A		A		
1702A53-046	LSB-6-10	Soil	2/20/2017 11:28	☐							A	A		A		

Test Legend:

1	8081_S	2	8081PCB_S	3	8082_PCB_S	4	8260B_S
5	8270_S	6	ASBESTOS_E600PLM_S	7	CAM17MS_TTLC_S	8	G-MBTX_S
9	LUFTMS_6020_TTLC_S	10	TPH(DMO)_S	11		12	

Prepared by: Briana Cutino

The following SampleIDs: 001A, 002A, 006A, 011A, 012A, 014A, 018A, 019A, 025A, 027A, 028A, 029A, 032A, 035A, 036A, 040A, 042A, 043A, 046A contain testgroup Multi Range_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.



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http://www.mcccampbell.com / E-mail: main@mcccampbell.com

WORK ORDER SUMMARY

Client Name: LANGAN
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Project: 770638201; 199 Bassett Street

Comments:

Work Order: 1702A53
QC Level: LEVEL 2
Date Logged: 2/21/2017

☐ 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
1702A53-001A	LSB-1-1.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 8:53	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8081A (OC Pesticides)			☐		5 days		☐	
1702A53-002A	LSB-1-5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 8:59	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1702A53-003A	LSB-1-7.5	Soil		1	Acetate Liner	☐	2/20/2017 9:00			☒	
1702A53-004A	LSB-1-10	Soil		1	Acetate Liner	☐	2/20/2017 9:10			☒	
1702A53-005A	LSB-1-15	Soil		1	Acetate Liner	☐	2/20/2017 9:13			☒	
1702A53-006A	LSB-1-20	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	2/20/2017 9:17	5 days		☐	
			Multi-Range TPH(g,d,mo) by EPA 8015Bm			☐		5 days		☐	
			Asbestos - PLM			☐		5 days		☐	SubOut
1702A53-007A	LSB-1-25	Soil		1	Acetate Liner	☐	2/20/2017 9:25			☒	
1702A53-008A	LSB-1-30	Soil		1	Acetate Liner	☐	2/20/2017 9:30			☒	

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).

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http://www.mcccampbell.com / E-mail: main@mcccampbell.com

WORK ORDER SUMMARY

Client Name: LANGAN
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Project: 770638201; 199 Bassett Street

Comments:

Work Order: 1702A53
QC Level: LEVEL 2
Date Logged: 2/21/2017

☐ 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
1702A53-009A	LSB-1-35	Soil		1	Acetate Liner	☐	2/20/2017 9:39			☒	
1702A53-010A	LSB-1-40	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	2/20/2017 9:43	5 days		☐	
1702A53-011A	LSB-2-1.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 10:15	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
			SW8081A/8082 (OC Pesticides+PCBs)			☐		5 days		☐	
1702A53-012A	LSB-2-3	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	2/20/2017 10:17	5 days		☐	
			Multi-Range TPH(g,d,mo) by EPA 8015Bm			☐		5 days		☐	
			Asbestos - PLM			☐		5 days		☐	SubOut
1702A53-013A	LSB-2-5	Soil		1	Acetate Liner	☐	2/20/2017 10:19			☒	
1702A53-014A	LSB-2-7.5	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	2/20/2017 10:20	5 days		☐	
			Multi-Range TPH(g,d,mo) by EPA 8015Bm			☐		5 days		☐	
1702A53-015A	LSB-2-10	Soil		1	Acetate Liner	☐	2/20/2017 10:26			☒	
1702A53-016A	LSB-2-15	Soil		1	Acetate Liner	☐	2/20/2017 10:33			☒	

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).

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WORK ORDER SUMMARY

Client Name: LANGAN
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Project: 770638201; 199 Bassett Street

Comments:

Work Order: 1702A53
QC Level: LEVEL 2
Date Logged: 2/21/2017

☐ 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
1702A53-017A	LSB-2-20	Soil		1	Acetate Liner	☐	2/20/2017 10:37			☒	
1702A53-018A	LSB-3-1.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 8:55	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8081A (OC Pesticides)			☐		5 days		☐	
1702A53-019A	LSB-3-3	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 9:05	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
			SW8082 (PCBs Only)			☐		5 days		☐	
1702A53-020A	LSB-3-5	Soil		1	Acetate Liner	☐	2/20/2017 9:10			☒	
1702A53-021A	LSB-3-7.5	Soil		1	Acetate Liner	☐	2/20/2017 9:07			☒	
1702A53-022A	LSB-3-10	Soil		1	Acetate Liner	☐	2/20/2017 9:10			☒	
1702A53-023A	LSB-3-15	Soil		1	Acetate Liner	☐	2/20/2017 9:40			☒	
1702A53-024A	LSB-3-20	Soil		1	Acetate Liner	☐	2/20/2017 9:41			☒	
1702A53-025A	LSB-3-25	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	2/20/2017 9:48	5 days		☐	

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).

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WORK ORDER SUMMARY

Client Name: LANGAN
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Project: 770638201; 199 Bassett Street

Comments:

Work Order: 1702A53
QC Level: LEVEL 2
Date Logged: 2/21/2017

☐ 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
1702A53-025A	LSB-3-25	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 9:48	5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1702A53-026A	LSB-3-30	Soil		1	Acetate Liner	☐	2/20/2017 9:50			☒	
1702A53-027A	LSB-3-32	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 9:52	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
1702A53-028A	LSB-4-1.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 11:55	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
			SW8081A/8082 (OC Pesticides+PCBs)			☐		5 days		☐	
1702A53-029A	LSB-4-3	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	2/20/2017 11:56	5 days		☐	
			Multi-Range TPH(g,d,mo) by EPA 8015Bm			☐		5 days		☐	
1702A53-030A	LSB-4-5	Soil		1	Acetate Liner	☐	2/20/2017 11:57			☒	
1702A53-031A	LSB-4-7.5	Soil		1	Acetate Liner	☐	2/20/2017 11:59			☒	

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).

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WORK ORDER SUMMARY

Client Name: LANGAN
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Project: 770638201; 199 Bassett Street

Comments:

Work Order: 1702A53
QC Level: LEVEL 2
Date Logged: 2/21/2017

☐ 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
1702A53-032A	LSB-4-10	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 12:12	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			Asbestos - PLM			☐		5 days		☐	SubOut
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1702A53-033A	LSB-4-15	Soil		1	Acetate Liner	☐	2/20/2017 12:15			☒	
1702A53-034A	LSB-4-20	Soil		1	Acetate Liner	☐	2/20/2017 12:20			☒	
1702A53-035A	LSB-5-1.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 10:27	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			SW8081A (OC Pesticides)			☐		5 days		☐	
1702A53-036A	LSB-5-3	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 10:30	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
1702A53-037A	LSB-5-5	Soil		1	Acetate Liner	☐	2/20/2017 10:31			☒	
1702A53-038A	LSB-5-7.5	Soil		1	Acetate Liner	☐	2/20/2017 10:40			☒	
1702A53-039A	LSB-5-10	Soil		1	Acetate Liner	☐	2/20/2017 10:43			☒	

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).

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WORK ORDER SUMMARY

Client Name: LANGAN
Client Contact: Peter Cusack
Contact's Email: pcusack@langan.com

Project: 770638201; 199 Bassett Street

Comments:

Work Order: 1702A53
QC Level: LEVEL 2
Date Logged: 2/21/2017

☐ 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
1702A53-040A	LSB-5-15	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 10:44	5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1702A53-041A	LSB-5-20	Soil	SW6020 (CAM 17)	1	Acetate Liner	☐	2/20/2017 10:45	5 days		☐	
			SW8081A (OC Pesticides)			☐		5 days		☐	
1702A53-042A	LSB-6-1.5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 11:14	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	
			Asbestos - PLM			☐		5 days		☐	SubOut
1702A53-043A	LSB-6-3	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 11:18	5 days		☐	
			SW8270C (SVOCs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1702A53-044A	LSB-6-5	Soil		1	Acetate Liner	☐	2/20/2017 11:23			☒	
1702A53-045A	LSB-6-7.5	Soil		1	Acetate Liner	☐	2/20/2017 11:25			☒	
1702A53-046A	LSB-6-10	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	☐	2/20/2017 11:28	5 days		☐	
			SW6020 (CAM 17)			☐		5 days		☐	

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).

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WORK ORDER SUMMARY

Client Name: LANGAN

Client Contact: Peter Cusack

Contact's Email: pcusack@langan.com

Project: 770638201; 199 Bassett Street

Comments:

Work Order: 1702A53

QC Level: LEVEL 2

Date Logged: 2/21/2017

☐ WaterTrax

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☐ ThirdParty

☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1702A53-047A	LSB-6-15	Soil		1	Acetate Liner	☐	2/20/2017 11:34			☒	
1702A53-048A	LSB-6-20	Soil		1	Acetate Liner	☐	2/20/2017 11:40			☒	

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).

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Proj. Name: 199 Bassett Street		Proj. No: 770638201		ANALYSIS REQUESTED														COMMENTS						
Site Location: San Jose CA		Auth. By: P. Cusack		TPH(g/dm ³)	VOCs	SVOCs	PCBs	Pesticides	CAMIL7	LUFTG	Asbestos													
Sampled By: Christine B Madsen		Phone No: 408-551-5271																						
Company: LANGAN																								
Sample Number	Depth Location	Date Depth	Time Date	Time	Matrix	Grab Comp.	Inorg/PHC Preserve.	No. of Cont.	TPH(g/dm ³)	VOCs	SVOCs	PCBs	Pesticides	CAMIL7	LUFTG	Asbestos								
LSB 1-1.5	1.5	20Feb17	0853		S	G	—	1	X					X	X									
LSB 1-5	5	20Feb17	0859		S	G	—	1	X	X	X			X										
LSB 1-7.5	7.5	20Feb17	0900		S	G	—	1									HOLD							
LSB 1-10	10	20Feb17	0910		S	G	—	1									HOLD							
LSB 1-15	15	20Feb17	0913		S	G	—	1									HOLD							
LSB 1-20	20	20Feb17	0917		S	G	—	1	X						X	X								
LSB 1-25	25	20Feb17	0925		S	G	—	1									HOLD							
LSB 1-30	30	20Feb17	0930		S	G	—	1									HOLD							
LSB 1-35	35	20Feb17	0939		S	G	—	1									HOLD							
LSB 1-40	40	20Feb17	0943		S	G	—	1							X									
LSB 2-1.5	1.5	20Feb17	1015		S	G	—	1	X	X	X	X	X	X										
LSB 2-3	3	20Feb17	1017		S	G	—	1	X						X	X								
LSB 2-5	5	20Feb17	1019		S	G	—	1									HOLD							
LSB 2-7.5	7.5	20Feb17	1020		S	G	—	1	X						X									
LSB 2-10	10	20Feb17	1026		S	G	—	1									HOLD							

Metals Filtered (Yes/No)? _____ Total No. of Containers: 15

Aq. VOAs Pres. (Yes/No)? _____

Rush T/A, Report format, Contingent analysis: _____

cc: CMADSEN@LANGAN + PCUSACK@LANGAN.COM

(1) Relinquished By: Christine B Madsen DATE: 21Feb17 Received By: [Signature]
Company: Langan TIME: _____ Company: _____

(2) Relinquished By: [Signature] DATE: 217 Received By: [Signature]
Company: _____ TIME: 1540 Company: _____

(3) Relinquished By: _____ DATE: _____ Received By: _____
Company: _____ TIME: _____ Company: _____

(4) Relinquished By: _____ DATE: _____ Received By: _____
Company: _____ TIME: _____ Company: _____

Laboratory Name & Address: McCampbell Analytical

*labeled LSB-1-7.5 distinguished by time

Proj. Name: 199 Bassett Street		Proj. No: 770638201		ANALYSIS REQUESTED														COMMENTS						
Site Location: San Jose, CA		Auth. By: P. Cusack		TPH (g/dm ³)	VOCs	SVOCs	PCBs	Pesticides	CML17	LULF5	Asbestos													
Sampled By: Christine B. Madsen		Phone No: 408-551-5271																						
Company: LANGAN																								
Sample Number	Location	Depth	Date	Time	Matrix	Grab Comp.	Inorg/PHC Preserve.	No. of Cont.	TPH (g/dm ³)	VOCs	SVOCs	PCBs	Pesticides	CML17	LULF5	Asbestos								
LSB-2-15		15	20Feb17	1033		G	—	1										HOLD						
LSB-2-20		20	20Feb17	1037		G	—	1										HOLD						
LSB-3-1.5		1.5	20Feb17	1017	0855	G	—	1	X				X	X										
LSB-3-3		3	20Feb17	1030	0905	G	—	1	X	X	X	X		X										
LSB-3-5		5	20Feb17	1031	0910	G	—	1										HOLD						
LSB-3-7.5		7.5	20Feb17	1040	0907	G	—	1										HOLD						
LSB-3-10		10	20Feb17	1043	0910	G	—	1										HOLD						
LSB-3-15		15	20Feb17	1044	0940	G	—	1										HOLD						
LSB-3-20		20	20Feb17	1049	0941	G	—	1										HOLD						
LSB-3-25		25	20Feb17	0948		G	—	1	X	X	X				X									
LSB-3-30		30	20Feb17	0950		G	—	1										HOLD						
LSB-3-32		32	20Feb17	0952		G	—	1	X					X										
LSB-4-1.5		1.5	20Feb17	1155		G	—	1	X	X	X	X	X	X										
LSB-4-3		3	20Feb17	1156		G	—	1	X						X									
LSB-4-5		5	20Feb17	1157		G	—	1										HOLD						

Metals Filtered (Yes/No)? _____ Total No. of Containers: 15

Aq. VOAs Pres. (Yes/No)? _____

Rush T/A, Report format, Contingent analysis: _____

cc: CMADSEN@LANGAN.COM + PCUSACK@LANGAN.COM

(1) Relinquished By: Christine B. Madsen DATE: _____ Received By: [Signature]
Company: LANGAN TIME: _____ Company: _____

(2) Relinquished By: [Signature] DATE: 2-17 Received By: [Signature]
Company: _____ TIME: 1540 Company: _____

(3) Relinquished By: _____ DATE: _____ Received By: _____
Company: _____ TIME: _____ Company: _____

(4) Relinquished By: _____ DATE: _____ Received By: _____
Company: _____ TIME: _____ Company: _____

Laboratory Name & Address: McCampbell Analytical

Proj. Name: <u>199 Basset Street</u>		Proj. No: <u>770638201</u>		ANALYSIS REQUESTED														COMMENTS					
Site Location: <u>San Jose, CA</u>		Auth. By: <u>P. Cusack</u>		TPH/gal/mol VOCs SIVOCs PCBs Pesticides CAM17 LUFT5 Asbestos																			
Sampled By: <u>Christine B. Madsen</u>		Phone No: <u>408-551-5271</u>																					
Company: <u>Langan</u>																							
Sample Number	Location	Depth	Date	Time	Matrix	Grab Comp.	Inorg/PHC Preserve.	No. of Cont.															COMMENTS
LSB-4-7.5		7.5	20Feb17	1159	S	G		1												HOLD			
LSB-4-10		10	20Feb17	1212	S	G		1	X	X	X			X		X							
LSB-4-15		15	20Feb17	1215	S	G		1												HOLD			
LSB-4-20		20	20Feb17	1220	S	G		1												HOLD			
LSB-5-1.5		1.5	20Feb17	1027	S	G		1	X				X	X									
LSB-5-3		3	20Feb17	1030	S	G		1	X					X									
LSB-5-5		5	20Feb17	1031	S	G		1												HOLD			
LSB-5-7.5		7.5	20Feb17	1040	S	G		1												HOLD			
LSB-5-10		10	20Feb17	1043	S	G		1												HOLD			
LSB-5-15		15	20Feb17	1044	S	G		1	X	X	X												
LSB-5-20		20	20Feb17	1045	S	G		1					X	X									
LSB-6-1.5		1.5	20Feb17	1114	S	G		1	X					X		X							
LSB-6-3		3	20Feb17	1118	S	G		1	X	X	X												
LSB-6-5		5	20Feb17	1123	S	G		1												HOLD			
LSB-6-7.5		7.5	20Feb17	1125	S	G		1												HOLD			

Metals Filtered (Yes/No)? NO Total No. of Containers: 15

Aq. VOAs Pres. (Yes/No)? NO

Rush T/A, Report format, Contingent analysis: _____

(1) Relinquished By: Christine B. Madsen DATE: _____ Received By: [Signature]
Company: Langan TIME: _____ Company: _____

(2) Relinquished By: [Signature] DATE: 2/17 Received By: [Signature]
Company: _____ TIME: 1540 Company: _____

(3) Relinquished By: _____ DATE: _____ Received By: _____
Company: _____ TIME: _____ Company: _____

(4) Relinquished By: _____ DATE: _____ Received By: _____
Company: _____ TIME: _____ Company: _____

Laboratory Name & Address: McCampbell Analytical

Proj. Name: <u>19a Bassett Street</u>		Proj. No: <u>770638201</u>		ANALYSIS REQUESTED										COMMENTS																	
Site Location: <u>San Jose CA</u>		Auth. By: <u>D. Cusack</u>		TPH (g/dm ³)	VOCs	SVOCs	PCBs	Pesticides	CAM 17	LUT 15	Asbestos																				
Sampled By: <u>Christi B. Madson</u>		Phone No: <u>408-551-5271</u>																													
Company: <u>Langan</u>																															
Sample Number	Location	Depth	Date	Time	Matrix	Grab Comp.	Inorg/PHC Preserve.	No. of Cont.																							
6-10		10	206617	1128	S	G	—	1	X																						
6-15		15	206617	1134	S	G	—	1								HOLD															
6-20		20	206617	1140	S	G	—	1								HOLD															

Metals Filtered (Yes/No)? NO Total No. of Containers: 3
 Aq. VOAs Pres. (Yes/No)? NO
 Rush T/A, Report format, Contingent analysis: _____

(1)	Relinquished By:	DATE: <u>2/16/17</u>	Received By:
	Company: <u>Langan</u>	TIME: _____	Company: _____
(2)	Relinquished By:	DATE: <u>2-17</u>	Received By:
	Company: _____	TIME: <u>1540</u>	Company: _____

(3)	Relinquished By:	DATE: _____	Received By:
	Company: _____	TIME: _____	Company: _____
(4)	Relinquished By:	DATE: _____	Received By:
	Company: _____	TIME: _____	Company: _____

Laboratory Name & Address: McCampbell Analytical



Sample Receipt Checklist

Client Name: **Langan**
Project Name: **770638201; 199 Bassett Street**
WorkOrder No: **1702A53** Matrix: Soil
Carrier: David Shaver (MAI Courier)

Date and Time Received: **2/21/2017 15:40**
Date Logged: **2/21/2017**
Received by: **Briana Cutino**
Logged by: **Briana Cutino**

Chain of Custody (COC) Information

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

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☒
Shipping container/cooler in good condition?	Yes ☒	No ☐	
Samples in proper containers/bottles?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☒	No ☐	NA ☐
Sample/Temp Blank temperature	Temp: 8.4°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☒
Sample labels checked for correct preservation?	Yes ☒	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☒
Samples Received on Ice?	Yes ☒	No ☐	

(Ice Type: WET ICE)

UCMR3 Samples:

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

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1702A53 A

Report Created for: Langan

1 Almaden Blvd, Suite 590
San Jose, CA 95113

Project Contact: Peter Cusack

Project P.O.:

Project Name: 770638201; 199 Bassett Street

Project Received: 02/21/2017

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: Langan
Project: 770638201; 199 Bassett Street
WorkOrder: 1702A53

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: Langan
Project: 770638201; 199 Bassett Street
WorkOrder: 1702A53

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.
d1	weakly modified or unmodified gasoline is significant
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
d9	no recognizable pattern
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validates the prep batch.
F2	LCS/LCSD recovery and/or RPD is out of acceptance criteria.
F10	MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 3/4/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L

Metals (STLC)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-20	1702A53-006A	Soil	02/20/2017 09:17	ICP-MS2	135068

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.41	0.10	1	03/06/2017 18:03

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-40	1702A53-010A	Soil	02/20/2017 09:43	ICP-MS2	135068

Analytes	Result	RL	DF	Date Analyzed
Chromium	0.43	0.10	1	03/06/2017 18:09

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-3	1702A53-012A	Soil	02/20/2017 10:17	ICP-MS2	135068

Analytes	Result	RL	DF	Date Analyzed
Chromium	ND	0.10	1	03/06/2017 18:34

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-3	1702A53-019A	Soil	02/20/2017 09:05	ICP-MS2	135068

Analytes	Result	RL	DF	Date Analyzed
Chromium	ND	0.10	1	03/06/2017 18:46

Analyst(s): MIG

(Cont.)



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 3/4/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L

Metals (STLC)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-4-3	1702A53-029A	Soil	02/20/2017 11:56	ICP-MS2	135068

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	ND	0.10	1	03/06/2017 18:52

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-3	1702A53-036A	Soil	02/20/2017 10:30	ICP-MS2	135068

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	ND	0.10	1	03/06/2017 18:59

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-5-20	1702A53-041A	Soil	02/20/2017 10:45	ICP-MS2	135068

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Chromium	0.19	0.10	1	03/06/2017 19:05

Analyst(s): MIG



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 3/4/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L

Metals (STLC)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-1.5	1702A53-001A	Soil	02/20/2017 08:53	ICP-MS2	135068

Analytes	Result	RL	DF	Date Analyzed
Zinc	68	1.0	1	03/06/2017 17:51

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-5	1702A53-002A	Soil	02/20/2017 08:59	ICP-MS2	135068

Analytes	Result	RL	DF	Date Analyzed
Lead	0.28	0.10	1	03/06/2017 17:57
Zinc	17	1.0	1	03/06/2017 17:57

Analyst(s): MIG



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 3/2/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/kg

Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-1-7.5	1702A53-003A	Soil	02/20/2017 09:00	ICP-MS1	134913

Analytes	Result	RL	DF	Date Analyzed
Lead	12	0.50	1	03/03/2017 06:25
Zinc	85	5.0	1	03/03/2017 06:25

Surrogates	REC (%)	Limits	
Terbium	102	70-130	03/03/2017 06:25

Analyst(s): DB



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 3/4/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L

STLC Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	ICP-MS3	135068

Analytes	Result	RL	DF	Date Analyzed
Lead	14	0.10	1	03/06/2017 16:19

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-1.5	1702A53-018A	Soil	02/20/2017 08:55	ICP-MS2	135068

Analytes	Result	RL	DF	Date Analyzed
Lead	13	0.10	1	03/06/2017 18:40

Analyst(s): MIG



Analytical Report

Client: Langan
Date Received: 2/21/17 15:40
Date Prepared: 3/2/17-3/5/17
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
Extraction Method: SW1311/SW3010
Analytical Method: SW6020
Unit: mg/L

TCLP Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-2-1.5	1702A53-011A	Soil	02/20/2017 10:15	ICP-MS2	135076

Analytes	Result	RL	DF	Date Analyzed
Lead	0.16	0.10	1	03/07/2017 17:45

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
LSB-3-1.5	1702A53-018A	Soil	02/20/2017 08:55	ICP-MS3	134918

Analytes	Result	RL	DF	Date Analyzed
Lead	ND	0.10	1	03/07/2017 05:49

Analyst(s): DVH



Quality Control Report

Client: Langan
Date Prepared: 3/4/17
Date Analyzed: 3/6/17
Instrument: ICP-MS3
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 135068
Extraction Method: CA Title 22
Analytical Method: SW6020
Unit: mg/L
Sample ID: MB/LCS-135068
1702A53-011AMS/MSD

QC Summary Report for Metals (STLC)

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Chromium	ND	9.16	0.10	10	-	92	75-125
Lead	ND	9.65	0.10	10	-	97	75-125
Zinc	ND	96.6	1.0	100	-	97	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Chromium	9.77	9.59	10	0.13	96	95	75-125	1.82	20
Lead	24.7	24.5	10	13.65	110	108	75-125	0.733	20
Zinc	101	100	100	1.3	100	99	75-125	0.935	20



Quality Control Report

Client: Langan
Date Prepared: 3/1/17
Date Analyzed: 3/2/17
Instrument: ICP-MS3
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134913
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-134913
1703051-005AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	55.8	0.50	50	-	112	75-125
Zinc	ND	522	5.0	500	-	104	75-125
Surrogate Recovery							
Terbium	562.2	621		500	112	124	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	241	206	50	ND	482,F10	412,F10	75-125	15.7	20
Zinc	591	577	500	ND	118	115	75-125	2.41	20
Surrogate Recovery									
Terbium	604	596	500		121	119	70-130	1.32	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Lead	212	ND	-	-
Zinc	178	ND	-	-

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



Quality Control Report

Client: Langan
Date Prepared: 3/1/17
Date Analyzed: 3/3/17
Instrument: ICP-MS3
Matrix: Soil
Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53
BatchID: 134918
Extraction Method: SW1311/SW3010
Analytical Method: SW6020
Unit: mg/L
Sample ID: MB/LCS-134918
1702887-094AMS/MSD

QC Summary Report for Metals (TCLP)

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Lead	ND	9.71	0.10	10	-	97	75-125

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Lead	10.3	10.5	10	0.1372	101	104	75-125	2.29	20

(Cont.)



Quality Control Report

Client: Langan

Date Prepared: 3/5/17

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

Instrument: ICP-MS3

Matrix: Soil

Project: 770638201; 199 Bassett Street

WorkOrder: 1702A53

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: 1702A53 **A** ClientCode: TRSJ

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

Report to:

Peter Cusack
Langan
1 Almaden Blvd, Suite 590
San Jose, CA 95113
(408) 551-6700 FAX:

Email: pcusack@langan.com
cc/3rd Party: cmadsen@langan.com;
PO:
ProjectNo: 770638201; 199 Bassett Street

Bill to:

Accounts Payable
Langan
555 Montgomery St., Suite 1300
San Francisco, CA 94111
Langan_InvoiceCapture@concursolutio

Requested TAT: 5 days;

Date Received: 02/21/2017

Date Logged: 02/21/2017

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
1702A53-001	LSB-1-1.5	Soil	2/20/2017 08:53	☐		A										
1702A53-002	LSB-1-5	Soil	2/20/2017 08:59	☐		A										
1702A53-003	LSB-1-7.5	Soil	2/20/2017 09:00	☐			A									
1702A53-006	LSB-1-20	Soil	2/20/2017 09:17	☐	A											
1702A53-010	LSB-1-40	Soil	2/20/2017 09:43	☐	A											
1702A53-011	LSB-2-1.5	Soil	2/20/2017 10:15	☐				A	A							
1702A53-012	LSB-2-3	Soil	2/20/2017 10:17	☐	A											
1702A53-018	LSB-3-1.5	Soil	2/20/2017 08:55	☐				A	A							
1702A53-019	LSB-3-3	Soil	2/20/2017 09:05	☐	A											
1702A53-029	LSB-4-3	Soil	2/20/2017 11:56	☐	A											
1702A53-036	LSB-5-3	Soil	2/20/2017 10:30	☐	A											
1702A53-041	LSB-5-20	Soil	2/20/2017 10:45	☐	A											

Test Legend:

1	CRMS_STLC_S	2	METALSMS_STLC_S	3	METALSMS_TTLC_S	4	PBMS_STLC_S
5	PBMS_TCLP_S	6		7		8	
9		10		11		12	

Prepared by: Briana Cutino

Add-On Prepared By: Maria Venegas

Comments: STLC's & TCLP's added 3/2/17 STAT.

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: LANGAN
Client Contact: Peter Cusack
Contact's Email pcusack@langan.com

Project: 770638201; 199 Bassett Street
Comments: STLC's & TCLP's added 3/2/17 STAT.

Work Order: 1702A53
QC Level: LEVEL 2
Date Logged: 2/21/2017
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
1702A53-001A	LSB-1-1.5	Soil	SW6020 (Metals) (STLC) <Zinc>	1	Acetate Liner	2/20/2017 8:53	5 days*		☐	
1702A53-002A	LSB-1-5	Soil	SW6020 (Metals) (STLC) <Lead, Zinc>	1	Acetate Liner	2/20/2017 8:59	5 days*		☐	
1702A53-003A	LSB-1-7.5	Soil	SW6020 (Metals) <Lead, Zinc>	1	Acetate Liner	2/20/2017 9:00	5 days		☐	
1702A53-006A	LSB-1-20	Soil	SW6020 (Chromium) (STLC)	1	Acetate Liner	2/20/2017 9:17	5 days*		☐	
1702A53-010A	LSB-1-40	Soil	SW6020 (Chromium) (STLC)	1	Acetate Liner	2/20/2017 9:43	5 days*		☐	
1702A53-011A	LSB-2-1.5	Soil	SW6020 (Lead) (TCLP)	1	Acetate Liner	2/20/2017 10:15	5 days*		☐	
			SW6020 (Lead) (STLC)				5 days*		☐	
1702A53-012A	LSB-2-3	Soil	SW6020 (Chromium) (STLC)	1	Acetate Liner	2/20/2017 10:17	5 days*		☐	
1702A53-018A	LSB-3-1.5	Soil	SW6020 (Lead) (TCLP)	1	Acetate Liner	2/20/2017 8:55	5 days*		☐	
			SW6020 (Lead) (STLC)				5 days*		☐	
1702A53-019A	LSB-3-3	Soil	SW6020 (Chromium) (STLC)	1	Acetate Liner	2/20/2017 9:05	5 days*		☐	
1702A53-029A	LSB-4-3	Soil	SW6020 (Chromium) (STLC)	1	Acetate Liner	2/20/2017 11:56	5 days*		☐	
1702A53-036A	LSB-5-3	Soil	SW6020 (Chromium) (STLC)	1	Acetate Liner	2/20/2017 10:30	5 days*		☐	
1702A53-041A	LSB-5-20	Soil	SW6020 (Chromium) (STLC)	1	Acetate Liner	2/20/2017 10:45	5 days*		☐	

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.

Proj. Name: 199 Bassett Street		Proj. No: 770638201		ANALYSIS REQUESTED												COMMENTS		
Site Location: San Jose CA		Auth. By: P. Cusack		TPH (g/dm ³)	VOCs	SVOCs	PCBs	Pesticides	CML17	LUTG	Asbestos	STL Zn	STL Cr	STL Pb	TLL Pb, Zn		TLL Pb	
Sampled By: Christine B Madsen		Phone No: 408-551-5271																
Company: LANGAN																		
Sample Number	Depth Location	Date Depth	Time Date	Time	Matrix	Grab Comp.	Inorg/PHC Preserve.	No. of Cont.										
LSB 1-1.5	1.5	20Feb17	0853		S	G	-	1	X									
LSB 1-5	5	20Feb17	0859		S	G	-	1	X	X	X							
LSB 1-7.5	7.5	20Feb17	0900		S	G	-	1										HOLD
LSB 1-10	10	20Feb17	0910		S	G	-	1										HOLD
LSB 1-15	15	20Feb17	0913		S	G	-	1										HOLD
LSB 1-20	20	20Feb17	0917		S	G	-	1	X				X	X				
LSB 1-25	25	20Feb17	0925		S	G	-	1										HOLD
LSB 1-30	30	20Feb17	0930		S	G	-	1										HOLD
LSB 1-35	35	20Feb17	0939		S	G	-	1										HOLD
LSB 1-40	40	20Feb17	0943		S	G	-	1										
LSB 2-1.5	1.5	20Feb17	1015		S	G	-	1	X	X	X	X	X	X				
LSB 2-3	3	20Feb17	1017		S	G	-	1	X				X	X				
LSB 2-5	5	20Feb17	1019		S	G	-	1										HOLD
LSB 2-7.5	7.5	20Feb17	1020		S	G	-	1	X				X					
LSB 2-10	10	20Feb17	1026		S	G	-	1										HOLD

Metals Filtered (Yes/No)? _____ Total No. of Containers: 15

Aq. VOAs Pres. (Yes/No)? _____

Rush T/A, Report format, Contingent analysis: added 3/2/17 STAT

cc: CMADSEN@LANGAN + PCUSACK@LANGAN.COM

(1) Relinquished By: Christine B Madsen
Company: Langan
DATE: 2/20/17
TIME: _____
Received By: [Signature]
Company: _____

(2) Relinquished By: [Signature]
Company: _____
DATE: 2/17
TIME: 1540
Received By: [Signature]
Company: _____

(3) Relinquished By: _____
Company: _____
DATE: _____
TIME: _____
Received By: _____
Company: _____

(4) Relinquished By: _____
Company: _____
DATE: _____
TIME: _____
Received By: _____
Company: _____

Laboratory Name & Address: McCampbell Analytical

* labeled LSB-1-7.5 distinguished w/lines.

Proj. Name: 199 Bassett Street
 Site Location: San Jose, CA
 Sampled By: Christine B. Madson
 Company: LANGAN

Proj. No: 770638201
 Auth. By: P. Cusack
 Phone No: 408-551-5271

ANALYSIS REQUESTED

TPH (g/dm ³)	VOCs	SVOCs	PCBs	Pesticides	CAN 17	Luft 6	Asbestos	STLC Pb	STLC Pb	TELP Pb	COMMENTS
											HOLD
											HOLD
X				X	X						
X	X	X	X		X		X	X	X	X	
											HOLD
											HOLD
											HOLD
											HOLD
											HOLD
X	X	X				X					
											HOLD
X					X						
X	X	X	X	X	X						
X						X					
											HOLD

Metals Filtered (Yes/No)? _____ Total No. of Containers: 15

Aq. VOAs Pres. (Yes/No)? _____

Rush T/A, Report format, Contingent analysis: _____

cc: CMADSEN@LANGAN.COM + PCUSACK@LANGAN.COM

(1) Relinquished By: Christine B. Madson
 Company: Langan
 DATE: _____
 TIME: _____
 Received By: _____
 Company: _____

(2) Relinquished By: _____
 Company: _____
 DATE: 2-17
 TIME: 1540
 Received By: _____
 Company: _____

(3) Relinquished By: _____
 Company: _____
 DATE: _____
 TIME: _____
 Received By: _____
 Company: _____

(4) Relinquished By: _____
 Company: _____
 DATE: _____
 TIME: _____
 Received By: _____
 Company: _____

Laboratory Name & Address: McLaughlin Analytical

Proj. Name: 199 Bassett Street		Proj. No: 770638201		ANALYSIS REQUESTED														COMMENTS
Site Location: San Jose, CA		Auth. By: P. Cusack		TPH/gnd	VOCs	SVOCs	PCBs	Pesticides	CML17	LUT15	Asbestos	STC CR						
Sampled By: Christine B. Madsen		Phone No: 408-551-5276																
Company: Langan																		
Sample Number	Location	Depth	Date	Time	Matrix	Grab Comp.	Inorg/PHC Preserve.	No. of Cont.										
LSB-4-7.5		7.5	20Feb17	1159	S	G		1									HOLD	
LSB-4-10		10	20Feb17	1212	S	G		1	X	X	X		X		X			
LSB-4-15		15	20Feb17	1215	S	G		1									HOLD	
LSB-4-20		20	20Feb17	1220	S	G		1									HOLD	
LSB-5-1.5		1.5	20Feb17	1027	S	G		1	X			X	X					
LSB-5-3		3	20Feb17	1030	S	G		1	X						X			
LSB-5-5		5	20Feb17	1031	S	G		1									HOLD	
LSB-5-7.5		7.5	20Feb17	1040	S	G		1									HOLD	
LSB-5-10		10	20Feb17	1043	S	G		1									HOLD	
LSB-5-15		15	20Feb17	1044	S	G		1	X	X	X							
LSB-5-20		20	20Feb17	1045	S	G		1				X	X		X			
LSB-6-1.5		1.5	20Feb17	1114	S	G		1	X				X		X			
LSB-6-3		3	20Feb17	1118	S	G		1	X	X	X							
LSB-6-5		5	20Feb17	1123	S	G		1									HOLD	
LSB-6-7.5		7.5	20Feb17	1125	S	G		1									HOLD	

Metals Filtered (Yes/No)? _____ Total No. of Containers: 15

Aq. VOAs Pres. (Yes/No)? _____

Rush T/A, Report format, Contingent analysis: _____

(1)	Relinquished By: Christine B. Madsen	DATE: _____	Received By: _____
	Company: Langan	TIME: _____	Company: _____
(2)	Relinquished By: _____	DATE: 2-17	Received By: _____
	Company: _____	TIME: 1540	Company: _____

(3)	Relinquished By: _____	DATE: _____	Received By: _____
	Company: _____	TIME: _____	Company: _____
(4)	Relinquished By: _____	DATE: _____	Received By: _____
	Company: _____	TIME: _____	Company: _____

Laboratory Name & Address: McCampbell Analytical



Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

McC Campbell Analytical, Inc.
Account Payable
1534 Willow Pass Rd
Pittsburg, CA 94565

Client ID: A31409
Report Number: B235142
Date Received: 02/22/17
Date Analyzed: 03/01/17
Date Printed: 03/01/17
First Reported: 03/01/17

Job ID/Site: 1702A53 - 770638201, 199 Bassett Street

FALI Job ID: A31409
Total Samples Submitted: 4
Total Samples Analyzed: 4

Date(s) Collected: 02/20/2017

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
-----------	------------	---------------	------------------	---------------	------------------	---------------	------------------

LSB-1-20	11860649						
Layer: Grey Soil							ND

Total Composite Values of Fibrous Components: Asbestos (ND)

LSB-2-3	11860650						
Layer: Brown Soil							ND

Total Composite Values of Fibrous Components: Asbestos (ND)

LSB-4-10	11860651						
Layer: Brown Soil							ND

Total Composite Values of Fibrous Components: Asbestos (ND)

LSB-6-1.5	11860652						
Layer: Brown Soil							ND

Total Composite Values of Fibrous Components: Asbestos (ND)

Tad Thrower, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

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