

Subsurface Investigation Report for Site Closure Sears Auto Center Site Seattle, Washington

November 14, 2017

Prepared for

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Subsurface Investigation Report for Site Closure Sears Auto Center Site Seattle, Washington

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LIST OF ABBREVIATIONS AND ACRONYMS

µg/kg.....	micrograms per kilogram
µg/L.....	micrograms per liter
BTEX.....	benzene, toluene, ethylbenzene, xylenes
Ecology.....	Washington State Department of Ecology
EPA.....	US Environmental Protection Agency
ft.....	feet
LAI.....	Landau Associates, Inc.
mg/kg.....	milligrams per kilogram
MTCA.....	Model Toxics Control Act
NAVD88.....	North American Vertical Datum of 1988
NFA.....	No Further Action
PAH.....	polycyclic aromatic hydrocarbon
SHA.....	Site Hazard Assessment
TPH.....	total petroleum hydrocarbon
TPH-D.....	diesel-range total petroleum hydrocarbon
TPH-G.....	gasoline-range total petroleum hydrocarbon
TPH-O.....	oil-range total petroleum hydrocarbon
UST.....	underground storage tank
VCP.....	Voluntary Cleanup Program
VOC.....	volatile organic compound

INTRODUCTION AND SITE BACKGROUND

At the request of First & Utah Street Associates, LLC, Landau Associates, Inc. (LAI) prepared this report documenting recent soil and groundwater investigation activities and sampling results from the Sears Auto Center Site (Ecology CSID 4669 and FSID 46247836) located at 2759 First Avenue South in Seattle, Washington (Figure 1; Site). The Site is identified by the Washington State Department of Ecology (Ecology) as requiring additional investigation to document compliance with the Ecology Model Toxics Control Act (MTCA) cleanup regulations (Chapter 173-340 of the Washington Administration Code). The property owner, First & Utah Street Associates, LLC, collected soil and groundwater samples in 2016 and 2017 to document current soil and groundwater quality, to support regulatory closure under the MTCA regulations, and to receive a No Further Action (NFA) determination from Ecology for the Site.

The Site is located at the northwest corner of the intersection of First Avenue South and South Forest Street in a commercial/industrial area. A gasoline station formerly occupied the northern portion of this Site and was later redeveloped into an auto service center. Two underground storage tanks (USTs) are reported to have been present at the Site. One was reportedly decommissioned in place in 1973, and another, which was a heating oil tank with a capacity of 2,500 gallons, was removed in 1992 (First & Utah Street Associates 2007). The heating oil UST was observed to be in good condition with no visible signs of corrosion or leakage at the time of removal (Earth Consultants 1992). Based on the analytical results for soil samples collected from the excavation sidewalls and stockpile, no evidence of total petroleum hydrocarbon (TPH) contamination at concentrations greater than laboratory reporting limits or the applicable cleanup levels in effect at the time was identified during the 1992 UST removal, so a release was not reported to Ecology. Groundwater was encountered during the tank removal, but was not sampled. Previous environmental reports associated with the Site further indicated that there was no evidence of past release(s) of petroleum hydrocarbon contaminants associated with these USTs.

The UST decommissioned in place in 1973 was reportedly associated with a bulk fuel facility. In 1993, SEACOR conducted a Phase I environmental assessment of the Home Depot property west of the Site (SEACOR 1993), which noted the potential presence of a “three-celled underground storage tank labeled ‘gas & oil’” on the property east of the Home Depot site, based on information obtained from a 1950 Sanborn Fire Insurance map. A 1994 Phase II evaluation conducted by Earth Consultants, Inc. found no evidence that the three-celled tank was still on the Site (First & Utah Street Associates 2007). Earth Consultants, Inc. noted that no olfactory or visual indications of petroleum contamination were observed in a soil boring completed near the decommissioned in place bulk fuel UST.

In 1988, an investigation was conducted at the property that included subsurface sampling and testing from one boring located in the northern portion of the Site (Sweet-Edwards/EMCON 1988). According to the report, two soil samples were collected from this boring and were tested for benzene, toluene,

ethylbenzene, and xylenes (BTEX). Laboratory testing of these samples, collected from depths of 0.5 to 2 feet (ft) and 5 to 6.5 ft, revealed no detectable concentrations of BTEX.

In 1994, a preliminary environmental evaluation was conducted of the Site and the neighboring Home Depot/Former Sears site to the west (Earth Consultants 1994). Three borings were advanced, one to the north (crossgradient) of the Site, one on the southeast side of the Site (between the Sears Auto Center and the Home Depot) and one on the southwest side of the Home Depot site. Soil and groundwater samples were collected from the borings and analyzed for TPH, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and selected metals. No gasoline-, diesel-, or motor oil-range TPH, VOCs, or PCBs were detected in the soil samples. Benzo(b)fluoranthene and bis(2-ethylhexyl)phthalate were detected at concentrations below MTCA Method A soil cleanup levels in the soil samples from the southeastern portion of the block. It was concluded that PCBs, VOCs, and TPH did not appear to exist in the soils at the two southern sample sites, and that the metals concentrations in soil were less than the applicable MTCA cleanup levels in effect at that time. Diesel-range TPH and SVOCs were detected in groundwater at concentrations less than the MTCA Method A cleanup levels in effect at the time. Total chromium and total lead were detected at concentrations greater than the applicable cleanup levels in groundwater, but dissolved metals were not detected in groundwater. The investigation report stated that the higher concentrations of total metals were due to the high turbidity (soils suspended in water), and considered only the dissolved metal results to be relevant. It was concluded that both soil and groundwater at the Sears Auto Center site were in compliance with the MTCA Method A cleanup levels.

Ecology received an application for the Voluntary Cleanup Program (VCP) in 2007, requesting an NFA determination. In a June 2007 meeting, Ecology verbally recommended the installation of a groundwater monitoring well at the Site, and soil sampling and analysis east of the former UST location. The Site was removed from the VCP in 2008 due to inactivity. A Site Hazard Assessment (SHA) was conducted in 2013 (Ecology 2013), and the Site was ranked a 5 (low risk to human health and/or the environment). Based on the 2007 comments from Ecology and the SHA, diesel-range total petroleum hydrocarbons (TPH-D) in groundwater is the contaminant of concern.

SUMMARY OF RECENT INVESTIGATION ACTIVITIES

In November 2016, LAI conducted an investigation at the Site to address Ecology's request for additional soil and groundwater data collected from near the former heating oil UST. Two borings were drilled and completed as monitoring wells (MW-7 and MW-8). The monitoring well locations are shown on Figure 2.

The two groundwater monitoring wells were constructed with 2-inch Schedule 40 PVC casing with 10-ft 0.020-inch slot screens pre-packed with 10/20 Colorado silica sand. The wells were constructed with the screen interval positioned across, and extending at least 5 ft below, the water table. After installation, the horizontal and vertical locations of monitoring wells were surveyed by a professional land surveyor to measure the elevation of the groundwater table, and evaluate the groundwater flow direction.

Boreholes were advanced to 15 ft below ground surface. During drilling, the soil encountered was generally gray or brown, fine to coarse sand with gravel and silt. Occasional red brick fragments, concrete rubble, and wood debris were also observed during drilling. The material encountered is interpreted to be fill historically placed on the former tidal flats during development of the area. Boring logs are provided in Appendix A, and laboratory analytical reports are provided in Appendix B.

During drilling, soil was field-screened for evidence of contamination using a photoionization detector, sheen testing, and visual and olfactory observations. Up to two soil samples were collected from each boring location for laboratory analysis. If indications of contamination were not observed during field screening, a soil sample was collected from just above the water table at each boring and submitted for laboratory analysis. If evidence of soil contamination was observed during field screening, a sample was collected from the zone of greatest apparent impact, and a second sample was collected from below the impacted zone. No evidence of contamination was encountered in either of these borings.

Groundwater monitoring, including measurement of groundwater elevations and collection of groundwater samples using low-flow sampling techniques, was conducted quarterly for 1 year after monitoring wells were installed and developed.

Soil and groundwater samples collected from MW-7 were submitted for laboratory analysis for petroleum hydrocarbons by Method NWTPH-HCID, polycyclic aromatic hydrocarbons (PAHs) by US Environmental Protection Agency (EPA) Method 8270D with selected ion monitoring, VOCs by Method 8260C, and total and dissolved metals by EPA Methods 245.1 and 200.8. If results from the Method NWTPH-HCID analysis indicated detectable concentrations of TPH, then the sample was re-analyzed for diesel and oil range TPH (TPH-D and TPH-O) and gasoline range TPH (TPH-G) by Method NWTPH-Dx and/or NWTPH-Gx. Soil and groundwater samples collected from MW-8 were submitted for laboratory analysis for TPH-D and TPH-O by Method NWTPH-Dx.

Soil Sampling Results

Soil sampling results are provided in Table 1 and compared to applicable screening levels to evaluate compliance with MTCA. Soil screening levels were developed by using MTCA Method A soil cleanup levels for unrestricted land use. For the analytes that do not have MTCA Method A cleanup levels, screening levels were developed based on the MTCA Method B formula values for direct contact. Screening levels for soil protective of groundwater were not considered, because there were no groundwater screening-level exceedances, as discussed in the next section.

As shown in Table 1, none of the soil samples contained concentrations of compounds that exceed applicable screening levels. Results from MW-7 indicate that TPH, PAHs, and VOCs were not detected in soil at concentrations greater than laboratory reporting limits. Concentrations of arsenic (1.7 milligrams per kilogram [mg/kg]), chromium (11 mg/kg), and lead (11 mg/kg) were the only metals detected and none of the concentrations exceeded applicable screening levels. Results from MW-8 indicate that TPH-D and TPH-O were not detected above laboratory reporting limits.

Groundwater Sampling Results

Four rounds of groundwater elevation measurements were taken at each of the monitoring wells. Based on these elevations, groundwater flow direction is generally west, except during the February 2017 monitoring event, in which there was essentially no hydraulic gradient between the two wells. Groundwater contour maps are provided on Figures 3 through 6 for all four monitoring events (November 2016, February 2017, May 2017, and August 2017). Groundwater elevations range from 8.3 ft NAVD88¹ (at MW-7 in August) to 9.7 ft NAVD88 (at MW-7 in February). The groundwater table was highest in February 2017 and lowest in August 2017.

Groundwater sampling results for all four quarters are provided in Table 2 and compared to applicable screening levels to evaluate compliance with MTCA. Groundwater screening levels were developed by using MTCA Method A groundwater cleanup levels for unrestricted land use. For analytes that do not have MTCA Method A cleanup levels, screening levels were developed based on MTCA Method B formula values protective of drinking water.

As shown in Table 2, none of groundwater samples contained concentrations of compounds that exceed screening levels. No petroleum hydrocarbons were detected at either MW-7 or MW-8. Results from MW-7 indicate that PAHs and VOCs were not detected at concentrations greater than laboratory reporting limits, except in November 2016, where naphthalene was detected at 0.023 micrograms per liter ($\mu\text{g/L}$), below the screening level of 160 $\mu\text{g/L}$. Arsenic was the only metal detected in all four sampling events from MW-7, but the concentrations were below the applicable screening level

¹ North American Vertical Datum of 1988.

(5 µg/L). The presence of arsenic does not appear to be linked with petroleum hydrocarbon contamination, and is likely a result of natural or background sources.

INVESTIGATION FINDINGS AND CONCLUSIONS

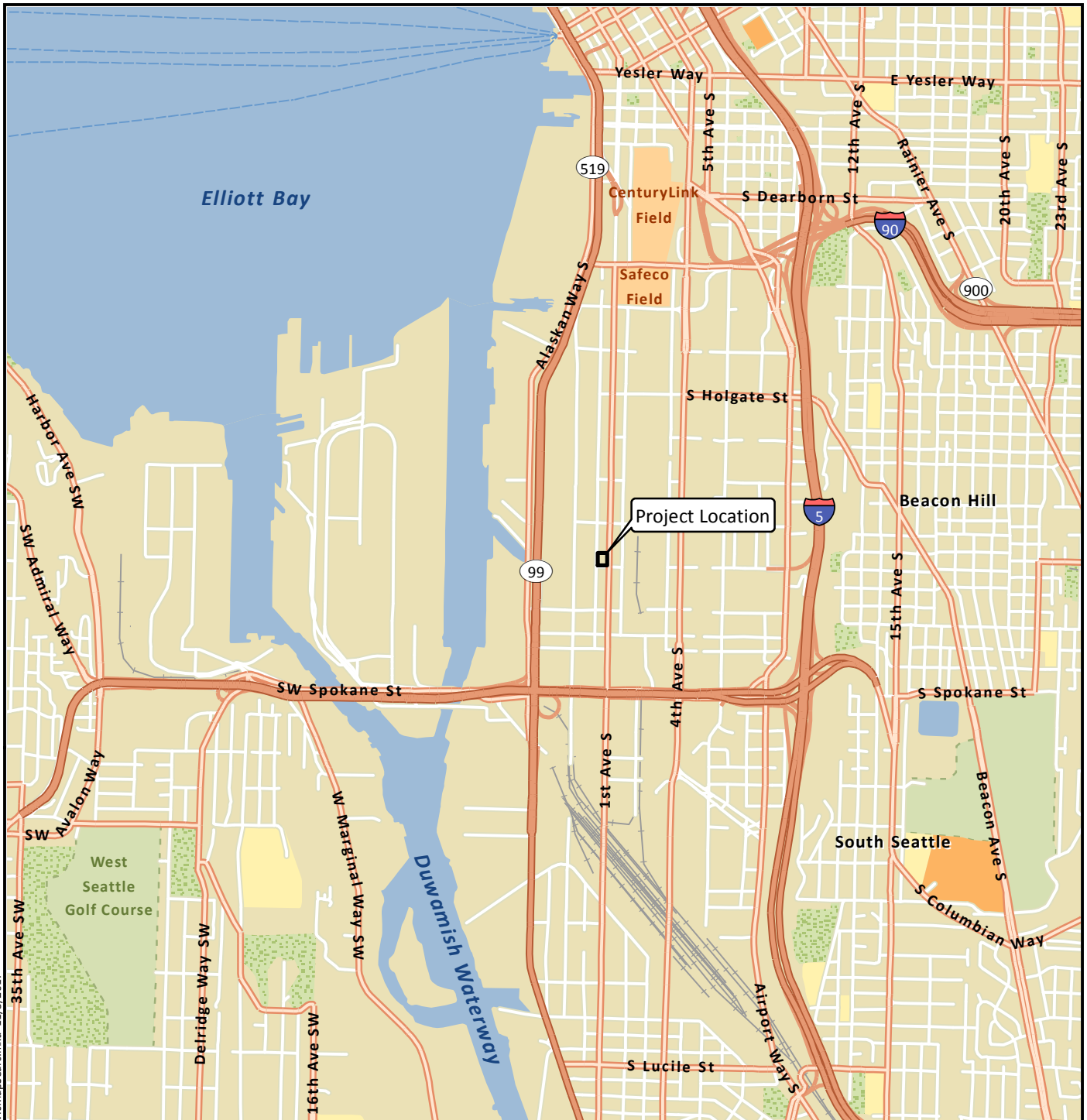
In response to Ecology's request for additional soil and groundwater data from the Site, additional investigation activities were conducted in 2016 and 2017. Soil and groundwater samples were collected from east and west of the former UST. Groundwater samples were collected during both high and low groundwater table conditions to investigate the effect on potential contaminant concentrations. Based on the results on this investigation, soil and groundwater from the area near the former UST do not exceed applicable MTCA cleanup criteria for TPH-D and TPH-O. Soil and groundwater collected from downgradient of the Site (MW-7) confirmed that TPH and associated contaminants (PAHs, VOCs, and metals) are not present at concentrations greater than applicable screening levels. These results demonstrate compliance with MTCA cleanup standards and confirm that the Site's subsurface conditions do not present a risk to human health or the environment. Based on these findings, on behalf of First & Utah Street Associates, LLC, we request a No Further Action determination be granted by Ecology for this Site.

USE OF THIS REPORT

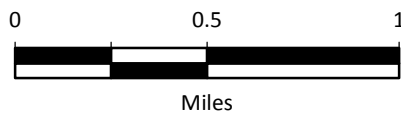
This investigation report has been prepared for the exclusive use of First & Utah Street Associates, LLC for specific application to the Sears Auto Center Site. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of LAI. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by LAI, shall be at the user's sole risk. LAI warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

REFERENCES

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- Sweet-Edwards/EMCON, Inc. 1988. Sears Retail Property Site Assessment, 1st Avenue & South Lander, Seattle, Washington. December 16.



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Data Source: Esri 2012



First & Utah Associates, LLC
Sears Auto Center
Seattle, Washington

Vicinity Map

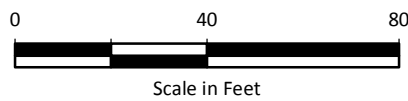
Figure
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Legend

- Monitoring Well
- ⊙ Soil Boring
- Former UST Location



Notes

1. GPS locations recorded on 11/10/2016.
2. UST removed in 1992.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Google Earth Pro.



First & Utah Associates, LLC Sears Auto Center Seattle, Washington	<h2>Sampling Locations</h2>	Figure <h1>2</h1>
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Legend

- Monitoring Well
- ⊕ Soil Boring
- Groundwater Elevation Contour
- 8.72** Groundwater Elevation (ft NAVD88)
- 7.64** Depth to Water from Top of Casing (ft)

Notes

1. GPS locations recorded on 11/10/2016.
2. Casing elevations measured by David Evans and Associates on 2/14/2017.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Google Earth Pro.



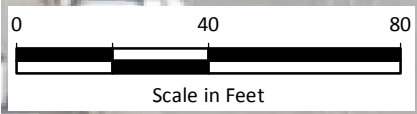
First & Utah Associates, LLC
Sears Auto Center
Seattle, Washington

Groundwater Contours
November 2016

Figure
3



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Legend

- Monitoring Well **8.72** Groundwater Elevation (ft NAVD88)
- ⊕ Soil Boring **7.64** Depth to Water from Top of Casing (ft)

Notes

1. No apparent hydraulic gradient between MW-7 and MW-8
2. GPS locations recorded on 11/10/2016.
3. Casing elevations measured by David Evans and Associates on 2/14/2017.
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Google Earth Pro.



First & Utah Associates, LLC Sears Auto Center Seattle, Washington	Groundwater Contours February 2017	Figure 4
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Legend

- Monitoring Well
- ⊕ Soil Boring
- Groundwater Elevation Contour
- 8.72** Groundwater Elevation (ft NAVD88)
- 7.64** Depth to Water from Top of Casing (ft)

Notes

1. GPS locations recorded on 11/10/2016.
2. Casing elevations measured by David Evans and Associates on 2/14/2017.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Google Earth Pro.



First & Utah Associates, LLC Sears Auto Center Seattle, Washington	Groundwater Contours May 2017	Figure 5
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Legend

- Monitoring Well
- ⊕ Soil Boring
- Groundwater Elevation Contour
- 8.72** Groundwater Elevation (ft NAVD88)
- 7.64** Depth to Water from Top of Casing (ft)

Notes

1. GPS locations recorded on 11/10/2016.
2. Casing elevations measured by David Evans and Associates on 2/14/2017.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Google Earth Pro.



First & Utah Associates
Sears Auto Center
Seattle, Washington

Groundwater Contours
August 2017

Figure
6

Table 1
Soil Analytical Results
Sears Auto Center Site
Seattle, Washington

Sample Location Depth: Laboratory SDG: Sample Date: Sample Type:	MTCA Screening Levels	MW-7	MW-8
		6.5-7.5	8-9
		EV16110079	EV16110079
		11/11/2016	11/11/2016
		N	N
Petroleum Hydrocarbons (mg/kg; NWTPH-Dx)			
Diesel Range Organics	2,000	--	25 U
Oil Range Organics	2,000	--	50 U

Semivolatile Organic Compounds (µg/kg; SW-846 8270 SIM)			
Naphthalene	5,000	20 U	--
2-Methylnaphthalene	320,000	20 U	--
1-Methylnaphthalene	34,500	20 U	--
Acenaphthylene	--	20 U	--
Acenaphthene	4,800,000	20 U	--
Fluorene	3,200,000	20 U	--
Phenanthrene	--	20 U	--
Anthracene	24,000,000	20 U	--
Fluoranthene	3,200,000 ^a	20 U	--
Pyrene	2,400,000 ^a	20 U	--
Benzo[a]anthracene	1,370,000 ^b	20 U	--
Chrysene	137,000 ^b	20 U	--
Benzo[b]fluoranthene	1,370 ^b	20 U	--
Benzo[k]fluoranthene	13,700 ^b	20 U	--
Benzo[a]pyrene	100 ^c	20 U	--
Indeno[1,2,3-Cd]pyrene	1,370 ^b	20 U	--
Dibenz[a,h]anthracene	137 ^b	20 U	--
Benzo[g,h,i]perylene	--	20 U	--

Volatile Organic Compounds (µg/kg; SW-846 8260 SIM)			
Dichlorodifluoromethane		10 U	--
Chloromethane		10 U	--
Vinyl Chloride		10 U	--
Bromomethane		10 U	--
Chloroethane		10 U	--
Carbon Tetrachloride		10 U	--
Trichlorofluoromethane		10 U	--
Carbon Disulfide		10 U	--
Acetone		50 U	--
1,1-Dichloroethene		10 U	--
Methylene Chloride		20 U	--
Acrylonitrile		50 U	--
Methyl T-Butyl Ether		10 U	--

Table 1
Soil Analytical Results
Sears Auto Center Site
Seattle, Washington

Sample Location Depth: Laboratory SDG: Sample Date: Sample Type:	MTCA Screening Levels	MW-7	MW-8
		6.5-7.5	8-9
		EV16110079	EV16110079
		11/11/2016	11/11/2016
		N	N
Trans-1,2-Dichloroethene		10 U	--
1,1-Dichloroethane		10 U	--
2-Butanone		50 U	--
Cis-1,2-Dichloroethene		10 U	--
2,2-Dichloropropane		10 U	--
Bromochloromethane		10 U	--
Chloroform		10 U	--
1,1,1-Trichloroethane		10 U	--
1,1-Dichloropropene		10 U	--
1,2-Dichloroethane		10 U	--
Benzene		5.0 U	--
Trichloroethene		10 U	--
1,2-Dichloropropane		10 U	--
Dibromomethane		10 U	--
Bromodichloromethane		10 U	--
Trans-1,3-Dichloropropene		10 U	--
4-Methyl-2-Pentanone		50 U	--
Toluene		10 U	--
Cis-1,3-Dichloropropene		10 U	--
1,1,2-Trichloroethane		10 U	--
2-Hexanone		50 U	--
1,3-Dichloropropane		10 U	--
Tetrachloroethylene		10 U	--
Dibromochloromethane		10 U	--
1,2-Dibromoethane		5.0 U	--
Chlorobenzene		10 U	--
1,1,1,2-Tetrachloroethane		10 U	--
Ethylbenzene		10 U	--
m,p-Xylene		20 U	--
Styrene		10 U	--
o-Xylene		10 U	--
Bromoform		10 U	--
Isopropylbenzene		10 U	--
1,1,2,2-Tetrachloroethane		10 U	--
1,2,3-Trichloropropane		10 U	--
Bromobenzene		10 U	--
N-Propyl Benzene		10 U	--
2-Chlorotoluene		10 U	--
1,3,5-Trimethylbenzene		10 U	--
4-Chlorotoluene		10 U	--
T-Butyl Benzene		10 U	--
1,2,4-Trimethylbenzene		10 U	--
S-Butyl Benzene		10 U	--

Table 1
Soil Analytical Results
Sears Auto Center Site
Seattle, Washington

Sample Location Depth: Laboratory SDG: Sample Date: Sample Type:	MTCA Screening Levels	MW-7	MW-8
		6.5-7.5	8-9
		EV16110079	EV16110079
		11/11/2016	11/11/2016
		N	N
P-Isopropyltoluene		10 U	--
1,3-Dichlorobenzene		10 U	--
1,4-Dichlorobenzene		10 U	--
N-Butylbenzene		10 U	--
1,2-Dichlorobenzene		10 U	--
1,2-Dibromo-3-Chloropropane		50 U	--
1,2,4-Trichlorobenzene		10 U	--
Hexachlorobutadiene		10 U	--
Naphthalene		10 U	--
1,2,3-Trichlorobenzene		10 U	--

Metals (mg/kg; SW-846 7471, SW-846)			
Mercury	2 ^c	0.020 U	--
Arsenic	20 ^c	1.7	--
Cadmium	2 ^c	0.50 U	--
Chromium	2,000 ^d	11	--
Lead	250 ^c	11	--

Notes:

Bold = detected analyte

U = The analyte was not detected at the reported concentration.

^a MTCA Method B (non-cancer)

^b MTCA Method B (cancer)

^c MTCA Method A for Unrestricted Land Uses

^d MTCA Method A for Unrestricted Land Uses for Chromium (III)

Abbreviations and Acronyms:

-- = not analyzed

N = primary sample

NWTPH = Northwest Total Petroleum Hydrocarbon

MTCA = Model Toxics Control Act

SDG = sample delivery group

SIM = selected ion monitoring

mg/kg = milligrams per kilogram

µg/kg = micrograms/kilograms

Table 2
Groundwater Analytical Results
Sears Auto Center Site
Seattle, Washington

Sample Location: Laboratory SDG: Sample Date: Sample Type:	MTCA Screening Levels	MW-7	MW-7	MW-7	MW-7	MW-8	MW-8	MW-8	MW-8
		EV16110100	EV17020097	EV17050162	EV17080112	EV16110100	EV17020097	EV17050162	EV17080112
		11/14/2016	2/14/2017	5/23/2017	8/17/2017	11/14/2016	2/14/2017	5/23/2017	8/17/2017
		N	N	N	N	N	N	N	N
Petroleum Hydrocarbons (µg/L; NWTPH-HCID)									
Gasoline-Range Organics	1,000/800 ^a	130 U	130 U	130 U	130 U	--	--	--	--
Diesel-Range Organics	500	310 U	310 U	310 U	310 U	--	--	--	--
Oil-Range Organics	500	310 U	310 U	310 U	310 U	--	--	--	--
Petroleum Hydrocarbons (µg/L; NWTPH-Gx and -Dx)									
Gasoline-Range Organics	1,000/800 ^a	--	--	--	--	--	--	--	--
Diesel-Range Organics	500	--	--	--	--	130 U	130 U	130 U	130 U
Oil-Range Organics	500	--	--	--	--	250 U	250 U	250 U	250 U
Semivolatile Organic Compounds (µg/L; SW-846 8270D SIM)									
Naphthalene	160 ^b	0.023	0.020 U	0.020 U	0.020 U	--	--	--	--
2-Methylnaphthalene	32 ^c	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
1-Methylnaphthalene	560 ^c	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Acenaphthylene	--	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Acenaphthene	960 ^c	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Fluorene	640 ^c	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Phenanthrene	--	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Anthracene	4,800 ^c	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Fluoranthene	640 ^c	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Pyrene	480 ^c	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Benzo[g,h,i]perylene	--	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Benzo[a]anthracene	0.12 ^d	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Chrysene	12 ^d	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Benzo[b]fluoranthene	0.12 ^d	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Benzo[k]fluoranthene	1.2 ^d	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Benzo[a]pyrene	0.1 ^b	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Indeno[1,2,3-Cd]pyrene	0.12 ^d	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
Dibenz[a,h]anthracene	0.012 ^d	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--
cPAH TEQ	0.1 ^b	ND	ND	ND	ND	--	--	--	--
Volatile Organic Compounds (µg/L; SW-846 8260C)									
Dichlorodifluoromethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Chloromethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Vinyl Chloride		0.20 U	0.20 U	0.20 U	0.20 U	--	--	--	--
Bromomethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Chloroethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Carbon Tetrachloride		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Trichlorofluoromethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Carbon Disulfide		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Acetone		25 U	25 U	25 U	25 U	--	--	--	--
1,1-Dichloroethene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Methylene Chloride		5.0 U	5.0 U	5.0 U	5.0 U	--	--	--	--
Acrylonitrile		10 U	10 U	10 U	10 U	--	--	--	--
Methyl T-Butyl Ether		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Trans-1,2-Dichloroethene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,1-Dichloroethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2-Butanone		10 U	10 U	10 U	10 U	--	--	--	--
Cis-1,2-Dichloroethene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2,2-Dichloropropane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Bromochloromethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Chloroform		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,1,1-Trichloroethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,1-Dichloropropene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2-Dichloroethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Benzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Trichloroethene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2-Dichloropropane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Dibromomethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Bromodichloromethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Trans-1,3-Dichloropropene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
4-Methyl-2-Pentanone		10 U	10 U	10 U	10 U	--	--	--	--
Toluene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Cis-1,3-Dichloropropene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,1,2-Trichloroethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2-Hexanone		10 U	10 U	10 U	10 U	--	--	--	--
1,3-Dichloropropane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Tetrachloroethylene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Dibromochloromethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2-Dibromoethane		0.010 U	0.010 U	0.010 U	0.010 U	--	--	--	--
Chlorobenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,1,1,2-Tetrachloroethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Ethylbenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--

Table 2
Groundwater Analytical Results
Sears Auto Center Site
Seattle, Washington

Sample Location: Laboratory SDG: Sample Date: Sample Type:	MTCA Screening Levels	MW-7	MW-7	MW-7	MW-7	MW-8	MW-8	MW-8	MW-8
		EV16110100	EV17020097	EV17050162	EV17080112	EV16110100	EV17020097	EV17050162	EV17080112
		11/14/2016	2/14/2017	5/23/2017	8/17/2017	11/14/2016	2/14/2017	5/23/2017	8/17/2017
		N	N	N	N	N	N	N	N
m,p-Xylene		4.0 U	4.0 U	4.0 U	4.0 U	--	--	--	--
Styrene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
o-Xylene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Bromoform		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Isopropylbenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,1,2,2-Tetrachloroethane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2,3-Trichloropropane		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Bromobenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
N-Propyl Benzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
2-Chlorotoluene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,3,5-Trimethylbenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
4-Chlorotoluene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
T-Butyl Benzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2,4-Trimethylbenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
S-Butyl Benzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
P-Isopropyltoluene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,3-Dichlorobenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,4-Dichlorobenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
N-Butylbenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2-Dichlorobenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2-Dibromo-3-Chloropropane		10 U	10 U	10 U	10 U	--	--	--	--
1,2,4-Trichlorobenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Hexachlorobutadiene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Naphthalene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
1,2,3-Trichlorobenzene		2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--

Total Metals (µg/L; EPA 245.1, EPA 200.8)									
Arsenic	--	4.6	1.3	1.2	1.6	--	--	--	--
Cadmium	--	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	--
Chromium	--	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Lead	--	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	--
Mercury	--	0.20 U	0.20 U	0.20 U	0.20 U	--	--	--	--

Dissolved Metals (µg/L; EPA 245.1, EPA 200.8)									
Arsenic	5 ^b	4.1	1.0 U	1.0 U	1.0 U	--	--	--	--
Cadmium	5 ^b	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	--
Chromium	50 ^b	2.0 U	2.0 U	2.0 U	2.0 U	--	--	--	--
Lead	15 ^b	1.0 U	1.0 U	1.0 U	1.0 U	--	--	--	--
Mercury	2 ^b	0.20 U	0.20 U	0.20 U	0.20 U	--	--	--	--

Notes:**Bold** = detected analyte

U = The analyte was not detected at the reported concentration.

cPAH TEQs were calculated following WAC 173-340-708(8)(e)(iii)(A)(II) and using a value of 0 for non-detected analytes.

Preliminary MTCA cleanup levels were not developed for VOCs, because concentrations in all samples were below laboratory reporting limits for all compounds.

^a For gasoline, the groundwater screening level is 800 µg/L when benzene is present, and 1,000 µg/L when benzene is not present^b MTCA Method A^c MTCA Method B (non-cancer)^d MTCA Method B (cancer)**Abbreviations and Acronyms:**

cPAH = carcinogenic polycyclic aromatic hydrocarbons

EPA = US Environmental Protection Agency

HCID = hydrocarbon identification

µg/L = micrograms per liter

MTCA = Model Toxics Control Act

N = primary sample

-- = not analyzed

ND = not detected

NWTPH = Northwest Total Petroleum Hydrocarbon

SDG = sample delivery group

SIM = selected ion monitoring

TEQ = toxicity equivalency quotient

APPENDIX A

Boring Logs

Soil Classification System

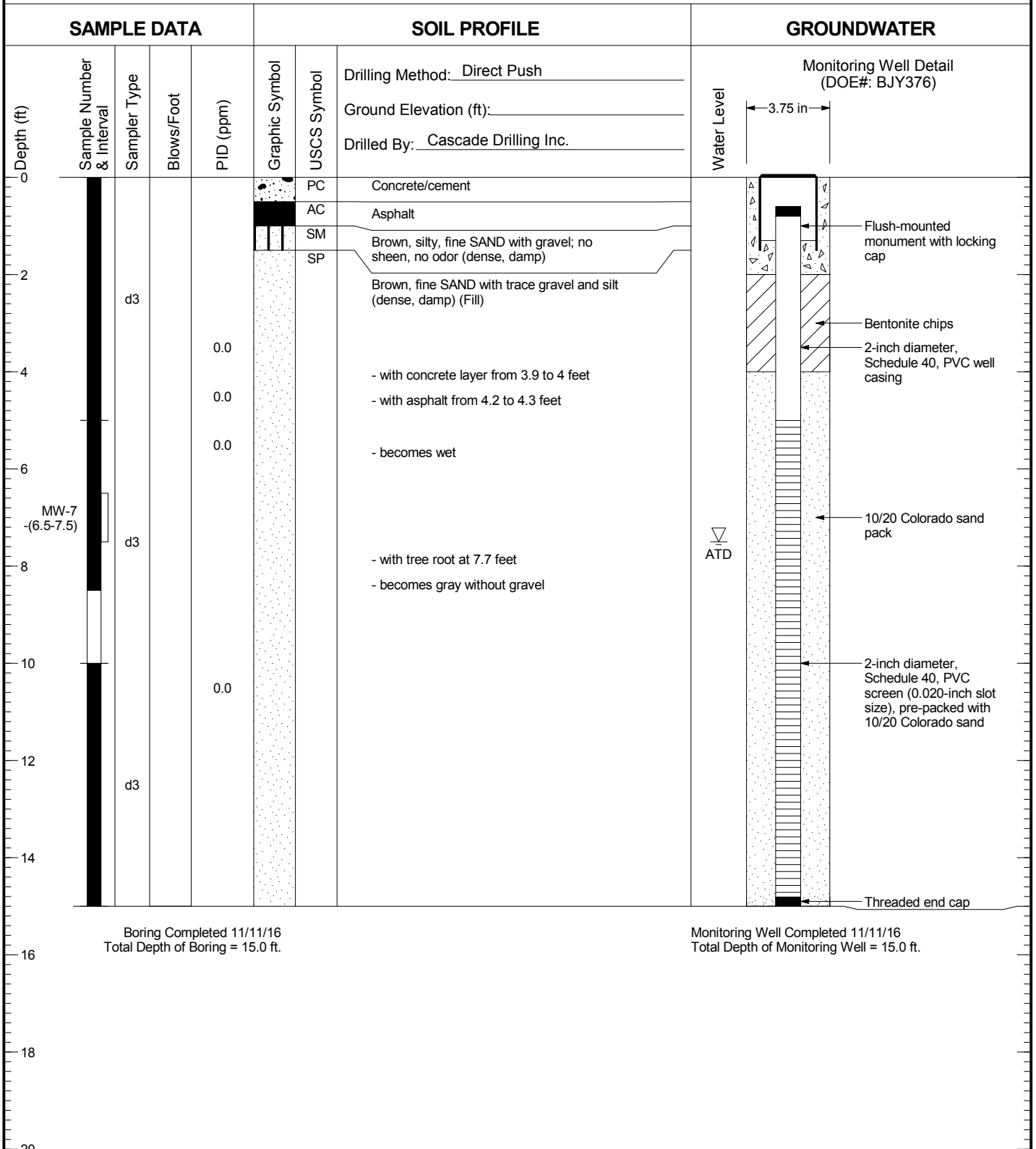
	MAJOR DIVISIONS	CLEAN GRAVEL (Little or no fines)	GRAPHIC SYMBOL	LETTER SYMBOL ⁽¹⁾	TYPICAL DESCRIPTIONS ⁽²⁾⁽³⁾
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
		CLEAN SAND (Little or no fines)		SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)	SILT AND CLAY (Liquid limit less than 50)		SC	Clayey sand; sand/clay mixture(s)
		SILT AND CLAY (Liquid limit less than 50)		ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
		SILT AND CLAY (Liquid limit less than 50)		CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
	SILT AND CLAY (Liquid limit greater than 50)	SILT AND CLAY (Liquid limit greater than 50)		MH	Inorganic silt; micaceous or diatomaceous fine sand
		SILT AND CLAY (Liquid limit greater than 50)		CH	Inorganic clay of high plasticity; fat clay
		SILT AND CLAY (Liquid limit greater than 50)		OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL		PT	Peat; humus; swamp soil with high organic content	

OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

- Notes:
- USCS letter symbols correspond to symbols used by the Unified Soil Classification System and ASTM classification methods. Dual letter symbols (e.g., SP-SM for sand or gravel) indicate soil with an estimated 5-15% fines. Multiple letter symbols (e.g., ML/CL) indicate borderline or multiple soil classifications.
 - Soil descriptions are based on the general approach presented in the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the Standard Test Method for Classification of Soils for Engineering Purposes, as outlined in ASTM D 2487.
 - Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:
 - Primary Constituent: > 50% - "GRAVEL," "SAND," "SILT," "CLAY," etc.
 - Secondary Constituents: > 30% and ≤ 50% - "very gravelly," "very sandy," "very silty," etc.
 - > 15% and ≤ 30% - "gravelly," "sandy," "silty," etc.
 - Additional Constituents: > 5% and ≤ 15% - "with gravel," "with sand," "with silt," etc.
 - ≤ 5% - "with trace gravel," "with trace sand," "with trace silt," etc., or not noted.
 - Soil density or consistency descriptions are based on judgement using a combination of sampler penetration blow counts, drilling or excavating conditions, field tests, and laboratory tests, as appropriate.

Drilling and Sampling Key		Field and Lab Test Data																																																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">SAMPLER TYPE</th> <th style="width: 85%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr><td>a</td><td>3.25-inch O.D., 2.42-inch I.D. Split Spoon</td></tr> <tr><td>b</td><td>2.00-inch O.D., 1.50-inch I.D. Split Spoon</td></tr> <tr><td>c</td><td>Shelby Tube</td></tr> <tr><td>d</td><td>Grab Sample</td></tr> <tr><td>e</td><td>Single-Tube Core Barrel</td></tr> <tr><td>f</td><td>Double-Tube Core Barrel</td></tr> <tr><td>g</td><td>2.50-inch O.D., 2.00-inch I.D. WSDOT</td></tr> <tr><td>h</td><td>3.00-inch O.D., 2.375-inch I.D. Mod. California</td></tr> <tr><td>i</td><td>Other - See text if applicable</td></tr> <tr><td>1</td><td>300-lb Hammer, 30-inch Drop</td></tr> <tr><td>2</td><td>140-lb Hammer, 30-inch Drop</td></tr> <tr><td>3</td><td>Pushed</td></tr> <tr><td>4</td><td>Vibrocore (Rotasonic/Geoprobe)</td></tr> <tr><td>5</td><td>Other - See text if applicable</td></tr> </tbody> </table>	SAMPLER TYPE	DESCRIPTION	a	3.25-inch O.D., 2.42-inch I.D. Split Spoon	b	2.00-inch O.D., 1.50-inch I.D. Split Spoon	c	Shelby Tube	d	Grab Sample	e	Single-Tube Core Barrel	f	Double-Tube Core Barrel	g	2.50-inch O.D., 2.00-inch I.D. WSDOT	h	3.00-inch O.D., 2.375-inch I.D. Mod. California	i	Other - See text if applicable	1	300-lb Hammer, 30-inch Drop	2	140-lb Hammer, 30-inch Drop	3	Pushed	4	Vibrocore (Rotasonic/Geoprobe)	5	Other - See text if applicable		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Code</th> <th style="width: 85%;">Description</th> </tr> </thead> <tbody> <tr><td>PP = 1.0</td><td>Pocket Penetrometer, tsf</td></tr> <tr><td>TV = 0.5</td><td>Torvane, tsf</td></tr> <tr><td>PID = 100</td><td>Photoionization Detector VOC screening, ppm</td></tr> <tr><td>W = 10</td><td>Moisture Content, %</td></tr> <tr><td>D = 120</td><td>Dry Density, pcf</td></tr> <tr><td>-200 = 60</td><td>Material smaller than No. 200 sieve, %</td></tr> <tr><td>GS</td><td>Grain Size - See separate figure for data</td></tr> <tr><td>AL</td><td>Atterberg Limits - See separate figure for data</td></tr> <tr><td>GT</td><td>Other Geotechnical Testing</td></tr> <tr><td>CA</td><td>Chemical Analysis</td></tr> </tbody> </table>	Code	Description	PP = 1.0	Pocket Penetrometer, tsf	TV = 0.5	Torvane, tsf	PID = 100	Photoionization Detector VOC screening, ppm	W = 10	Moisture Content, %	D = 120	Dry Density, pcf	-200 = 60	Material smaller than No. 200 sieve, %	GS	Grain Size - See separate figure for data	AL	Atterberg Limits - See separate figure for data	GT	Other Geotechnical Testing	CA	Chemical Analysis
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<h3 style="margin: 0;">Groundwater</h3>																																																						
		Approximate water level at time of drilling (ATD)																																																				
		Approximate water level at time other than ATD																																																				

MW-7



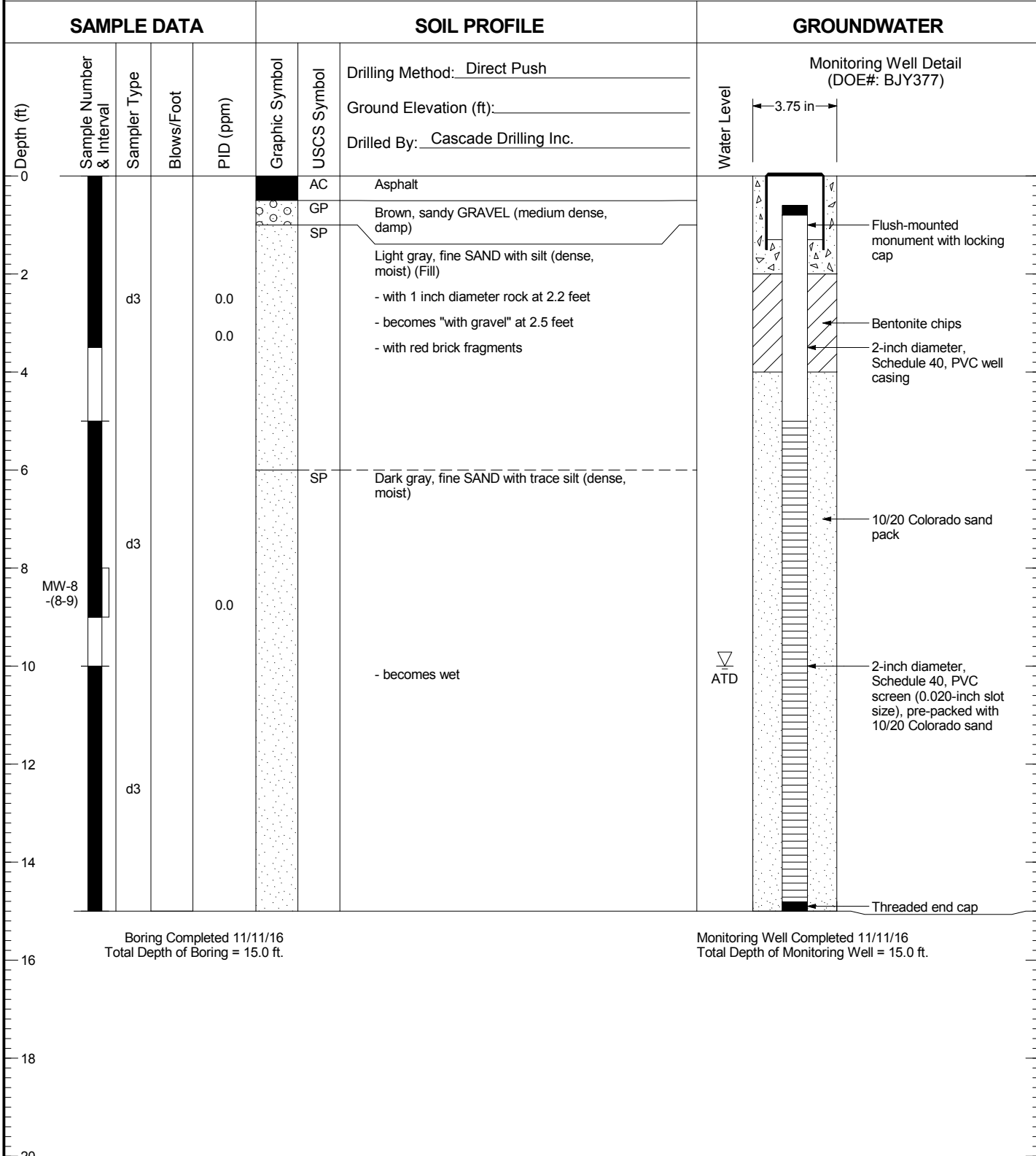
Boring Completed 11/11/16
Total Depth of Boring = 15.0 ft.

Monitoring Well Completed 11/11/16
Total Depth of Monitoring Well = 15.0 ft.

- Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
 2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
 3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

374020.01 11/14/17 N:\PROJECTS\374020.010.GPJ WELL LOG

MW-8



Boring Completed 11/11/16
 Total Depth of Boring = 15.0 ft.

Monitoring Well Completed 11/11/16
 Total Depth of Monitoring Well = 15.0 ft.

- Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
 2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
 3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

374020.01 11/14/17 N:\PROJECTS\374020.010.GPJ WELL LOG



Sears Auto Center
 Seattle, Washington

Log of Monitoring Well MW-8

Figure
A-3

Laboratory Analytical Reports



November 29, 2016

Mr. Tim Syverson
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Mr. Syverson,

On November 12th, 18 samples were received by our laboratory and assigned our laboratory project number EV16110079. The project was identified as your Starbucks Center #0374020.010. The sample identification and requested analyses are outlined on the attached chain of custody record.

Report is being re-issued.

Non-Conformance Report EV0016 was created for this job. The non-conformance was discovered by the client due to the 8270 SIM PAH BS/BSD results missing along with unexpectedly high results in the Blank and client samples. The non-conformance was due to a typo resulting in the Blank and clients samples failing to be associated with the correct Prep Batch (110115) and being associated with Prep Batch R285342. This caused the BS/BSD to be lost as they were assigned to the correct Prep Batch and this caused the Blank and client samples to be calculated without the dry sample amounts and conversion factor, resulting in vastly inflated values for the target analytes. Surrogate results were not affected as they are not adjusted by sample weight. The analyst failed to notice the inflated numbers, failed to notice the incorrect Prep Batch ID, and failed to heed the Sequence Scan warning. The report reviewer failed to notice the inflated numbers and failed to notice the missing BS/BSD. Due to the multiple failures it was determined that this was not a failure of the review system but was a highly unlikely situation where multiple checks were missed. Therefore we have determined that re-training and a greater emphasis on existing checks is the proper corrective action to take.

No other abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

Page 1

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

ALS Group USA, Corp dba ALS Environmental



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-01
CLIENT SAMPLE ID	SB-1-(10-11)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/9/2016 11:00:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/17/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/17/2016	EBS
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
C25	NWTPH-DX w/ SGA	99.7	11/17/2016	EBS
Terphenyl-d14	EPA-8270 SIM	128	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-02
CLIENT SAMPLE ID	SB-1-(15-16)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/9/2016 11:05:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/17/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/17/2016	EBS
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	104	11/17/2016	EBS
Terphenyl-d14	EPA-8270 SIM	77.9	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-03
CLIENT SAMPLE ID	SB-2-(2-3)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/9/2016 4:20:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/17/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/17/2016	EBS
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	29	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	59	20	1	UG/KG	11/18/2016	GAP
Pyrene	EPA-8270 SIM	49	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	34	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	36	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	46	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	38	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	21	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	26	20	1	UG/KG	11/18/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	104	11/17/2016	EBS
Terphenyl-d14	EPA-8270 SIM	93.3	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-04
CLIENT SAMPLE ID	SB-1	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/9/2016 12:00:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	300	130	1	UG/L	11/14/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	11/14/2016	EBS
Naphthalene	EPA-8270 SIM	0.10	0.020	1	UG/L	11/16/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	0.030	0.020	1	UG/L	11/16/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	0.028	0.020	1	UG/L	11/16/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Acenaphthene	EPA-8270 SIM	1.2	0.020	1	UG/L	11/16/2016	GAP
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Pyrene	EPA-8270 SIM	0.12	0.020	1	UG/L	11/16/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	0.023	0.020	1	UG/L	11/16/2016	GAP
Chrysene	EPA-8270 SIM	0.021	0.020	1	UG/L	11/16/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	90.8	11/14/2016	EBS
Terphenyl-d14	EPA-8270 SIM	71.7	11/16/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains highly weathered diesel.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-05
CLIENT SAMPLE ID	SB-2	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/9/2016 5:20:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	11/14/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	11/14/2016	EBS
Naphthalene	EPA-8270 SIM	0.023	0.020	1	UG/L	11/16/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/16/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	88.8	11/14/2016	EBS
Terphenyl-d14	EPA-8270 SIM	84.8	11/16/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-07
CLIENT SAMPLE ID	MW-1-(6.5-7.5)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/9/2016 2:15:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/17/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/17/2016	EBS
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	108	11/17/2016	EBS
Terphenyl-d14	EPA-8270 SIM	131	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-08
CLIENT SAMPLE ID	MW-2-(6-7)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/10/2016 8:10:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/17/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/17/2016	EBS
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	85.3	11/17/2016	EBS
Terphenyl-d14	EPA-8270 SIM	109	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-10
CLIENT SAMPLE ID	MW-4-(5-6)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/10/2016 12:15:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/17/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/17/2016	EBS
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	84.2	11/17/2016	EBS
Terphenyl-d14	EPA-8270 SIM	124	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-11
CLIENT SAMPLE ID	MW-3-(5-6)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/10/2016 3:00:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	39	1	MG/KG	11/17/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	360	50	1	MG/KG	11/17/2016	EBS
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	25	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	23	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	81.8	11/17/2016	EBS
Terphenyl-d14	EPA-8270 SIM	77.4	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.
 Chromatogram indicates that it is likely that sample contains lube oil.
 Diesel range product reporting limits raised due to motor oil range product overlap.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-12
CLIENT SAMPLE ID	MW-3-(11-12)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/10/2016 3:40:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/17/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/17/2016	EBS
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	93.2	11/17/2016	EBS
Terphenyl-d14	EPA-8270 SIM	87.6	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-13
CLIENT SAMPLE ID	MW-5-(7-8)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 8:00:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	20	1	MG/KG	11/18/2016	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	50	1	MG/KG	11/18/2016	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	100	1	MG/KG	11/18/2016	EBS
Dichlorodifluoromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Vinyl Chloride	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromomethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Carbon Tetrachloride	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trichlorofluoromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Carbon Disulfide	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Acetone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,1-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Methylene Chloride	EPA-8260	U	20	1	UG/KG	11/14/2016	DLC
Acrylonitrile	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Methyl T-Butyl Ether	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1-Dichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Butanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromochloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloroform	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,1-Trichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Benzene	EPA-8260	U	5.0	1	UG/KG	11/14/2016	DLC
Trichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Dibromomethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromodichloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
4-Methyl-2-Pentanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Toluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,2-Trichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Hexanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,3-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Tetrachloroethylene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-13
CLIENT SAMPLE ID	MW-5-(7-8)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 8:00:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	11/14/2016	DLC
Chlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/14/2016	DLC
Styrene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
o-Xylene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromoform	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Isopropylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,3-Trichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
N-Propyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Chlorotoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
4-Chlorotoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
T-Butyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
S-Butyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
P-Isopropyltoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,3-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,4-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
N-Butylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Hexachlorobutadiene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Naphthalene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	22	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	37	20	1	UG/KG	11/18/2016	GAP



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-13
CLIENT SAMPLE ID	MW-5-(7-8)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 8:00:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Pyrene	EPA-8270 SIM	30	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	26	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	37	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	24	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	27	20	1	UG/KG	11/18/2016	GAP
Mercury	EPA-7471	0.058	0.020	1	MG/KG	11/16/2016	RAL
Arsenic	EPA-6020	3.6	1.0	5	MG/KG	11/16/2016	RAL
Cadmium	EPA-6020	0.52	0.50	5	MG/KG	11/16/2016	RAL
Chromium	EPA-6020	14	0.50	5	MG/KG	11/16/2016	RAL
Lead	EPA-6020	69	0.50	5	MG/KG	11/16/2016	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
BCB	NWTPH-HCID	84.9	11/18/2016	EBS
C25	NWTPH-HCID	93.2	11/18/2016	EBS
1,2-Dichloroethane-d4	EPA-8260	111	11/14/2016	DLC
Toluene-d8	EPA-8260	97.4	11/14/2016	DLC
4-Bromofluorobenzene	EPA-8260	115	11/14/2016	DLC
Terphenyl-d14	EPA-8270 SIM	78.7	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-14
CLIENT SAMPLE ID	MW-5-(8.5-9.5)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 8:15:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	20	1	MG/KG	11/18/2016	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	50	1	MG/KG	11/18/2016	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	100	1	MG/KG	11/18/2016	EBS
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Mercury	EPA-7471	U	0.020	1	MG/KG	11/16/2016	RAL
Arsenic	EPA-6020	1.5	1.0	5	MG/KG	11/16/2016	RAL
Cadmium	EPA-6020	U	0.50	5	MG/KG	11/16/2016	RAL
Chromium	EPA-6020	19	0.50	5	MG/KG	11/16/2016	RAL
Lead	EPA-6020	4.3	0.50	5	MG/KG	11/16/2016	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
BCB	NWTPH-HCID	83.6	11/18/2016	EBS
C25	NWTPH-HCID	89.8	11/18/2016	EBS
Terphenyl-d14	EPA-8270 SIM	112	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-15
CLIENT SAMPLE ID	MW-6-(1.5-3)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 10:20:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	100	5	MG/KG	11/18/2016	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	250	5	MG/KG	11/18/2016	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	>500	500	5	MG/KG	11/18/2016	EBS
Dichlorodifluoromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Vinyl Chloride	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromomethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Carbon Tetrachloride	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trichlorofluoromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Carbon Disulfide	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Acetone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,1-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Methylene Chloride	EPA-8260	U	20	1	UG/KG	11/14/2016	DLC
Acrylonitrile	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Methyl T-Butyl Ether	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1-Dichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Butanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromochloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloroform	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,1-Trichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Benzene	EPA-8260	U	5.0	1	UG/KG	11/14/2016	DLC
Trichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Dibromomethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromodichloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
4-Methyl-2-Pentanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Toluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,2-Trichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Hexanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,3-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Tetrachloroethylene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-15
CLIENT SAMPLE ID	MW-6-(1.5-3)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 10:20:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	11/14/2016	DLC
Chlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/14/2016	DLC
Styrene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
o-Xylene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromoform	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Isopropylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,3-Trichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
N-Propyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Chlorotoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
4-Chlorotoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
T-Butyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
S-Butyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
P-Isopropyltoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,3-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,4-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
N-Butylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Hexachlorobutadiene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Naphthalene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	61	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-15
CLIENT SAMPLE ID	MW-6-(1.5-3)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 10:20:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Pyrene	EPA-8270 SIM	170	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	54	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	90	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	190	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	39	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	23	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	66	20	1	UG/KG	11/18/2016	GAP
Mercury	EPA-7471	0.042	0.020	1	MG/KG	11/16/2016	RAL
Arsenic	EPA-6020	3.3	1.0	5	MG/KG	11/16/2016	RAL
Cadmium	EPA-6020	U	0.50	5	MG/KG	11/16/2016	RAL
Chromium	EPA-6020	19	0.50	5	MG/KG	11/16/2016	RAL
Lead	EPA-6020	56	0.50	5	MG/KG	11/16/2016	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
BCB 5X Dilution	NWTPH-HCID	81.7	11/18/2016	EBS
C25 5X Dilution	NWTPH-HCID	92.1	11/18/2016	EBS
1,2-Dichloroethane-d4	EPA-8260	116	11/14/2016	DLC
Toluene-d8	EPA-8260	101	11/14/2016	DLC
4-Bromofluorobenzene	EPA-8260	126	11/14/2016	DLC
Terphenyl-d14	EPA-8270 SIM	55.5	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains lube oil.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-16
CLIENT SAMPLE ID	MW-6-(7-8)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 10:30:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	20	1	MG/KG	11/18/2016	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	50	1	MG/KG	11/18/2016	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	100	1	MG/KG	11/18/2016	EBS
Dichlorodifluoromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Vinyl Chloride	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromomethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Carbon Tetrachloride	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trichlorofluoromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Carbon Disulfide	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Acetone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,1-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Methylene Chloride	EPA-8260	U	20	1	UG/KG	11/14/2016	DLC
Acrylonitrile	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Methyl T-Butyl Ether	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1-Dichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Butanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromochloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloroform	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,1-Trichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Benzene	EPA-8260	U	5.0	1	UG/KG	11/14/2016	DLC
Trichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Dibromomethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromodichloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
4-Methyl-2-Pentanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Toluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,2-Trichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Hexanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,3-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Tetrachloroethylene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-16
CLIENT SAMPLE ID	MW-6-(7-8)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 10:30:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	11/14/2016	DLC
Chlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/14/2016	DLC
Styrene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
o-Xylene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromoform	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Isopropylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,3-Trichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
N-Propyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Chlorotoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
4-Chlorotoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
T-Butyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
S-Butyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
P-Isopropyltoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,3-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,4-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
N-Butylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Hexachlorobutadiene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Naphthalene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	23	20	1	UG/KG	11/18/2016	GAP



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-16
CLIENT SAMPLE ID	MW-6-(7-8)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 10:30:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Mercury	EPA-7471	0.033	0.020	1	MG/KG	11/16/2016	RAL
Arsenic	EPA-6020	2.7	1.0	5	MG/KG	11/16/2016	RAL
Cadmium	EPA-6020	U	0.50	5	MG/KG	11/16/2016	RAL
Chromium	EPA-6020	13	0.50	5	MG/KG	11/16/2016	RAL
Lead	EPA-6020	46	0.50	5	MG/KG	11/16/2016	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
BCB	NWTPH-HCID	119	11/18/2016	EBS
C25	NWTPH-HCID	109	11/18/2016	EBS
1,2-Dichloroethane-d4	EPA-8260	112	11/14/2016	DLC
Toluene-d8	EPA-8260	96.3	11/14/2016	DLC
4-Bromofluorobenzene	EPA-8260	106	11/14/2016	DLC
Terphenyl-d14	EPA-8270 SIM	85.5	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-17
CLIENT SAMPLE ID	MW-7-(6.5-7.5)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 12:50:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	20	1	MG/KG	11/18/2016	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	50	1	MG/KG	11/18/2016	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	100	1	MG/KG	11/18/2016	EBS
Dichlorodifluoromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Vinyl Chloride	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromomethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Carbon Tetrachloride	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trichlorofluoromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Carbon Disulfide	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Acetone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,1-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Methylene Chloride	EPA-8260	U	20	1	UG/KG	11/14/2016	DLC
Acrylonitrile	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Methyl T-Butyl Ether	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1-Dichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Butanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromochloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Chloroform	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,1-Trichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Benzene	EPA-8260	U	5.0	1	UG/KG	11/14/2016	DLC
Trichloroethene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Dibromomethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromodichloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
4-Methyl-2-Pentanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
Toluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,2-Trichloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Hexanone	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,3-Dichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Tetrachloroethylene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-17
CLIENT SAMPLE ID	MW-7-(6.5-7.5)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 12:50:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	11/14/2016	DLC
Chlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Ethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
m,p-Xylene	EPA-8260	U	20	1	UG/KG	11/14/2016	DLC
Styrene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
o-Xylene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromoform	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Isopropylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,3-Trichloropropane	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Bromobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
N-Propyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
2-Chlorotoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
4-Chlorotoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
T-Butyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
S-Butyl Benzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
P-Isopropyltoluene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,3-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,4-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
N-Butylbenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	50	1	UG/KG	11/14/2016	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Hexachlorobutadiene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Naphthalene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	11/14/2016	DLC
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-17
CLIENT SAMPLE ID	MW-7-(6.5-7.5)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 12:50:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Chrysene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	20	1	UG/KG	11/18/2016	GAP
Mercury	EPA-7471	U	0.020	1	MG/KG	11/16/2016	RAL
Arsenic	EPA-6020	1.7	1.0	5	MG/KG	11/16/2016	RAL
Cadmium	EPA-6020	U	0.50	5	MG/KG	11/16/2016	RAL
Chromium	EPA-6020	11	0.50	5	MG/KG	11/16/2016	RAL
Lead	EPA-6020	11	0.50	5	MG/KG	11/16/2016	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
BCB	NWTPH-HCID	114	11/18/2016	EBS
C25	NWTPH-HCID	106	11/18/2016	EBS
1,2-Dichloroethane-d4	EPA-8260	112	11/14/2016	DLC
Toluene-d8	EPA-8260	97.1	11/14/2016	DLC
4-Bromofluorobenzene	EPA-8260	104	11/14/2016	DLC
Terphenyl-d14	EPA-8270 SIM	104	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	ALS SAMPLE#:	EV16110079-18
CLIENT SAMPLE ID	MW-8-(8-9)	DATE RECEIVED:	11/12/2016
		COLLECTION DATE:	11/11/2016 3:00:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	25	1	MG/KG	11/17/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	50	1	MG/KG	11/17/2016	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	83.8	11/17/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 11/29/2016
 130 - 2nd Ave. S. ALS SDG#: EV16110079
 Edmonds, WA 98020 WDOE ACCREDITATION: C601

CLIENT CONTACT: Tim Syverson
 CLIENT PROJECT: Starbucks Center #0374020.010

LABORATORY BLANK RESULTS

MB-111816S - Batch 110018 - Soil by NWTPH-HCID

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	MG/KG	20	11/18/2016	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	MG/KG	50	11/18/2016	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	MG/KG	100	11/18/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111716S - Batch 109994 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	MG/KG	25	11/17/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	MG/KG	50	11/17/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-110816W - Batch 109694 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	UG/L	130	11/08/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	UG/L	250	11/08/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111116S - Batch 109833 - Soil by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Chloromethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Vinyl Chloride	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Bromomethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Chloroethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Carbon Tetrachloride	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Trichlorofluoromethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Carbon Disulfide	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Acetone	EPA-8260	U	UG/KG	50	11/11/2016	DLC
1,1-Dichloroethene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Methylene Chloride	EPA-8260	U	UG/KG	20	11/11/2016	DLC
Acrylonitrile	EPA-8260	U	UG/KG	50	11/11/2016	DLC
Methyl T-Butyl Ether	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,1-Dichloroethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
2-Butanone	EPA-8260	U	UG/KG	50	11/11/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS SDG#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-111116S - Batch 109833 - Soil by EPA-8260

Cis-1,2-Dichloroethene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
2,2-Dichloropropane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Bromochloromethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Chloroform	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,1,1-Trichloroethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,1-Dichloropropene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,2-Dichloroethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Benzene	EPA-8260	U	UG/KG	5.0	11/11/2016	DLC
Trichloroethene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,2-Dichloropropane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Dibromomethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Bromodichloromethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
4-Methyl-2-Pentanone	EPA-8260	U	UG/KG	50	11/11/2016	DLC
Toluene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,1,2-Trichloroethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
2-Hexanone	EPA-8260	U	UG/KG	50	11/11/2016	DLC
1,3-Dichloropropane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Tetrachloroethylene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Dibromochloromethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,2-Dibromoethane	EPA-8260	U	UG/KG	5.0	11/11/2016	DLC
Chlorobenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Ethylbenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
m,p-Xylene	EPA-8260	U	UG/KG	20	11/11/2016	DLC
Styrene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
o-Xylene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Bromoform	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Isopropylbenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,2,3-Trichloropropane	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Bromobenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
N-Propyl Benzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
2-Chlorotoluene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
4-Chlorotoluene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
T-Butyl Benzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
S-Butyl Benzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
P-Isopropyltoluene	EPA-8260	U	UG/KG	10	11/11/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS SDG#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-111116S - Batch 109833 - Soil by EPA-8260

1,3-Dichlorobenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,4-Dichlorobenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
N-Butylbenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,2-Dichlorobenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	UG/KG	50	11/11/2016	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Hexachlorobutadiene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
Naphthalene	EPA-8260	U	UG/KG	10	11/11/2016	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	UG/KG	10	11/11/2016	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111716S - Batch 110115 - Soil by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Acenaphthene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Fluorene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Phenanthrene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Anthracene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Fluoranthene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Pyrene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Chrysene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/KG	20	11/18/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111016W - Batch 109824 - Water by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS SDG#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-111016W - Batch 109824 - Water by EPA-8270 SIM

Acenaphthene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Fluorene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Phenanthrene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Anthracene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Pyrene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Chrysene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/L	0.020	11/10/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R285426 - Batch R285426 - Soil by EPA-7471

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	11/16/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111616S - Batch 109898 - Soil by EPA-6020

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	U	MG/KG	0.20	11/16/2016	RAL
Cadmium	EPA-6020	U	MG/KG	0.10	11/16/2016	RAL
Chromium	EPA-6020	U	MG/KG	0.10	11/16/2016	RAL
Lead	EPA-6020	U	MG/KG	0.10	11/16/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS SDG#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 109994 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	116			75.5	122.1	11/17/2016	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	108	7		75.5	122.1	11/17/2016	EBS

ALS Test Batch ID: 109694 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	84.0			67	125.2	11/09/2016	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	91.0	8		67	125.2	11/09/2016	EBS

ALS Test Batch ID: 109833 - Soil by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
1,1-Dichloroethene - BS	EPA-8260	114			73	138	11/11/2016	DLC
1,1-Dichloroethene - BSD	EPA-8260	114	0		73	138	11/11/2016	DLC
Benzene - BS	EPA-8260	122			75	138	11/11/2016	DLC
Benzene - BSD	EPA-8260	120	2		75	138	11/11/2016	DLC
Trichloroethene - BS	EPA-8260	121			75	136	11/11/2016	DLC
Trichloroethene - BSD	EPA-8260	118	2		75	136	11/11/2016	DLC
Toluene - BS	EPA-8260	107			76	134	11/11/2016	DLC
Toluene - BSD	EPA-8260	105	2		76	134	11/11/2016	DLC
Chlorobenzene - BS	EPA-8260	99.2			79	128	11/11/2016	DLC
Chlorobenzene - BSD	EPA-8260	99.5	0		79	128	11/11/2016	DLC

ALS Test Batch ID: 110115 - Soil by EPA-8270 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Naphthalene - BS	EPA-8270 SIM	86.6			49.2	140	11/18/2016	GAP
Naphthalene - BSD	EPA-8270 SIM	81.8	6		49.2	140	11/18/2016	GAP
Acenaphthene - BS	EPA-8270 SIM	87.6			55	147	11/18/2016	GAP
Acenaphthene - BSD	EPA-8270 SIM	83.4	5		55	147	11/18/2016	GAP
Pyrene - BS	EPA-8270 SIM	96.5			47.9	176	11/18/2016	GAP
Pyrene - BSD	EPA-8270 SIM	98.5	2		47.9	176	11/18/2016	GAP
Benzo[G,H,I]Perylene - BS	EPA-8270 SIM	101			40.4	143	11/18/2016	GAP
Benzo[G,H,I]Perylene - BSD	EPA-8270 SIM	94.9	6		40.4	143	11/18/2016	GAP

ALS Test Batch ID: 109824 - Water by EPA-8270 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Naphthalene - BS	EPA-8270 SIM	101			36	118	11/10/2016	GAP



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/29/2016
CLIENT CONTACT:	Tim Syverson	ALS SDG#:	EV16110079
CLIENT PROJECT:	Starbucks Center #0374020.010	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Naphthalene - BSD	EPA-8270 SIM	102	1		36	118	11/10/2016	GAP
Acenaphthene - BS	EPA-8270 SIM	115			37	125	11/10/2016	GAP
Acenaphthene - BSD	EPA-8270 SIM	116	0		37	125	11/10/2016	GAP
Pyrene - BS	EPA-8270 SIM	128			59	156	11/10/2016	GAP
Pyrene - BSD	EPA-8270 SIM	125	3		59	156	11/10/2016	GAP
Benzo[G,H,I]Perylene - BS	EPA-8270 SIM	112			43	140	11/10/2016	GAP
Benzo[G,H,I]Perylene - BSD	EPA-8270 SIM	117	5		43	140	11/10/2016	GAP

ALS Test Batch ID: R285426 - Soil by EPA-7471

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury - BS	EPA-7471	100			81.8	117	11/16/2016	RAL
Mercury - BSD	EPA-7471	101	1		81.8	117	11/16/2016	RAL

ALS Test Batch ID: 109898 - Soil by EPA-6020

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Arsenic - BS	EPA-6020	99.5			80	120	11/16/2016	RAL
Arsenic - BSD	EPA-6020	102	3		80	120	11/16/2016	RAL
Cadmium - BS	EPA-6020	100			80	120	11/16/2016	RAL
Cadmium - BSD	EPA-6020	104	3		80	120	11/16/2016	RAL
Chromium - BS	EPA-6020	98.6			80	120	11/16/2016	RAL
Chromium - BSD	EPA-6020	104	5		80	120	11/16/2016	RAL
Lead - BS	EPA-6020	101			80	120	11/16/2016	RAL
Lead - BSD	EPA-6020	103	1		80	120	11/16/2016	RAL

APPROVED BY

Laboratory Director



- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080
- _____

Chain-of-Custody Record

Date 11/10/2016
Page 1 of 1

EVI6110079

Project Name <u>Starbucks Center</u> Project No. <u>0374020.010</u>					Testing Parameters										Turnaround Time							
Project Location/Event <u>South Loading Dock / Soil/groundwater</u>					NWTPH-Dx	PAHs	Aroclor	NWTPH-HCID	VOCs (8260C)	Metals As, Cd, Cr, Pb, Hg											<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Accelerated
Sampler's Name <u>Evelyn Ives / Katie Gauglitz</u>																						
Project Contact <u>Tim Syverson</u>																						
Send Results To <u>T. Syverson, D. Jorgensen,</u>																						
Sample I.D.	Date	Time	Matrix	No. of Containers														Observations/Comments				
1 SB-1-(10-11)	11/9/16	1100	SOIL	2	X	X												* <input checked="" type="checkbox"/> Allow water samples to settle, collect aliquot from clear portion				
2 SB-1-(15-16)	11/9/16	1105	SOIL	2	X	X																
3 SB-2-(2-3)	11/9/16	1620	SOIL	2	X	X												* <input checked="" type="checkbox"/> NWTPH-Dx - run acid wash silica gel cleanup				
4 SB-1	11/9/16	1200	Ag	2	X	X																
5 SB-2	11/9/16	1720	Ag	2	X	X																
6 MW-1-(5-6)	11/9/16	1410	SOIL	2						X								— Analyze for EPH if no specific product identified				
7 MW-1-(6.5-7.5)	11/9/16	1415	SOIL	2	X	X																
8 MW-2-(6-7)	11/10/16	0810	SOIL	2	X	X												— VOC/BTEX/VPH (soil): — non-preserved — preserved w/methanol — preserved w/sodium bisulfate — Freeze upon receipt — Dissolved metal water samples field filtered				
9 MW-4-(1-2)	11/10/16	1210	SOIL	2						X												
10 MW-4-(5-6)	11/10/16	1215	SOIL	2	X	X																
11 MW-3-(5-6)	11/10/16	1500	SOIL	2	X	X																
12 MW-3-(11-12)	11/10/16	1540	SOIL	2	X	X																
13 MW-5-(7-8)	11/11/16	0800	SOIL	6			X	X	X	X												
14 MW-5-(8.5-9.5)	11/11/16	0815	SOIL	3			X	X	X	X												
15 MW-6-(1.5-3)	11/11/16	1020	SOIL	6			X	X	X	X												
16 MW-6-(7-8)	11/11/16	1030	SOIL	6			X	X	X	X												
17 MW-7-(6.5-7.5)	11/11/16	1250	SOIL	6			X	X	X	X												
18 MW-8-(8-9)	11/11/16	1500	SOIL	1	X																	

Special Shipment/Handling or Storage Requirements on ice Method of Shipment drop off @ ALS

Relinquished by Signature <u>Evelyn Ives</u> Printed Name <u>Evelyn Ives</u> Company <u>LA1</u> Date <u>11/12/16</u> Time <u>10:15</u>	Received by Signature <u>Rick Bager</u> Printed Name <u>Rick Bager</u> Company <u>ALS</u> Date <u>11/2/16</u> Time <u>10:15</u>	Relinquished by Signature _____ Printed Name _____ Company _____ Date _____ Time _____	Received by Signature _____ Printed Name _____ Company _____ Date _____ Time _____
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ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landan Associates

ALS Job #: EV16110079

Project: Starbucks Center

Received Date: 11/12/16 Received Time: 10:15 By: RS

Type of shipping container: Cooler Box Other

Shipped via: FedEx Ground UPS Mail Courier Hand Delivered
FedEx Express

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals on outside of shipping container?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, how many? <u>1</u> Where? <u>Top</u>			
Custody seal date: <u>11/11</u> Seal name: <u>Landan Assoc.</u>			

Was Chain of Custody properly filled out (ink, signed, dated, etc.)?

Did all bottles have labels?

Did all bottle labels and tags agree with Chain of Custody?

Were samples received within hold time?

Did all bottles arrive in good condition (unbroken, etc.)?

Was sufficient amount of sample sent for the tests indicated?

Was correct preservation added to samples?

If no, Sample Control added preservative to the following: Per 5035 low - 4 kits

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Were VOA vials checked for absence of air bubbles?
Bubbles present in sample #: _____

Temperature of cooler upon receipt: #1 = 1°C
#2 = 1°C
on Ice Cold Cool Ambient N/A

Explain any discrepancies: _____

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____

Outcome of call: _____



November 30, 2016

Mr. Tim Syverson
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Mr. Syverson,

On November 30th, an add-on analysis was requested for our laboratory project number EV16110079, your Starbucks Center #0374020.010 project. The sample identification and requested analyses are outlined on the attached chain of custody record.

NWTPH-Dx analysis of our sample number EV16110079-15 was requested outside of hold time and the analysis was performed outside of hold time. No other abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 11/30/2016
130 - 2nd Ave. S. ALS JOB#: EV16110079A
Edmonds, WA 98020 ALS SAMPLE#: EV16110079-15
CLIENT CONTACT: Tim Syverson DATE RECEIVED: 11/12/2016
CLIENT PROJECT: Starbucks Center #0374020.010 COLLECTION DATE: 11/11/2016 10:20:00 AM
CLIENT SAMPLE ID MW-6-(1.5-3) WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	ND- H	120	5	MG/KG	11/28/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	3900 H	250	5	MG/KG	11/28/2016	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25 5X Dilution	NWTPH-DX w/ SGA	102 H	11/28/2016	EBS

H - Sample analyzed outside of hold time.
Chromatogram indicates that it is likely that sample contains lube oil.



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 11/30/2016
130 - 2nd Ave. S. ALS SDG#: EV16110079A
Edmonds, WA 98020 WDOE ACCREDITATION: C601
CLIENT CONTACT: Tim Syverson
CLIENT PROJECT: Starbucks Center #0374020.010

LABORATORY BLANK RESULTS

MB-112816S - Batch 110254 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	MG/KG	25	11/28/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	MG/KG	50	11/28/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS SDG#:	EV16110079A
CLIENT PROJECT:	Starbucks Center #0374020.010	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 110254 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	101			75.5	122.1	11/28/2016	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	100	0		75.5	122.1	11/28/2016	EBS

APPROVED BY



Laboratory Director



- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080
- _____

Chain-of-Custody Record

Date 11/10/2016
Page 1 of 1

EV16110079A

Project Name <u>Starbucks Center</u> Project No. <u>0374020.010</u>					Testing Parameters						
Project Location/Event <u>South Loading Dock / Soil/groundwater</u>					<div style="display: flex; justify-content: space-around; font-size: small;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">NWTPH-Dx</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">PAHs</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Archive</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">NWTPH-HCID</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">VOCs (BZGOC)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Metals As, Cd, Cr, Pb, Hg</div> </div>						
Sampler's Name <u>Evelyn Ives / Katie Gauglitz</u>											
Project Contact <u>Tim Syverson</u>											
Send Results To <u>T. Syverson, D. Jorgensen,</u>											
					Turnaround Time <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Accelerated <input type="checkbox"/> _____						
Sample I.D.	Date	Time	Matrix	No. of Containers						Observations/Comments	
1 SB-1-(10-11)	11/9/16	1100	SOIL	2	X	X					<div style="border: 1px solid black; border-radius: 10px; padding: 5px; display: inline-block;"> X Allow water samples to settle, collect aliquot from clear portion * </div>
2 SB-1-(15-16)	11/9/16	1105	SOIL	2	X	X					
3 SB-2-(2-3)	11/9/16	1620	SOIL	2	X	X					<input checked="" type="checkbox"/> NWTPH-Dx - run acid wash silica gel cleanup
4 SB-1	11/9/16	1200	Ag	2	X	X					
5 SB-2	11/9/16	1720	Ag	2	X	X					<input type="checkbox"/> Analyze for EPH if no specific product identified
6 MW-1-(5-6)	11/9/16	1410	SOIL	2			X				
7 MW-1-(6.5-7.5)	11/9/16	1415	SOIL	2	X	X					VOC/BTEX/VPH (soil): <input type="checkbox"/> non-preserved <input type="checkbox"/> preserved w/methanol <input type="checkbox"/> preserved w/sodium bisulfate <input type="checkbox"/> Freeze upon receipt <input type="checkbox"/> Dissolved metal water samples field filtered
8 MW-2-(6-7)	11/10/16	0810	SOIL	2	X	X					
9 MW-4-(1-2)	11/10/16	1210	SOIL	2			X				<input type="checkbox"/> Other
10 MW-4-(5-6)	11/10/16	1215	SOIL	2	X	X					
11 MW-3-(5-6)	11/10/16	1500	SOIL	2	X	X					<input checked="" type="checkbox"/> Added per Evelyn 11/30/16
12 MW-3-(11-12)	11/10/16	1540	SOIL	2	X	X					
13 MW-5-(7-8)	11/11/16	0800	SOIL	6		X	X	X			
14 MW-5-(8.5-9.5)	11/11/16	0815	SOIL	3		X	X	X			
15 MW-6-(1.5-3)	11/11/16	1020	SOIL	6	X	X	X	X			
16 MW-6-(7-8)	11/11/16	1030	SOIL	6		X	X	X			
17 MW-7-(6.5-7.5)	11/11/16	1250	SOIL	6		X	X	X			
18 MW-8-(8-9)	11/11/16	1500	SOIL	1	X						

Special Shipment/Handling or Storage Requirements <u>on ice</u>	Method of Shipment <u>drop off @ ALS</u>
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Relinquished by Signature <u>Evelyn Ives</u> Printed Name <u>Evelyn Ives</u> Company <u>LAI</u> Date <u>11/12/16</u> Time <u>10:15</u>	Received by Signature <u>Rick Bagor</u> Printed Name <u>Rick Bagor</u> Company <u>ALS</u> Date <u>11/2/16</u> Time <u>10:15</u>	Relinquished by Signature _____ Printed Name _____ Company _____ Date _____ Time _____	Received by Signature _____ Printed Name _____ Company _____ Date _____ Time _____
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ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landan Associates

ALS Job #: EV16110079

Project: Starbucks Center

Received Date: 11/12/16 Received Time: 10:15 By: RS

Type of shipping container: Cooler Box Other

Shipped via: FedEx Ground UPS Mail Courier Hand Delivered
FedEx Express

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals on outside of shipping container?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, how many? <u>1</u> Where? <u>Top</u>			
Custody seal date: <u>11/11</u> Seal name: <u>Landan Assoc.</u>			

Was Chain of Custody properly filled out (ink, signed, dated, etc.)?

Did all bottles have labels?

Did all bottle labels and tags agree with Chain of Custody?

Were samples received within hold time?

Did all bottles arrive in good condition (unbroken, etc.)?

Was sufficient amount of sample sent for the tests indicated?

Was correct preservation added to samples?

If no, Sample Control added preservative to the following: Per 5035 low - 4 kits

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Were VOA vials checked for absence of air bubbles?
Bubbles present in sample #: _____

Temperature of cooler upon receipt: #1 = 1°C
#2 = 1°C
on Ice Cold Cool Ambient N/A

Explain any discrepancies: _____

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____

Outcome of call: _____



November 30, 2016

Mr. Tim Syverson
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Mr. Syverson,

On November 15th, 9 samples were received by our laboratory and assigned our laboratory project number EV16110100. The project was identified as your Starbucks Center - 0374020.010. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-01
CLIENT SAMPLE ID	MW-1	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 9:40:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	11/21/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	11/21/2016	EBS
Naphthalene	EPA-8270 SIM	0.027	0.020	1	UG/L	11/21/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Pyrene	EPA-8270 SIM	0.033	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	0.046	0.020	1	UG/L	11/21/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
C25	NWTPH-DX w/ SGA	76.6	11/21/2016	EBS
Terphenyl-d14	EPA-8270 SIM	105	11/21/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-02
CLIENT SAMPLE ID	MW-2	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 10:23:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	11/21/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	11/21/2016	EBS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	78.5	11/21/2016	EBS
Terphenyl-d14	EPA-8270 SIM	104	11/21/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-03
CLIENT SAMPLE ID	MW-3	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 10:50:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	11/21/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	11/21/2016	EBS
Naphthalene	EPA-8270 SIM	0.073	0.020	1	UG/L	11/21/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	0.057	0.020	1	UG/L	11/21/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	0.050	0.020	1	UG/L	11/21/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthene	EPA-8270 SIM	0.26	0.020	1	UG/L	11/21/2016	GAP
Fluorene	EPA-8270 SIM	0.083	0.020	1	UG/L	11/21/2016	GAP
Phenanthrene	EPA-8270 SIM	0.049	0.020	1	UG/L	11/21/2016	GAP
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	103	11/21/2016	EBS
Terphenyl-d14	EPA-8270 SIM	101	11/21/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-04
CLIENT SAMPLE ID	MW-4	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 11:12:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	11/21/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	11/21/2016	EBS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	99.1	11/21/2016	EBS
Terphenyl-d14	EPA-8270 SIM	105	11/21/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-05
CLIENT SAMPLE ID	MW-5	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 12:20:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	130	1	UG/L	11/19/2016	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	310	1	UG/L	11/19/2016	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	310	1	UG/L	11/19/2016	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	11/17/2016	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/17/2016	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	11/17/2016	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	11/17/2016	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/17/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/17/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/17/2016	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-05
CLIENT SAMPLE ID	MW-5	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 12:20:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/17/2016	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/17/2016	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	11/17/2016	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Naphthalene	EPA-8270 SIM	0.20	0.020	1	UG/L	11/21/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	0.47	0.020	1	UG/L	11/21/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	0.36	0.020	1	UG/L	11/21/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-05
CLIENT SAMPLE ID	MW-5	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 12:20:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Mercury	EPA-245.1	U	0.20	1	UG/L	11/21/2016	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	11/21/2016	RAL
Arsenic	EPA-200.8	2.4	1.0	1	UG/L	11/22/2016	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	11/22/2016	RAL
Chromium	EPA-200.8	2.3	2.0	1	UG/L	11/22/2016	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	11/22/2016	RAL
Arsenic (Dissolved)	EPA-200.8	1.8	1.0	1	UG/L	11/22/2016	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/22/2016	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	11/22/2016	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/22/2016	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
BCB	NWTPH-HCID	111	11/19/2016	EBS
C25	NWTPH-HCID	99.7	11/19/2016	EBS
C25 (conc)	NWTPH-HCID	110	11/19/2016	EBS
1,2-Dichloroethane-d4	EPA-8260	101	11/17/2016	DLC
Toluene-d8	EPA-8260	97.7	11/17/2016	DLC
4-Bromofluorobenzene	EPA-8260	105	11/17/2016	DLC
Terphenyl-d14	EPA-8270 SIM	105	11/21/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-06
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 12:25:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	130	1	UG/L	11/19/2016	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	310	1	UG/L	11/19/2016	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	310	1	UG/L	11/19/2016	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	11/18/2016	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/18/2016	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	11/18/2016	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	11/18/2016	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/18/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/18/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/18/2016	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-06
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 12:25:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/18/2016	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/18/2016	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	11/18/2016	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-06
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 12:25:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Mercury	EPA-245.1	U	0.20	1	UG/L	11/21/2016	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	11/21/2016	RAL
Arsenic	EPA-200.8	4.3	1.0	1	UG/L	11/22/2016	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	11/22/2016	RAL
Chromium	EPA-200.8	2.6	2.0	1	UG/L	11/22/2016	RAL
Lead	EPA-200.8	1.3	1.0	1	UG/L	11/22/2016	RAL
Arsenic (Dissolved)	EPA-200.8	3.8	1.0	1	UG/L	11/22/2016	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/22/2016	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	11/22/2016	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/22/2016	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
BCB	NWTPH-HCID	118	11/19/2016	EBS
C25	NWTPH-HCID	102	11/19/2016	EBS
C25 (conc)	NWTPH-HCID	111	11/19/2016	EBS
1,2-Dichloroethane-d4	EPA-8260	108	11/18/2016	DLC
Toluene-d8	EPA-8260	102	11/18/2016	DLC
4-Bromofluorobenzene	EPA-8260	95.2	11/18/2016	DLC
Terphenyl-d14	EPA-8270 SIM	102	11/21/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-07
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 2:00:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	130	1	UG/L	11/19/2016	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	310	1	UG/L	11/19/2016	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	310	1	UG/L	11/19/2016	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	11/18/2016	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/18/2016	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	11/18/2016	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	11/18/2016	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/18/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/18/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/18/2016	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-07
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 2:00:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/18/2016	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/18/2016	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	11/18/2016	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/18/2016	DLC
Naphthalene	EPA-8270 SIM	0.023	0.020	1	UG/L	11/21/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-07
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 2:00:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	11/21/2016	GAP
Mercury	EPA-245.1	U	0.20	1	UG/L	11/21/2016	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	11/21/2016	RAL
Arsenic	EPA-200.8	4.6	1.0	1	UG/L	11/22/2016	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	11/22/2016	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	11/22/2016	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	11/22/2016	RAL
Arsenic (Dissolved)	EPA-200.8	4.1	1.0	1	UG/L	11/22/2016	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/22/2016	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	11/22/2016	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	11/22/2016	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
BCB	NWTPH-HCID	112	11/19/2016	EBS
C25	NWTPH-HCID	97.5	11/19/2016	EBS
C25 (conc)	NWTPH-HCID	114	11/19/2016	EBS
1,2-Dichloroethane-d4	EPA-8260	105	11/18/2016	DLC
Toluene-d8	EPA-8260	94.7	11/18/2016	DLC
4-Bromofluorobenzene	EPA-8260	94.5	11/18/2016	DLC
Terphenyl-d14	EPA-8270 SIM	93.2	11/21/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-08
CLIENT SAMPLE ID	MW-8	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016 2:21:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	11/21/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	11/21/2016	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	99.5	11/21/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syveron	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-09
CLIENT SAMPLE ID	Trip Blanks	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C7-C12)	NWTPH-GX	U	50	1	UG/L	11/16/2016	PAB
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	11/17/2016	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Acetone	EPA-8260	U	25	1	UG/L	11/17/2016	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	11/17/2016	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	11/17/2016	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	11/17/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/17/2016	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	11/17/2016	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/17/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS JOB#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	ALS SAMPLE#:	EV16110100-09
CLIENT SAMPLE ID	Trip Blanks	DATE RECEIVED:	11/15/2016
		COLLECTION DATE:	11/14/2016
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/17/2016	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	11/17/2016	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/17/2016	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	105	11/16/2016	PAB
1,2-Dichloroethane-d4	EPA-8260	103	11/17/2016	DLC
Toluene-d8	EPA-8260	95.6	11/17/2016	DLC
4-Bromofluorobenzene	EPA-8260	106	11/17/2016	DLC

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS SDG#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-111816W - Batch 110040 - Water by NWTPH-HCID

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	UG/L	130	11/18/2016	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	UG/L	310	11/18/2016	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	UG/L	310	11/18/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MBG-111016W - Batch 109753 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C7-C12)	NWTPH-GX	U	UG/L	50	11/10/2016	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111416W - Batch 109882 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	UG/L	130	11/14/2016	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	UG/L	250	11/14/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111716W - Batch 110008 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Chloromethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Vinyl Chloride	EPA-8260	U	UG/L	0.20	11/17/2016	DLC
Bromomethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Chloroethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Carbon Tetrachloride	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Trichlorofluoromethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Carbon Disulfide	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Acetone	EPA-8260	U	UG/L	25	11/17/2016	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Methylene Chloride	EPA-8260	U	UG/L	5.0	11/17/2016	DLC
Acrylonitrile	EPA-8260	U	UG/L	10	11/17/2016	DLC
Methyl T-Butyl Ether	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,1-Dichloroethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
2-Butanone	EPA-8260	U	UG/L	10	11/17/2016	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS SDG#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-111716W - Batch 110008 - Water by EPA-8260

2,2-Dichloropropane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Bromochloromethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Chloroform	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,1,1-Trichloroethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,1-Dichloropropene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,2-Dichloroethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Benzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Trichloroethene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,2-Dichloropropane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Dibromomethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Bromodichloromethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
4-Methyl-2-Pentanone	EPA-8260	U	UG/L	10	11/17/2016	DLC
Toluene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,1,2-Trichloroethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
2-Hexanone	EPA-8260	U	UG/L	10	11/17/2016	DLC
1,3-Dichloropropane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Dibromochloromethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,2-Dibromoethane	EPA-8260	U	UG/L	0.010	11/17/2016	DLC
Chlorobenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	11/17/2016	DLC
Styrene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Bromoform	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Isopropylbenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,2,3-Trichloropropane	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Bromobenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
N-Propyl Benzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
2-Chlorotoluene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
4-Chlorotoluene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
T-Butyl Benzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
S-Butyl Benzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
P-Isopropyltoluene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,3-Dichlorobenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS SDG#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-111716W - Batch 110008 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,4-Dichlorobenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
N-Butylbenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,2-Dichlorobenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	UG/L	10	11/17/2016	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Hexachlorobutadiene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
Naphthalene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	UG/L	2.0	11/17/2016	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-111616W - Batch 109972 - Water by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
2-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
1-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Acenaphthylene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Acenaphthene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Fluorene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Phenanthrene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Anthracene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Pyrene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Benzo[A]Anthracene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Chrysene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/L	0.020	11/17/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-285555 - Batch R285555 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	UG/L	0.20	11/21/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 11/30/2016
 130 - 2nd Ave. S. ALS SDG#: EV16110100
 Edmonds, WA 98020 WDOE ACCREDITATION: C601

CLIENT CONTACT: Tim Syverson
 CLIENT PROJECT: Starbucks Center - 0374020.010

LABORATORY BLANK RESULTS

MBLK-285697 - Batch R285697 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)	EPA-245.1	U	UG/L	0.20	11/21/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112216W - Batch 110153 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-200.8	U	UG/L	1.0	11/22/2016	RAL
Cadmium	EPA-200.8	U	UG/L	1.0	11/22/2016	RAL
Chromium	EPA-200.8	U	UG/L	2.0	11/22/2016	RAL
Lead	EPA-200.8	U	UG/L	1.0	11/22/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-112216W - Batch 110154 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved)	EPA-200.8	U	UG/L	1.0	11/22/2016	RAL
Cadmium (Dissolved)	EPA-200.8	U	UG/L	1.0	11/22/2016	RAL
Chromium (Dissolved)	EPA-200.8	U	UG/L	2.0	11/22/2016	RAL
Lead (Dissolved)	EPA-200.8	U	UG/L	1.0	11/22/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS SDG#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 109753 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Volatile Range (C7-C12) - BS	NWTPH-GX	89.8			66.5	122.7	11/10/2016	PAB
TPH-Volatile Range (C7-C12) - BSD	NWTPH-GX	97.1	8		66.5	122.7	11/10/2016	PAB

ALS Test Batch ID: 109882 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	103			67	125.2	11/14/2016	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	102	2		67	125.2	11/14/2016	EBS

ALS Test Batch ID: 110008 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
1,1-Dichloroethene - BS	EPA-8260	82.7			72.5	136	11/17/2016	DLC
1,1-Dichloroethene - BSD	EPA-8260	80.8	2		72.5	136	11/17/2016	DLC
Benzene - BS	EPA-8260	80.5			74.7	143	11/17/2016	DLC
Benzene - BSD	EPA-8260	79.8	1		74.7	143	11/17/2016	DLC
Trichloroethene - BS	EPA-8260	80.6			74.4	141	11/17/2016	DLC
Trichloroethene - BSD	EPA-8260	79.1	2		74.4	141	11/17/2016	DLC
Toluene - BS	EPA-8260	83.4			71.7	139	11/17/2016	DLC
Toluene - BSD	EPA-8260	83.4	0		71.7	139	11/17/2016	DLC
Chlorobenzene - BS	EPA-8260	88.2			73	131	11/17/2016	DLC
Chlorobenzene - BSD	EPA-8260	82.7	6		73	131	11/17/2016	DLC

ALS Test Batch ID: 109972 - Water by EPA-8270 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Naphthalene - BS	EPA-8270 SIM	47.6			36	118	11/17/2016	GAP
Naphthalene - BSD	EPA-8270 SIM	47.1	1		36	118	11/17/2016	GAP
Acenaphthene - BS	EPA-8270 SIM	52.0			37	125	11/17/2016	GAP
Acenaphthene - BSD	EPA-8270 SIM	54.9	5		37	125	11/17/2016	GAP
Pyrene - BS	EPA-8270 SIM	68.6			59	156	11/17/2016	GAP
Pyrene - BSD	EPA-8270 SIM	74.1	8		59	156	11/17/2016	GAP
Benzo[G,H,I]Perylene - BS	EPA-8270 SIM	61.1			43	140	11/17/2016	GAP
Benzo[G,H,I]Perylene - BSD	EPA-8270 SIM	67.8	10		43	140	11/17/2016	GAP

ALS Test Batch ID: R285555 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury - BS	EPA-245.1	107			80.6	118	11/21/2016	RAL



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	11/30/2016
CLIENT CONTACT:	Tim Syverson	ALS SDG#:	EV16110100
CLIENT PROJECT:	Starbucks Center - 0374020.010	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury - BSD	EPA-245.1	103	4		80.6	118	11/21/2016	RAL

ALS Test Batch ID: R285697 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury (Dissolved) - BS	EPA-245.1	107			80.6	118	11/21/2016	RAL
Mercury (Dissolved) - BSD	EPA-245.1	103	4		80.6	118	11/21/2016	RAL

ALS Test Batch ID: 110153 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Arsenic - BS	EPA-200.8	97.0			89.1	110	11/22/2016	RAL
Arsenic - BSD	EPA-200.8	95.4	2		89.1	110	11/22/2016	RAL
Cadmium - BS	EPA-200.8	97.3			89.4	109	11/22/2016	RAL
Cadmium - BSD	EPA-200.8	95.4	2		89.4	109	11/22/2016	RAL
Chromium - BS	EPA-200.8	95.1			88.3	110.2	11/22/2016	RAL
Chromium - BSD	EPA-200.8	93.8	1		88.3	110.2	11/22/2016	RAL
Lead - BS	EPA-200.8	91.3			87.5	107	11/22/2016	RAL
Lead - BSD	EPA-200.8	90.8	0		87.5	107	11/22/2016	RAL

ALS Test Batch ID: 110154 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Arsenic (Dissolved) - BS	EPA-200.8	97.0			89.1	110	11/22/2016	RAL
Arsenic (Dissolved) - BSD	EPA-200.8	95.4	2		89.1	110	11/22/2016	RAL
Cadmium (Dissolved) - BS	EPA-200.8	97.3			89.4	109	11/22/2016	RAL
Cadmium (Dissolved) - BSD	EPA-200.8	95.4	2		89.4	109	11/22/2016	RAL
Chromium (Dissolved) - BS	EPA-200.8	95.1			86.2	107	11/22/2016	RAL
Chromium (Dissolved) - BSD	EPA-200.8	93.8	1		86.2	107	11/22/2016	RAL
Lead (Dissolved) - BS	EPA-200.8	91.3			87.5	107	11/22/2016	RAL
Lead (Dissolved) - BSD	EPA-200.8	90.8	0		87.5	107	11/22/2016	RAL

APPROVED BY

Laboratory Director

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau Associates

ALS Job #: EV16110100

Project: Starbucks Center

Received Date: 11/15/16

Received Time: 2:00

By: RB

Type of shipping container: Cooler Box Other

Shipped via: FedEx Ground UPS Mail Courier ALS Hand Delivered
FedEx Express

Were custody seals on outside of shipping container?

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
	<u>X</u>	<u> </u>	<u> </u>

If yes, how many? 1 Where? Top
Custody seal date: 11/14/16 Seal name: Landau

Was Chain of Custody properly filled out (ink, signed, dated, etc.)?

	<u>X</u>	<u> </u>	<u> </u>
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Did all bottles have labels?

	<u>X</u>	<u> </u>	<u> </u>
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Did all bottle labels and tags agree with Chain of Custody?

	<u>X</u>	<u> </u>	<u> </u>
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Were samples received within hold time?

	<u>X</u>	<u> </u>	<u> </u>
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Did all bottles arrive in good condition (unbroken, etc.)?

	<u>X</u>	<u> </u>	<u> </u>
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Was sufficient amount of sample sent for the tests indicated?

	<u>X</u>	<u> </u>	<u> </u>
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Was correct preservation added to samples?

	<u>X</u>	<u> </u>	<u> </u>
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If no, Sample Control added preservative to the following:

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>

Were VOA vials checked for absence of air bubbles?

	<u>X</u>	<u> </u>	<u> </u>
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Bubbles present in sample #: None

Temperature of cooler upon receipt: cooler 1 = 2.3°C
cooler 2 = 3.0°C

<u>Cold</u>	Cool	Ambient	N/A
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Explain any discrepancies: _____

Was client contacted? Who was called? _____ By whom? _____ Date: _____

Outcome of call: _____



- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080
- _____

Chain-of-Custody Record

Date 11/14/2016
 Page 1 of 1

Total + Dissolved

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters										Observations/Comments		
					NWTPH-DX	PAHs (8270)	NWTPH-HCID	VOCs (8260c)	Metals (6020/200.8)								
1 MW-1	11/14/16	0940	AQ	2	X	X											<p>Turnaround Time <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Accelerated <input type="checkbox"/> _____</p> <p>X Allow water samples to settle, collect aliquot from clear portion</p> <p>XXXXXX - what is wash silica gel cleanup</p> <p>Analyze for EPH if no specific product identified</p> <p>VOC/BTEX/VPH (soil): <input type="checkbox"/> non-preserved <input type="checkbox"/> preserved w/methanol <input type="checkbox"/> preserved w/sodium bisulfate <input type="checkbox"/> Freeze upon receipt</p> <p>X Dissolved metal water samples field filtered</p> <p>Other Analyze metals samples for arsenic, cadmium, chromium, lead, and mercury.</p> <p>* Hold samples for follow-up analysis *</p>
2 MW-2	11/14/16	1023	AQ	2	X	X											
3 MW-3	11/14/16	1050	AQ	2	X	X											
4 MW-4	11/14/16	1112	AQ	2	X	X											
5 MW-5	11/14/16	1220	AQ	10		X	X		X	X							
6 MW-6	11/14/16	1225	AQ	10		X	X		X	X							
7 MW-7	11/14/16	1400	AQ	11		X	X		X	X							
8 MW-8	11/14/16	1421	AQ	1	X												
9 Trip blanks	11/14/16	—	AQ	4					X	X							

Special Shipment/Handling or Storage Requirements _____ Method of Shipment _____

Relinquished by Signature <u>Evelyn Ives</u> Printed Name <u>Evelyn Ives</u> Company <u>LA</u> Date <u>11/14/16</u> Time <u>1600</u>	Received by Signature <u>Rick Bagan</u> Printed Name <u>Rick Bagan</u> Company <u>ALS</u> Date <u>11/15/16</u> Time <u>2:00</u>	Relinquished by Signature _____ Printed Name _____ Company _____ Date _____ Time _____	Received by Signature _____ Printed Name _____ Company _____ Date _____ Time _____
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February 27, 2017

Ms. Evelyn Ives
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Ms. Ives,

On February 15th, 9 samples were received by our laboratory and assigned our laboratory project number EV17020097. The project was identified as your Starbucks Center - 0374020.010.013. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-01
CLIENT SAMPLE ID	MW-1	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 11:32:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	02/21/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	02/21/2017	EBS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
C25	NWTPH-DX w/ SGA	110	02/21/2017	EBS
Terphenyl-d14	EPA-8270 SIM	108	02/24/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-02
CLIENT SAMPLE ID	MW-2	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 12:30:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	02/21/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	02/21/2017	EBS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	113	02/21/2017	EBS
Terphenyl-d14	EPA-8270 SIM	112	02/24/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-03
CLIENT SAMPLE ID	MW-3	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 12:40:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	02/21/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	02/21/2017	EBS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	109	02/21/2017	EBS
Terphenyl-d14	EPA-8270 SIM	116	02/24/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-04
CLIENT SAMPLE ID	MW-4	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 1:37:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	02/21/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	02/21/2017	EBS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	103	02/21/2017	EBS
Terphenyl-d14	EPA-8270 SIM	121	02/24/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-05
CLIENT SAMPLE ID	MW-5	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 2:55:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	130	1	UG/L	02/16/2017	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	310	1	UG/L	02/16/2017	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	310	1	UG/L	02/16/2017	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	02/15/2017	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Acetone	EPA-8260	U	25	1	UG/L	02/15/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	02/15/2017	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-05
CLIENT SAMPLE ID	MW-5	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 2:55:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	02/15/2017	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	02/15/2017	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Naphthalene	EPA-8270 SIM	0.035	0.020	1	UG/L	02/24/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	0.050	0.020	1	UG/L	02/24/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	0.059	0.020	1	UG/L	02/24/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-05
CLIENT SAMPLE ID	MW-5	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 2:55:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Mercury	EPA-245.1	U	0.20	1	UG/L	02/16/2017	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	02/16/2017	RAL
Arsenic	EPA-200.8	1.5	1.0	1	UG/L	02/16/2017	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	02/16/2017	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL
Arsenic (Dissolved)	EPA-200.8	1.3	1.0	1	UG/L	02/16/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	02/16/2017	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
BCB	NWTPH-HCID	86.3	02/16/2017	EBS
C25	NWTPH-HCID	90.6	02/16/2017	EBS
C25 (conc)	NWTPH-HCID	77.9	02/16/2017	EBS
1,2-Dichloroethane-d4	EPA-8260	111	02/15/2017	DLC
Toluene-d8	EPA-8260	94.2	02/15/2017	DLC
4-Bromofluorobenzene	EPA-8260	91.2	02/15/2017	DLC
Terphenyl-d14	EPA-8270 SIM	99.9	02/24/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-06
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 2:40:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	130	1	UG/L	02/16/2017	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	310	1	UG/L	02/16/2017	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	310	1	UG/L	02/16/2017	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	02/15/2017	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Acetone	EPA-8260	U	25	1	UG/L	02/15/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	02/15/2017	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-06
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 2:40:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	02/15/2017	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	02/15/2017	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-06
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 2:40:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	0.024	0.020	1	UG/L	02/24/2017	PAB
Mercury	EPA-245.1	U	0.20	1	UG/L	02/16/2017	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	02/16/2017	RAL
Arsenic	EPA-200.8	3.7	1.0	1	UG/L	02/16/2017	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	02/16/2017	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL
Arsenic (Dissolved)	EPA-200.8	3.6	1.0	1	UG/L	02/16/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	02/16/2017	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
BCB	NWTPH-HCID	82.7	02/16/2017	EBS
C25	NWTPH-HCID	96.1	02/16/2017	EBS
C25 (conc)	NWTPH-HCID	81.7	02/16/2017	EBS
1,2-Dichloroethane-d4	EPA-8260	113	02/15/2017	DLC
Toluene-d8	EPA-8260	95.1	02/15/2017	DLC
4-Bromofluorobenzene	EPA-8260	92.3	02/15/2017	DLC
Terphenyl-d14	EPA-8270 SIM	114	02/24/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-07
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 4:10:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	130	1	UG/L	02/16/2017	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	310	1	UG/L	02/16/2017	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	310	1	UG/L	02/16/2017	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	02/15/2017	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Acetone	EPA-8260	U	25	1	UG/L	02/15/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	02/15/2017	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-07
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 4:10:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	02/15/2017	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	02/15/2017	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-07
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 4:10:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	02/24/2017	PAB
Mercury	EPA-245.1	U	0.20	1	UG/L	02/16/2017	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	02/16/2017	RAL
Arsenic	EPA-200.8	1.3	1.0	1	UG/L	02/16/2017	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	02/16/2017	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL
Arsenic (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	02/16/2017	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	02/16/2017	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
BCB	NWTPH-HCID	86.7	02/16/2017	EBS
C25	NWTPH-HCID	101	02/16/2017	EBS
C25 (conc)	NWTPH-HCID	88.2	02/16/2017	EBS
1,2-Dichloroethane-d4	EPA-8260	112	02/15/2017	DLC
Toluene-d8	EPA-8260	94.9	02/15/2017	DLC
4-Bromofluorobenzene	EPA-8260	91.9	02/15/2017	DLC
Terphenyl-d14	EPA-8270 SIM	113	02/24/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-08
CLIENT SAMPLE ID	MW-8	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017 4:15:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	02/21/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	02/21/2017	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	111	02/21/2017	EBS

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-09
CLIENT SAMPLE ID	Trip Blanks	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Volatile Range (C7-C12)	NWTPH-GX	U	50	1	UG/L	02/16/2017	SNC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	02/15/2017	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Acetone	EPA-8260	U	25	1	UG/L	02/15/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	02/15/2017	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	02/15/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17020097-09
CLIENT SAMPLE ID	Trip Blanks	DATE RECEIVED:	02/15/2017
		COLLECTION DATE:	2/14/2017
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	02/15/2017	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	02/15/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	02/15/2017	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	96.5	02/16/2017	SNC
1,2-Dichloroethane-d4	EPA-8260	113	02/15/2017	DLC
Toluene-d8	EPA-8260	95.9	02/15/2017	DLC
4-Bromofluorobenzene	EPA-8260	93.0	02/15/2017	DLC

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-021417W - Batch 112334 - Water by NWTPH-HCID

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	UG/L	130	02/15/2017	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	UG/L	310	02/15/2017	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	UG/L	310	02/15/2017	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MBG-021517W - Batch 112401 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C7-C12)	NWTPH-GX	U	UG/L	50	02/16/2017	SNC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-022017W - Batch 112516 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	UG/L	130	02/21/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	UG/L	250	02/21/2017	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-021417W - Batch 112379 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Chloromethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Vinyl Chloride	EPA-8260	U	UG/L	0.20	02/14/2017	DLC
Bromomethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Chloroethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Carbon Tetrachloride	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Trichlorofluoromethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Carbon Disulfide	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Acetone	EPA-8260	U	UG/L	25	02/14/2017	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Methylene Chloride	EPA-8260	U	UG/L	5.0	02/14/2017	DLC
Acrylonitrile	EPA-8260	U	UG/L	10	02/14/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,1-Dichloroethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
2-Butanone	EPA-8260	U	UG/L	10	02/14/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-021417W - Batch 112379 - Water by EPA-8260

2,2-Dichloropropane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Bromochloromethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Chloroform	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,1-Dichloropropene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,2-Dichloroethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Benzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Trichloroethene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,2-Dichloropropane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Dibromomethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Bromodichloromethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	UG/L	10	02/14/2017	DLC
Toluene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
2-Hexanone	EPA-8260	U	UG/L	10	02/14/2017	DLC
1,3-Dichloropropane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Dibromochloromethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,2-Dibromoethane	EPA-8260	U	UG/L	0.010	02/14/2017	DLC
Chlorobenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	02/14/2017	DLC
Styrene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Bromoform	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Isopropylbenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Bromobenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
N-Propyl Benzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
2-Chlorotoluene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
4-Chlorotoluene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
T-Butyl Benzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
S-Butyl Benzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
P-Isopropyltoluene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-021417W - Batch 112379 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,4-Dichlorobenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
N-Butylbenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	UG/L	10	02/14/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Hexachlorobutadiene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
Naphthalene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	UG/L	2.0	02/14/2017	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-022117W - Batch 112739 - Water by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Acenaphthene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Fluorene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Phenanthrene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Anthracene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Pyrene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Chrysene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/L	0.020	02/24/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-289761 - Batch R289761 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	UG/L	0.20	02/16/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 2/27/2017
 130 - 2nd Ave. S. ALS SDG#: EV17020097
 Edmonds, WA 98020 WDOE ACCREDITATION: C601

CLIENT CONTACT: Evelyn Ives
 CLIENT PROJECT: Starbucks Center - 0374020.010.013

LABORATORY BLANK RESULTS

MBLK-290237 - Batch R290237 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)	EPA-245.1	U	UG/L	0.20	02/16/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-021517W - Batch 112403 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-200.8	U	UG/L	1.0	02/16/2017	RAL
Cadmium	EPA-200.8	U	UG/L	1.0	02/16/2017	RAL
Chromium	EPA-200.8	U	UG/L	2.0	02/16/2017	RAL
Lead	EPA-200.8	U	UG/L	1.0	02/16/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-021517W - Batch 112404 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved)	EPA-200.8	U	UG/L	1.0	02/16/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	UG/L	1.0	02/16/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	UG/L	2.0	02/16/2017	RAL
Lead (Dissolved)	EPA-200.8	U	UG/L	1.0	02/16/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 112401 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Volatile Range (C7-C12) - BS	NWTPH-GX	104			66.5	122.7	02/15/2017	SNC
TPH-Volatile Range (C7-C12) - BSD	NWTPH-GX	103	1		66.5	122.7	02/15/2017	SNC

ALS Test Batch ID: 112516 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	88.9			67	125.2	02/21/2017	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	83.2	7		67	125.2	02/21/2017	EBS

ALS Test Batch ID: 112379 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
1,1-Dichloroethene - BS	EPA-8260	90.0			72.5	136	02/14/2017	DLC
1,1-Dichloroethene - BSD	EPA-8260	80.0	12		72.5	136	02/14/2017	DLC
Benzene - BS	EPA-8260	90.0			74.7	143	02/14/2017	DLC
Benzene - BSD	EPA-8260	80.0	12		74.7	143	02/14/2017	DLC
Trichloroethene - BS	EPA-8260	100			74.4	141	02/14/2017	DLC
Trichloroethene - BSD	EPA-8260	90.0	11		74.4	141	02/14/2017	DLC
Toluene - BS	EPA-8260	90.0			71.7	139	02/14/2017	DLC
Toluene - BSD	EPA-8260	90.0	0		71.7	139	02/14/2017	DLC
Chlorobenzene - BS	EPA-8260	90.0			73	131	02/14/2017	DLC
Chlorobenzene - BSD	EPA-8260	90.0	0		73	131	02/14/2017	DLC

ALS Test Batch ID: 112739 - Water by EPA-8270 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Naphthalene - BS	EPA-8270 SIM	67.3			36	118	02/24/2017	PAB
Naphthalene - BSD	EPA-8270 SIM	71.6	6		36	118	02/24/2017	PAB
Acenaphthene - BS	EPA-8270 SIM	76.7			37	125	02/24/2017	PAB
Acenaphthene - BSD	EPA-8270 SIM	81.0	5		37	125	02/24/2017	PAB
Pyrene - BS	EPA-8270 SIM	80.9			59	156	02/24/2017	PAB
Pyrene - BSD	EPA-8270 SIM	82.1	1		59	156	02/24/2017	PAB
Benzo[G,H,I]Perylene - BS	EPA-8270 SIM	98.2			43	140	02/24/2017	PAB
Benzo[G,H,I]Perylene - BSD	EPA-8270 SIM	98.8	1		43	140	02/24/2017	PAB

ALS Test Batch ID: R289761 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury - BS	EPA-245.1	104			80.6	118	02/16/2017	RAL



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	2/27/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17020097
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury - BSD	EPA-245.1	106	2		80.6	118	02/16/2017	RAL

ALS Test Batch ID: R290237 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury (Dissolved) - BS	EPA-245.1	104			80.6	118	02/16/2017	RAL
Mercury (Dissolved) - BSD	EPA-245.1	106	2		80.6	118	02/16/2017	RAL

ALS Test Batch ID: 112403 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Arsenic - BS	EPA-200.8	98.4			89.1	110	02/16/2017	RAL
Arsenic - BSD	EPA-200.8	99.9	2		89.1	110	02/16/2017	RAL
Cadmium - BS	EPA-200.8	97.0			89.4	109	02/16/2017	RAL
Cadmium - BSD	EPA-200.8	99.2	2		89.4	109	02/16/2017	RAL
Chromium - BS	EPA-200.8	97.3			88.3	110.2	02/16/2017	RAL
Chromium - BSD	EPA-200.8	99.4	2		88.3	110.2	02/16/2017	RAL
Lead - BS	EPA-200.8	96.7			87.5	107	02/16/2017	RAL
Lead - BSD	EPA-200.8	97.6	1		87.5	107	02/16/2017	RAL

ALS Test Batch ID: 112404 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Arsenic (Dissolved) - BS	EPA-200.8	98.4			89.1	110	02/16/2017	RAL
Arsenic (Dissolved) - BSD	EPA-200.8	99.9	2		89.1	110	02/16/2017	RAL
Cadmium (Dissolved) - BS	EPA-200.8	97.0			89.4	109	02/16/2017	RAL
Cadmium (Dissolved) - BSD	EPA-200.8	99.2	2		89.4	109	02/16/2017	RAL
Chromium (Dissolved) - BS	EPA-200.8	97.3			88.3	110.2	02/16/2017	RAL
Chromium (Dissolved) - BSD	EPA-200.8	99.4	2		88.3	110.2	02/16/2017	RAL
Lead (Dissolved) - BS	EPA-200.8	96.7			87.5	107	02/16/2017	RAL
Lead (Dissolved) - BSD	EPA-200.8	97.6	1		87.5	107	02/16/2017	RAL

APPROVED BY

Laboratory Director

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau Associates ALS Job #: EV17020097

Project: Starbucks Center - 0374020.010.013

Received Date: 2/15/17 Received Time: 1352 By: SM

Type of shipping container: Cooler Box Other

Shipped via: FedEx Ground UPS Mail Courier Hand Delivered
FedEx Express

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals on outside of shipping container?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If yes, how many? _____			
Where? _____			
Custody seal date: _____			
Seal name: _____			

Was Chain of Custody properly filled out (ink, signed, dated, etc.)?

Did all bottles have labels?

Did all bottle labels and tags agree with Chain of Custody?

Were samples received within hold time?

Did all bottles arrive in good condition (unbroken, etc.)?

Was sufficient amount of sample sent for the tests indicated?

Was correct preservation added to samples?

If no, Sample Control added preservative to the following:

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Were VOA vials checked for absence of air bubbles?

Bubbles present in sample #: None

Temperature of cooler upon receipt: 3.0°C, 5.0°C Cold Cool Ambient N/A
both on ice

Explain any discrepancies: _____

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____

Outcome of call: _____



- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080

Chain-of-Custody Record

E117020097 Date 2/14/17
Page 1 of 1

Project Name <u>Starbucks Center</u> Project No. <u>0374020.010-013</u>					Testing Parameters					Turnaround Time <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Accelerated <input type="checkbox"/> _____	
Project Location/Event <u>South Loading Dock / 2nd Gw Event</u>					NWTPH-Dx PAH's (S270) NWTPH-HCID NWTPH-Gx VOC's (2600) T.Metals (5020) D.Metals (5020)						
Sampler's Name <u>Stephanie Renando / Jim Hearsey</u>											
Project Contact <u>Evelyn Ives</u>											
Send Results To <u>E. Ives, D. Jorgensen</u>					Observations/Comments						
Sample I.D.	Date	Time	Matrix	No. of Containers							
1 MW-1	2/14/17	1132	AQ	2	X	X					
2 MW-2	2/14/17	1230	AQ	2	X	X				X Allow water samples to settle, collect aliquot from clear portion	
3 MW-3	2/14/17	1240	AQ	2	X	X				X NWTPH-Dx - run acid wash silica gel cleanup	
4 MW-4	2/14/17	1337	AQ	2	X	X					
5 MW-5'	2/14/17	1455	AQ	10	1	X	X	1	X	X	Analyze for EPH if no specific product identified
6 MW-6'	2/14/17	1440	AQ	10	1	X	X	1	X	X	
7 MW-7'	2/14/17	1610	AQ	10	1	X	X	1	X	X	
8 MW-8	2/14/17	1615	AQ	1	X						VOC/BTEX/VPH (soil): ___ non-preserved ___ preserved w/methanol ___ preserved w/sodium bisulfate ___ Freeze upon receipt <input checked="" type="checkbox"/> Dissolved metal water samples field filtered Other <input checked="" type="checkbox"/> = Arsenic, Cadmium, Chromium, Lead + Mercury <input checked="" type="checkbox"/> 1 = HOLD volume pending HCID results.
9 TRIP BLANKS	-	-	AQ	2				X	X		

Special Shipment/Handling or Storage Requirements ON ICE Method of Shipment PICK UP

Relinquished by Signature <u>[Signature]</u> Printed Name <u>Stephanie Renando</u> Company <u>LANDAU ASSOCIATES</u> Date <u>2/15/17</u> Time <u>1352</u>	Received by Signature <u>[Signature]</u> Printed Name <u>Rick Bay</u> Company <u>ALS</u> Date <u>2/5/17</u> Time <u>13:52</u>	Relinquished by Signature _____ Printed Name _____ Company _____ Date _____ Time _____	Received by Signature _____ Printed Name _____ Company _____ Date _____ Time _____
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May 31, 2017

Ms. Evelyn Ives
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Ms. Ives,

On May 24th, 9 samples were received by our laboratory and assigned our laboratory project number EV17050162. The project was identified as your Starbucks Center - 0374020.010.013. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 5/31/2017
130 - 2nd Ave. S. ALS JOB#: EV17050162
Edmonds, WA 98020 ALS SAMPLE#: EV17050162-01
CLIENT CONTACT: Evelyn Ives DATE RECEIVED: 05/24/2017
CLIENT PROJECT: Starbucks Center - 0374020.010.013 COLLECTION DATE: 5/23/2017 10:36:00 AM
CLIENT SAMPLE ID MW-8 WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	05/25/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	05/25/2017	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	95.1	05/25/2017	EBS

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-02
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 11:12:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	130	1	UG/L	05/25/2017	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	310	1	UG/L	05/25/2017	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	310	1	UG/L	05/25/2017	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	05/30/2017	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Acetone	EPA-8260	U	25	1	UG/L	05/30/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	05/30/2017	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-02
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 11:12:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	05/30/2017	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	05/30/2017	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-02
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 11:12:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Mercury	EPA-245.1	U	0.20	1	UG/L	05/26/2017	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	05/26/2017	RAL
Arsenic	EPA-200.8	1.2	1.0	1	UG/L	05/25/2017	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	05/25/2017	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL
Arsenic (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	05/25/2017	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
BCB	NWTPH-HCID	102	05/25/2017	EBS
C25	NWTPH-HCID	123	05/25/2017	EBS
C25 (conc)	NWTPH-HCID	112	05/25/2017	EBS
1,2-Dichloroethane-d4	EPA-8260	97.7	05/30/2017	DLC
Toluene-d8	EPA-8260	100	05/30/2017	DLC
4-Bromofluorobenzene	EPA-8260	110	05/30/2017	DLC
Terphenyl-d14	EPA-8270 SIM	152 GS1	05/26/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.
 GS1 - Surrogate outside of control limits due to matrix effect.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-03
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 12:25:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	130	1	UG/L	05/25/2017	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	310	1	UG/L	05/25/2017	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	310	1	UG/L	05/25/2017	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	05/30/2017	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Acetone	EPA-8260	U	25	1	UG/L	05/30/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	05/30/2017	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-03
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 12:25:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	05/30/2017	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	05/30/2017	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-03
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 12:25:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Mercury	EPA-245.1	U	0.20	1	UG/L	05/26/2017	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	05/26/2017	RAL
Arsenic	EPA-200.8	7.2	1.0	1	UG/L	05/25/2017	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	05/25/2017	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL
Arsenic (Dissolved)	EPA-200.8	6.4	1.0	1	UG/L	05/25/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	05/25/2017	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
BCB	NWTPH-HCID	81.5	05/25/2017	EBS
C25	NWTPH-HCID	105	05/25/2017	EBS
C25 (conc)	NWTPH-HCID	89.6	05/25/2017	EBS
1,2-Dichloroethane-d4	EPA-8260	98.2	05/30/2017	DLC
Toluene-d8	EPA-8260	99.5	05/30/2017	DLC
4-Bromofluorobenzene	EPA-8260	110	05/30/2017	DLC
Terphenyl-d14	EPA-8270 SIM	138	05/26/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-04
CLIENT SAMPLE ID	MW-5	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 12:36:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	130	1	UG/L	05/26/2017	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	310	1	UG/L	05/26/2017	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	310	1	UG/L	05/26/2017	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	05/30/2017	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Acetone	EPA-8260	U	25	1	UG/L	05/30/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	05/30/2017	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-04
CLIENT SAMPLE ID	MW-5	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 12:36:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	05/30/2017	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	05/30/2017	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-04
CLIENT SAMPLE ID	MW-5	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 12:36:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Mercury	EPA-245.1	U	0.20	1	UG/L	05/26/2017	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	05/26/2017	RAL
Arsenic	EPA-200.8	1.9	1.0	1	UG/L	05/25/2017	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	05/25/2017	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL
Arsenic (Dissolved)	EPA-200.8	1.8	1.0	1	UG/L	05/25/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	05/25/2017	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	05/25/2017	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
BCB	NWTPH-HCID	71.6	05/26/2017	EBS
C25	NWTPH-HCID	86.4	05/26/2017	EBS
C25 (conc)	NWTPH-HCID	84.9	05/26/2017	EBS
1,2-Dichloroethane-d4	EPA-8260	98.5	05/30/2017	DLC
Toluene-d8	EPA-8260	99.9	05/30/2017	DLC
4-Bromofluorobenzene	EPA-8260	108	05/30/2017	DLC
Terphenyl-d14	EPA-8270 SIM	132	05/26/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-05
CLIENT SAMPLE ID	MW-4	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 2:15:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	05/25/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	05/25/2017	EBS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	108	05/25/2017	EBS
Terphenyl-d14	EPA-8270 SIM	147 GS1	05/26/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.
 GS1 - Surrogate outside of control limits due to matrix effect.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-06
CLIENT SAMPLE ID	MW-3	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 2:45:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	05/25/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	05/25/2017	EBS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	108	05/25/2017	EBS
Terphenyl-d14	EPA-8270 SIM	145	05/26/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-07
CLIENT SAMPLE ID	MW-2	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 3:25:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	05/25/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	05/25/2017	EBS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	118	05/25/2017	EBS
Terphenyl-d14	EPA-8270 SIM	30.5 GS1	05/26/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.
 GS1 - Surrogate outside of control limits due to matrix effect.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-08
CLIENT SAMPLE ID	MW-1	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 4:15:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	05/25/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	05/25/2017	EBS
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	05/26/2017	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	113	05/25/2017	EBS
Terphenyl-d14	EPA-8270 SIM	131	05/26/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-09
CLIENT SAMPLE ID	TRIP BLANKS	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 8:00:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C7-C12)	NWTPH-GX	U	50	1	UG/L	05/25/2017	SNC
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	05/30/2017	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Acetone	EPA-8260	U	25	1	UG/L	05/30/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	05/30/2017	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	05/30/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	ALS SAMPLE#:	EV17050162-09
CLIENT SAMPLE ID	TRIP BLANKS	DATE RECEIVED:	05/24/2017
		COLLECTION DATE:	5/23/2017 8:00:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	05/30/2017	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	05/30/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	05/30/2017	DLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	93.8	05/25/2017	SNC
1,2-Dichloroethane-d4	EPA-8260	99.1	05/30/2017	DLC
Toluene-d8	EPA-8260	99.4	05/30/2017	DLC
4-Bromofluorobenzene	EPA-8260	104	05/30/2017	DLC

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-052517W - Batch 116624 - Water by NWTPH-HCID

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	UG/L	130	05/25/2017	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	UG/L	310	05/25/2017	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	UG/L	310	05/25/2017	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MBG-052417W - Batch 116588 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range (C7-C12)	NWTPH-GX	U	UG/L	50	05/24/2017	SNC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-052517W - Batch 116621 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	UG/L	130	05/25/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	UG/L	250	05/25/2017	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-052617W - Batch 116659 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Chloromethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Vinyl Chloride	EPA-8260	U	UG/L	0.20	05/26/2017	DLC
Bromomethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Chloroethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Carbon Tetrachloride	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Trichlorofluoromethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Carbon Disulfide	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Acetone	EPA-8260	U	UG/L	25	05/26/2017	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Methylene Chloride	EPA-8260	U	UG/L	5.0	05/26/2017	DLC
Acrylonitrile	EPA-8260	U	UG/L	10	05/26/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,1-Dichloroethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
2-Butanone	EPA-8260	U	UG/L	10	05/26/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-052617W - Batch 116659 - Water by EPA-8260

2,2-Dichloropropane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Bromochloromethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Chloroform	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,1-Dichloropropene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,2-Dichloroethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Benzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Trichloroethene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,2-Dichloropropane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Dibromomethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Bromodichloromethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	UG/L	10	05/26/2017	DLC
Toluene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
2-Hexanone	EPA-8260	U	UG/L	10	05/26/2017	DLC
1,3-Dichloropropane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Dibromochloromethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,2-Dibromoethane	EPA-8260	U	UG/L	0.010	05/26/2017	DLC
Chlorobenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	05/26/2017	DLC
Styrene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Bromoform	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Isopropylbenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Bromobenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
N-Propyl Benzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
2-Chlorotoluene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
4-Chlorotoluene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
T-Butyl Benzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
S-Butyl Benzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
P-Isopropyltoluene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE: 5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#: EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-052617W - Batch 116659 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
1,4-Dichlorobenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
N-Butylbenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	UG/L	10	05/26/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Hexachlorobutadiene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
Naphthalene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	UG/L	2.0	05/26/2017	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-052617W - Batch 116671 - Water by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Acenaphthene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Fluorene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Phenanthrene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Anthracene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Pyrene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Chrysene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/L	0.020	05/26/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R295561 - Batch R295561 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	UG/L	0.20	05/26/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT: Landau Associates, Inc. DATE: 5/31/2017
 130 - 2nd Ave. S. ALS SDG#: EV17050162
 Edmonds, WA 98020 WDOE ACCREDITATION: C601

CLIENT CONTACT: Evelyn Ives
 CLIENT PROJECT: Starbucks Center - 0374020.010.013

LABORATORY BLANK RESULTS

MBLK-R295561B - Batch R295561 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)	EPA-245.1	U	UG/L	0.20	05/26/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-052417W - Batch 116601 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-200.8	U	UG/L	1.0	05/25/2017	RAL
Cadmium	EPA-200.8	U	UG/L	1.0	05/25/2017	RAL
Chromium	EPA-200.8	U	UG/L	2.0	05/25/2017	RAL
Lead	EPA-200.8	U	UG/L	1.0	05/25/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-052417W - Batch 116602 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved)	EPA-200.8	U	UG/L	1.0	05/25/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	UG/L	1.0	05/25/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	UG/L	2.0	05/25/2017	RAL
Lead (Dissolved)	EPA-200.8	U	UG/L	1.0	05/25/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 116588 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Volatile Range (C7-C12) - BS	NWTPH-GX	86.5			66.5	122.7	05/24/2017	SNC
TPH-Volatile Range (C7-C12) - BSD	NWTPH-GX	90.2	4		66.5	122.7	05/24/2017	SNC

ALS Test Batch ID: 116621 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	80.1			67	125.2	05/25/2017	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	77.0	4		67	125.2	05/25/2017	EBS

ALS Test Batch ID: 116659 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
1,1-Dichloroethene - BS	EPA-8260	101			72.5	136	05/26/2017	DLC
1,1-Dichloroethene - BSD	EPA-8260	109	7		72.5	136	05/26/2017	DLC
Benzene - BS	EPA-8260	94.4			74.7	143	05/26/2017	DLC
Benzene - BSD	EPA-8260	104	9		74.7	143	05/26/2017	DLC
Trichloroethene - BS	EPA-8260	90.8			74.4	141	05/26/2017	DLC
Trichloroethene - BSD	EPA-8260	100	10		74.4	141	05/26/2017	DLC
Toluene - BS	EPA-8260	96.0			71.7	139	05/26/2017	DLC
Toluene - BSD	EPA-8260	105	9		71.7	139	05/26/2017	DLC
Chlorobenzene - BS	EPA-8260	102			73	131	05/26/2017	DLC
Chlorobenzene - BSD	EPA-8260	109	7		73	131	05/26/2017	DLC

ALS Test Batch ID: 116671 - Water by EPA-8270 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Naphthalene - BS	EPA-8270 SIM	37.8			36	118	05/26/2017	PAB
Naphthalene - BSD	EPA-8270 SIM	48.9	26		36	118	05/26/2017	PAB
Acenaphthene - BS	EPA-8270 SIM	52.5			37	125	05/26/2017	PAB
Acenaphthene - BSD	EPA-8270 SIM	64.2	20		37	125	05/26/2017	PAB
Pyrene - BS	EPA-8270 SIM	114			59	156	05/26/2017	PAB
Pyrene - BSD	EPA-8270 SIM	124	8		59	156	05/26/2017	PAB
Benzo[G,H,I]Perylene - BS	EPA-8270 SIM	94.8			43	140	05/26/2017	PAB
Benzo[G,H,I]Perylene - BSD	EPA-8270 SIM	115	19		43	140	05/26/2017	PAB

ALS Test Batch ID: R295561 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury - BS	EPA-245.1	107			80.6	118	05/26/2017	RAL



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	5/31/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17050162
CLIENT PROJECT:	Starbucks Center - 0374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury - BSD	EPA-245.1	101	6		80.6	118	05/26/2017	RAL

ALS Test Batch ID: R295561 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury (Dissolved) - BS	EPA-245.1	107			80.6	118	05/26/2017	RAL
Mercury (Dissolved) - BSD	EPA-245.1	101	6		80.6	118	05/26/2017	RAL

ALS Test Batch ID: 116601 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Arsenic - BS	EPA-200.8	98.4			89.1	110	05/30/2017	RAL
Arsenic - BSD	EPA-200.8	98.9	1		89.1	110	05/30/2017	RAL
Cadmium - BS	EPA-200.8	98.6			89.4	109	05/30/2017	RAL
Cadmium - BSD	EPA-200.8	101	3		89.4	109	05/30/2017	RAL
Chromium - BS	EPA-200.8	100			88.3	110.2	05/30/2017	RAL
Chromium - BSD	EPA-200.8	100	0		88.3	110.2	05/30/2017	RAL
Lead - BS	EPA-200.8	98.0			87.5	107	05/30/2017	RAL
Lead - BSD	EPA-200.8	100	2		87.5	107	05/30/2017	RAL

ALS Test Batch ID: 116602 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Arsenic (Dissolved) - BS	EPA-200.8	98.4			89.1	110	05/30/2017	RAL
Arsenic (Dissolved) - BSD	EPA-200.8	98.9	1		89.1	110	05/30/2017	RAL
Cadmium (Dissolved) - BS	EPA-200.8	98.6			89.4	109	05/30/2017	RAL
Cadmium (Dissolved) - BSD	EPA-200.8	101	3		89.4	109	05/30/2017	RAL
Chromium (Dissolved) - BS	EPA-200.8	100			86.2	107	05/30/2017	RAL
Chromium (Dissolved) - BSD	EPA-200.8	100	0		86.2	107	05/30/2017	RAL
Lead (Dissolved) - BS	EPA-200.8	98.0			87.5	107	05/30/2017	RAL
Lead (Dissolved) - BSD	EPA-200.8	100	2		87.5	107	05/30/2017	RAL

APPROVED BY

Laboratory Director



- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080

Chain-of-Custody Record

Date 5/23/17
Page 1 of 1

EV17050162

Project Name Starbucks Center Project No. 0374020.010.013

Project Location/Event South Loading Dock / 3rd GW Event

Sampler's Name Jeovani Huerta / James Harsburg

Project Contact Evelyn Ives

Send Results To Evelyn Ives, Danille Jorgensen

Testing Parameters	
NWTPH-Dx	X
AMS (8270)	X
NWTPH-HClD	X
NWTPH-Gx	X
VOC's (8260C)	X
T Metals (8229)	X
D Metals (8229)	X

Turnaround Time
 Standard
 Accelerated

Lab#	Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	AMS (8270)	NWTPH-HClD	NWTPH-Gx	VOC's (8260C)	T Metals (8229)	D Metals (8229)	Observations/Comments
1	Mw-8	5/23/17	1036	AQ	1	X							<input checked="" type="checkbox"/> Allow water samples to settle, collect aliquot from clear portion <input checked="" type="checkbox"/> NWTPH-Dx - run acid wash silica gel cleanup
2	Mw-7	5/23/17	1112	AQ	10	1	X	X	1	X	X	X	
3	Mw-6	5/23/17	1225	AQ	10	1	X	X	1	X	X	X	
4	Mw-5	5/23/17	1236	AQ	10	1	X	X	1	X	X	X	
5	Mw-4	5/23/17	1415	AQ	2	X	X						Analyze for EPH if no specific product identified
6	Mw-3	5/23/17	1445	AQ	2	X	X						VOC/BTEX/VPH (soil):
7	Mw-2	5/23/17	1525	AQ	2	X	X						— non-preserved
8	Mw-1	5/23/17	1615	AQ	2	X	X						— preserved w/methanol
9	TREP BLANKS	-	-	AQ	4				X	X			— preserved w/sodium bisulfate
													— Freeze upon receipt
													<input checked="" type="checkbox"/> Dissolved metal water samples field filtered
													Other <input checked="" type="checkbox"/> Arsenic, Cadmium, Chromium, Lead, Mercury
													1 = HOLD Volume. Pending HClD results

Special Shipment/Handling or Storage Requirements On ice Method of Shipment Lab Pick up

Relinquished by Signature <u>[Signature]</u> Printed Name <u>Jeovani Huerta</u> Company <u>Landau Associates</u> Date <u>5/23/17</u> Time <u>18:45</u>	Received by Signature <u>[Signature]</u> Printed Name <u>Rick Bager</u> Company <u>ALS</u> Date <u>5/24/17</u> Time <u>12:45</u>	Relinquished by Signature _____ Printed Name _____ Company _____ Date _____ Time _____	Received by Signature _____ Printed Name _____ Company _____ Date _____ Time _____
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ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landan Associates

ALS Job #: EV17050162

Project: Starbucks Center - 0374020.010.013

Received Date: 5/24/17 Received Time: 12:45 pm
5/24/17 By: RB

Type of shipping container: Cooler Box Other

Shipped via: FedEx Ground UPS Mail Courier ALS Hand Delivered
FedEx Express

Were custody seals on outside of shipping container?

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

If yes, how many? one each cooler Where? Top
Custody seal date: 5/23/17 Seal name: Landan

Was Chain of Custody properly filled out (ink, signed, dated, etc.)?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Did all bottles have labels?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Did all bottle labels and tags agree with Chain of Custody?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Were samples received within hold time?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Did all bottles arrive in good condition (unbroken, etc.)?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Was sufficient amount of sample sent for the tests indicated?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

Was correct preservation added to samples?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--	-------------------------------------	--------------------------	--------------------------

If no, Sample Control added preservative to the following:

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Were VOA vials checked for absence of air bubbles?

	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Bubbles present in sample #: none

Temperature of cooler upon receipt: Cooler # 1 = 3.9°C
Cooler # 2 = 2.4°C
Both on Ice

<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cold	Cool	Ambient	N/A

Explain any discrepancies: _____

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____

Outcome of call: _____



August 24, 2017

Ms. Evelyn Ives
Landau Associates, Inc.
130 - 2nd Ave. S.
Edmonds, WA 98020

Dear Ms. Ives,

On August 18th, 4 samples were received by our laboratory and assigned our laboratory project number EV17080112. The project was identified as your Starbucks - 374020.010.013. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Glen Perry
Technical Manager



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	ALS SAMPLE#:	EV17080112-01
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	08/18/2017
		COLLECTION DATE:	8/17/2017 12:05:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	130	1	UG/L	08/23/2017	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	310	1	UG/L	08/23/2017	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	310	1	UG/L	08/23/2017	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	08/22/2017	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Acetone	EPA-8260	U	25	1	UG/L	08/22/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	08/22/2017	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	08/22/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	08/22/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	08/22/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	08/22/2017	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	ALS SAMPLE#:	EV17080112-01
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	08/18/2017
		COLLECTION DATE:	8/17/2017 12:05:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING	DILUTION	UNITS	ANALYSIS	ANALYSIS
			LIMITS	FACTOR		DATE	BY
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	08/22/2017	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	08/22/2017	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	08/22/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	ALS SAMPLE#:	EV17080112-01
CLIENT SAMPLE ID	MW-6	DATE RECEIVED:	08/18/2017
		COLLECTION DATE:	8/17/2017 12:05:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Mercury	EPA-245.1	U	0.20	1	UG/L	08/21/2017	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	08/21/2017	RAL
Arsenic	EPA-200.8	9.3	1.0	1	UG/L	08/21/2017	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	08/21/2017	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL
Arsenic (Dissolved)	EPA-200.8	8.5	1.0	1	UG/L	08/21/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	08/21/2017	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
BCB	NWTPH-HCID	92.6	08/23/2017	EBS
C25	NWTPH-HCID	117	08/23/2017	EBS
C25 (conc)	NWTPH-HCID	84.5	08/23/2017	EBS
1,2-Dichloroethane-d4	EPA-8260	102	08/22/2017	DLC
Toluene-d8	EPA-8260	100	08/22/2017	DLC
4-Bromofluorobenzene	EPA-8260	101	08/22/2017	DLC
Terphenyl-d14	EPA-8270 SIM	81.1	08/22/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	ALS SAMPLE#:	EV17080112-02
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	08/18/2017
		COLLECTION DATE:	8/17/2017 1:27:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	130	1	UG/L	08/23/2017	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	310	1	UG/L	08/23/2017	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	310	1	UG/L	08/23/2017	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	08/22/2017	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Acetone	EPA-8260	U	25	1	UG/L	08/22/2017	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	08/22/2017	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	08/22/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	08/22/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	08/22/2017	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	08/22/2017	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	ALS SAMPLE#:	EV17080112-02
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	08/18/2017
		COLLECTION DATE:	8/17/2017 1:27:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	08/22/2017	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	08/22/2017	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	08/22/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/22/2017	DLC
Naphthalene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Acenaphthene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Fluorene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Phenanthrene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	ALS SAMPLE#:	EV17080112-02
CLIENT SAMPLE ID	MW-7	DATE RECEIVED:	08/18/2017
		COLLECTION DATE:	8/17/2017 1:27:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Chrysene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	0.020	1	UG/L	08/22/2017	PAB
Mercury	EPA-245.1	U	0.20	1	UG/L	08/21/2017	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	08/21/2017	RAL
Arsenic	EPA-200.8	1.6	1.0	1	UG/L	08/21/2017	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	08/21/2017	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL
Arsenic (Dissolved)	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	08/21/2017	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
BCB	NWTPH-HCID	102	08/23/2017	EBS
C25	NWTPH-HCID	130	08/23/2017	EBS
C25 (conc)	NWTPH-HCID	72.3	08/23/2017	EBS
1,2-Dichloroethane-d4	EPA-8260	103	08/22/2017	DLC
Toluene-d8	EPA-8260	101	08/22/2017	DLC
4-Bromofluorobenzene	EPA-8260	102	08/22/2017	DLC
Terphenyl-d14	EPA-8270 SIM	68.3	08/22/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	ALS SAMPLE#:	EV17080112-03
CLIENT SAMPLE ID	MW-8	DATE RECEIVED:	08/18/2017
		COLLECTION DATE:	8/17/2017 2:31:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX w/ SGA	U	130	1	UG/L	08/19/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX w/ SGA	U	250	1	UG/L	08/19/2017	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
C25	NWTPH-DX w/ SGA	123	08/19/2017	EBS

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS JOB#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	ALS SAMPLE#:	EV17080112-04
CLIENT SAMPLE ID	MW-5 (redo)	DATE RECEIVED:	08/18/2017
		COLLECTION DATE:	8/17/2017 3:10:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Mercury	EPA-245.1	U	0.20	1	UG/L	08/21/2017	RAL
Mercury (Dissolved)	EPA-245.1	U	0.20	1	UG/L	08/21/2017	RAL
Arsenic	EPA-200.8	2.2	1.0	1	UG/L	08/21/2017	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL
Chromium	EPA-200.8	U	2.0	1	UG/L	08/21/2017	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL
Arsenic (Dissolved)	EPA-200.8	2.2	1.0	1	UG/L	08/21/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	2.0	1	UG/L	08/21/2017	RAL
Lead (Dissolved)	EPA-200.8	U	1.0	1	UG/L	08/21/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-082217W - Batch 119537 - Water by NWTPH-HCID

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
HCID-Gas Range (C7-C12)	NWTPH-HCID	U	UG/L	130	08/23/2017	EBS
HCID-Diesel Range (C12-C24)	NWTPH-HCID	U	UG/L	310	08/23/2017	EBS
HCID-Oil Range (C24-C40)	NWTPH-HCID	U	UG/L	310	08/23/2017	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-081517W2 - Batch 119370 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range (C12-C24)	NWTPH-DX	U	UG/L	130	08/17/2017	EBS
TPH-Oil Range (C24-C40)	NWTPH-DX	U	UG/L	250	08/17/2017	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-082117W - Batch 119466 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Chloromethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Vinyl Chloride	EPA-8260	U	UG/L	0.20	08/21/2017	DLC
Bromomethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Chloroethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Carbon Tetrachloride	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Trichlorofluoromethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Carbon Disulfide	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Acetone	EPA-8260	U	UG/L	25	08/21/2017	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Methylene Chloride	EPA-8260	U	UG/L	5.0	08/21/2017	DLC
Acrylonitrile	EPA-8260	U	UG/L	10	08/21/2017	DLC
Methyl T-Butyl Ether	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,1-Dichloroethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
2-Butanone	EPA-8260	U	UG/L	10	08/21/2017	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
2,2-Dichloropropane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Bromochloromethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Chloroform	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,1,1-Trichloroethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,1-Dichloropropene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,2-Dichloroethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-082117W - Batch 119466 - Water by EPA-8260

Benzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Trichloroethene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,2-Dichloropropane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Dibromomethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Bromodichloromethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
4-Methyl-2-Pentanone	EPA-8260	U	UG/L	10	08/21/2017	DLC
Toluene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,1,2-Trichloroethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
2-Hexanone	EPA-8260	U	UG/L	10	08/21/2017	DLC
1,3-Dichloropropane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Dibromochloromethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,2-Dibromoethane	EPA-8260	U	UG/L	0.010	08/21/2017	DLC
Chlorobenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	08/21/2017	DLC
Styrene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Bromoform	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Isopropylbenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,2,3-Trichloropropane	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Bromobenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
N-Propyl Benzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
2-Chlorotoluene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
4-Chlorotoluene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
T-Butyl Benzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
S-Butyl Benzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
P-Isopropyltoluene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,3-Dichlorobenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,4-Dichlorobenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
N-Butylbenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,2-Dichlorobenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	UG/L	10	08/21/2017	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
Hexachlorobutadiene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-082117W - Batch 119466 - Water by EPA-8260

Naphthalene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	UG/L	2.0	08/21/2017	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-081717W - Batch 119525 - Water by EPA-8270 SIM

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
2-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
1-Methylnaphthalene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Acenaphthylene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Acenaphthene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Fluorene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Phenanthrene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Anthracene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Pyrene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Benzo[A]Anthracene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Chrysene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/L	0.020	08/18/2017	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-300509 - Batch R300509 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	UG/L	0.20	08/21/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-300575 - Batch R300575 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury (Dissolved)	EPA-245.1	U	UG/L	0.20	08/21/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY BLANK RESULTS

MB-081817W - Batch 119401 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-200.8	U	UG/L	1.0	08/21/2017	RAL
Cadmium	EPA-200.8	U	UG/L	1.0	08/21/2017	RAL
Chromium	EPA-200.8	U	UG/L	2.0	08/21/2017	RAL
Lead	EPA-200.8	U	UG/L	1.0	08/21/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-081817W - Batch 119402 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic (Dissolved)	EPA-200.8	U	UG/L	1.0	08/21/2017	RAL
Cadmium (Dissolved)	EPA-200.8	U	UG/L	1.0	08/21/2017	RAL
Chromium (Dissolved)	EPA-200.8	U	UG/L	2.0	08/21/2017	RAL
Lead (Dissolved)	EPA-200.8	U	UG/L	1.0	08/21/2017	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 119370 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range (C12-C24) - BS	NWTPH-DX	88.6			67	125.2	08/17/2017	EBS
TPH-Diesel Range (C12-C24) - BSD	NWTPH-DX	91.9	4		67	125.2	08/17/2017	EBS

ALS Test Batch ID: 119466 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
1,1-Dichloroethene - BS	EPA-8260	108			72.5	136	08/21/2017	DLC
1,1-Dichloroethene - BSD	EPA-8260	101	7		72.5	136	08/21/2017	DLC
Benzene - BS	EPA-8260	100			74.7	143	08/21/2017	DLC
Benzene - BSD	EPA-8260	93.3	7		74.7	143	08/21/2017	DLC
Trichloroethene - BS	EPA-8260	120			74.4	141	08/21/2017	DLC
Trichloroethene - BSD	EPA-8260	115	4		74.4	141	08/21/2017	DLC
Toluene - BS	EPA-8260	105			71.7	139	08/21/2017	DLC
Toluene - BSD	EPA-8260	97.1	7		71.7	139	08/21/2017	DLC
Chlorobenzene - BS	EPA-8260	108			73	131	08/21/2017	DLC
Chlorobenzene - BSD	EPA-8260	101	7		73	131	08/21/2017	DLC

ALS Test Batch ID: 119525 - Water by EPA-8270 SIM

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Naphthalene - BS	EPA-8270 SIM	62.5			36	118	08/18/2017	PAB
Naphthalene - BSD	EPA-8270 SIM	63.5	2		36	118	08/18/2017	PAB
Acenaphthene - BS	EPA-8270 SIM	74.9			37	125	08/18/2017	PAB
Acenaphthene - BSD	EPA-8270 SIM	76.6	2		37	125	08/18/2017	PAB
Pyrene - BS	EPA-8270 SIM	80.8			59	156	08/18/2017	PAB
Pyrene - BSD	EPA-8270 SIM	79.6	1		59	156	08/18/2017	PAB
Benzo[G,H,I]Perylene - BS	EPA-8270 SIM	76.0			43	140	08/18/2017	PAB
Benzo[G,H,I]Perylene - BSD	EPA-8270 SIM	80.2	5		43	140	08/18/2017	PAB

ALS Test Batch ID: R300509 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury - BS	EPA-245.1	107			80.6	118	08/21/2017	RAL
Mercury - BSD	EPA-245.1	103	4		80.6	118	08/21/2017	RAL

ALS Test Batch ID: R300575 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury (Dissolved) - BS	EPA-245.1	107			80.6	118	08/21/2017	RAL



CERTIFICATE OF ANALYSIS

CLIENT:	Landau Associates, Inc. 130 - 2nd Ave. S. Edmonds, WA 98020	DATE:	8/24/2017
CLIENT CONTACT:	Evelyn Ives	ALS SDG#:	EV17080112
CLIENT PROJECT:	Starbucks - 374020.010.013	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury (Dissolved) - BSD	EPA-245.1	103	4		80.6	118	08/21/2017	RAL

ALS Test Batch ID: 119401 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Arsenic - BS	EPA-200.8	97.5			89.1	110	08/21/2017	RAL
Arsenic - BSD	EPA-200.8	97.6	0		89.1	110	08/21/2017	RAL
Cadmium - BS	EPA-200.8	96.6			89.4	109	08/21/2017	RAL
Cadmium - BSD	EPA-200.8	96.8	0		89.4	109	08/21/2017	RAL
Chromium - BS	EPA-200.8	97.7			88.3	110.2	08/21/2017	RAL
Chromium - BSD	EPA-200.8	98.0	0		88.3	110.2	08/21/2017	RAL
Lead - BS	EPA-200.8	94.3			87.5	107	08/21/2017	RAL
Lead - BSD	EPA-200.8	95.6	1		87.5	107	08/21/2017	RAL

ALS Test Batch ID: 119402 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Arsenic (Dissolved) - BS	EPA-200.8	97.5			89.1	110	08/21/2017	RAL
Arsenic (Dissolved) - BSD	EPA-200.8	97.6	0		89.1	110	08/21/2017	RAL
Cadmium (Dissolved) - BS	EPA-200.8	96.6			89.4	109	08/21/2017	RAL
Cadmium (Dissolved) - BSD	EPA-200.8	96.8	0		89.4	109	08/21/2017	RAL
Chromium (Dissolved) - BS	EPA-200.8	97.7			86.2	107	08/21/2017	RAL
Chromium (Dissolved) - BSD	EPA-200.8	98.0	0		86.2	107	08/21/2017	RAL
Lead (Dissolved) - BS	EPA-200.8	94.3			87.5	107	08/21/2017	RAL
Lead (Dissolved) - BSD	EPA-200.8	95.6	1		87.5	107	08/21/2017	RAL

APPROVED BY

Technical Manager



- Seattle/Edmonds (425) 778-0907
- Tacoma (253) 926-2493
- Spokane (509) 327-9737
- Portland (503) 542-1080
-

Chain-of-Custody Record

EV17080112
 Date 8/17/17
 Page 1 of 1

Project Name <u>Starbucks</u> Project No. <u>37402010.013</u>					Testing Parameters										
Project Location/Event <u>S. Loading dock / 4th GW event</u>					Turnaround Time <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Accelerated <input type="checkbox"/> _____										
Sampler's Name <u>Jim Hearsey</u>															
Project Contact <u>Evelyn Ives</u>															
Send Results To <u>Evelyn Ives, Danielle Jorgensen</u>															
Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	PAH (2270)	NWTPH-H22	VOC (2260C)	T metal (2020/2021)	D metal (2020/2021)	NWTPH-Dx	Observations/Comments			
1 <u>MW-6</u>	<u>8/17</u>	<u>1205</u>	<u>AQ</u>	<u>10</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<input checked="" type="checkbox"/> Allow water samples to settle, collect aliquot from clear portion <input checked="" type="checkbox"/> NWTPH-Dx - run acid wash silica gel cleanup Analyze for EPH if no specific product identified VOC/BTEX/VPH (soil): ___ non-preserved ___ preserved w/methanol ___ preserved w/sodium bisulfate ___ Freeze upon receipt <input checked="" type="checkbox"/> Dissolved metal water samples field filtered Other <u>As, Cd, Cr, Pb Hg</u> <u>1 = hold, pending (ACID) results</u>			
2 <u>MW-7</u>		<u>1327</u>		<u>10</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>					
3 <u>MW-8</u>		<u>1431</u>		<u>1</u>	<u>X</u>										
4 <u>MW-5 (redo)</u>		<u>1510</u>		<u>2</u>				<u>X</u>	<u>X</u>						

Special Shipment/Handling or Storage Requirements <u>On Ice</u>	Method of Shipment <u>Lab pickup</u>
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Relinquished by Signature <u>[Signature]</u> Printed Name <u>James W. Hearsey</u> Company <u>Landau</u> Date <u>8/17/17</u> Time <u>1715</u>	Received by Signature <u>[Signature]</u> Printed Name <u>Trent Tolken</u> Company <u>ALS</u> Date <u>8/18</u> Time <u>1230</u>	Relinquished by Signature _____ Printed Name _____ Company _____ Date _____ Time _____	Received by Signature _____ Printed Name _____ Company _____ Date _____ Time _____
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ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Landau

ALS Job #: EV17080112

Project: Starbucks - 374 020.010.013

Received Date: 8/18 Received Time: 1230 By: TT

Type of shipping container: Cooler Box Other

Shipped via: FedEx Ground UPS Mail Courier ALS Hand Delivered
FedEx Express

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals on outside of shipping container?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, how many? <u>2</u> Where? <u>over cooler</u>			
Custody seal date: <u>8/17</u> Seal name: <u>Landau</u>			

Was Chain of Custody properly filled out (ink, signed, dated, etc.)?

Did all bottles have labels?

Did all bottle labels and tags agree with Chain of Custody?

Were samples received within hold time?

Did all bottles arrive in good condition (unbroken, etc.)?

Was sufficient amount of sample sent for the tests indicated?

Was correct preservation added to samples?

If no, Sample Control added preservative to the following:

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Were VOA vials checked for absence of air bubbles?
Bubbles present in sample #: none

Temperature of cooler upon receipt: 5°C ice Cold Cool Ambient N/A

Explain any discrepancies: _____

Was client contacted? Who was called? _____ By whom? _____ Date: _____

Outcome of call: _____

LANDAU ASSOCIATES, INC.

- Seattle (Edmonds) 425.778.0907
- Tacoma 253.926.2493
- Spokane 509.327.9737
- Portland 503.542.1080

CUSTODY SEAL

Signature

Handwritten Signature

Date

8/17/14