July 9, 2019

Mr. Mahbub Alam
Environmental Engineer, Toxics Cleanup Program
Department of Ecology
PO Box 47600
Olympia, WA 98504

Re: Summary Report - 2019 Data Gap Assessment
Former E.A. Nord Facility, Everett, Washington (FS ID 2757)

Dear Mahbub,

SLR International Corporation (SLR) has prepared the following summary report of field activities completed per the April 2019 Work Plan Addendum to the December 2017 Source Control Evaluation (SCE) Work Plan to Assess Data Gaps for completion of the Remedial Investigation (RI)/Feasibility Study (FS) for the Former E.A. Nord Door facility (i.e. JELD-WEN Cleanup Site; FS ID 2757). This summary report presents the selected investigation areas from the Work Plan, sampling activities, laboratory analytical results, and suggestions for additional sampling based on the findings.

1. DATA GAP ASSESSMENT ACTIVITIES AND FINDINGS

The scope of work completed for this data gap assessment was based on communications and discussions with Washington Department of Ecology (Ecology) following submittal of the January 2019 SCE Summary Report and upon Ecology's review of the October 2016 Final Draft RI/FS. In April 2019, SLR submitted, and Ecology approved, the Work Plan Addendum presenting the proposed sampling locations, sampling rationale, and proposed analytical suite for each sample location.

In general, proposed investigation areas were selected to assess potential data gaps from the seep sampling/initial SCE activities and historical upland assessments included as part of the RI. Field notes including soil boring logs and groundwater sampling forms are included in **Appendix A**.

Laboratory analytical results are summarized on **Table 1** and **Table 2**. Revised Preliminary Cleanup Levels (PCLs) were developed based on discussions with Ecology and to reflect changes to CLARC values for analytes measured above laboratory reporting limits during this assessment. A summary of the revised PCLs used for this assessment are shown on **Table 3** and **Table 4**. Copies of the laboratory analytical reports are included as **Appendix B** and laboratory data review documents are included in **Appendix C**.
The following section presents the work scope from the April 2019 Work Plan Addendum, the activities completed for this assessment, and a summary of findings for each investigation area.

Extent of Existing Groundwater Impacts and Deep Zone Assessment

Data Gap per Work Plan Addendum: Previously identified isolated area of soil and groundwater contamination (GP-14 and GP-707). Need to verify the presence and trend of contamination. Help define groundwater flow and gradient for deep zone.

Completed Data Gap Assessment: One soil boring was completed with a Geoprobe drilling rig (GP-MW-11) for collection of a depth composite soil sample from surface to 12' below ground surface (bgs). Soil sample GP-MW-11-SS was submitted for laboratory analysis of volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyl (PCB) congeners, and dioxins/furans. The boring was extended to approximately 40' bgs to assess for potential deep zone impacts. Field observations and photoionization detector (PID) readings did not indicate soil impacts at this location. A shallow monitoring well (MW-11A) was installed with a hollow-stem auger drilling rig to a depth of 13' bgs with a 10' section of screen. An adjacent deep monitoring well (MW-11B) was installed to a depth of 41.5' bgs with a 10' section of screen and a 2' sump. Groundwater samples were collected and submitted for laboratory analysis of VOCs, SVOC, carcinogenic polynuclear aromatic hydrocarbons (cPAHs), dioxin/furans (sample held pending soil results), and priority pollutant metals for MW-11A, and VOCs, SVOCs, cPAHs, and total petroleum hydrocarbons – diesel and oil range (TPH-Dx) for MW-11B, respectively.

Findings: Soil analytical results did not measure concentrations of contaminants of potential concern (COPCs) above PCLs (**Table 1**). Groundwater analytical results measured concentrations of arsenic at 5.95 micrograms per liter (µg/L), above the PCL of 5.0 µg/L (based on natural background), and copper at 6.34 µg/L, above the PCL of 2.4 µg/L. No evidence of dense non-aqueous phase liquids (DNAPL) was observed in the sump installed in deep monitoring well MW-11B.

Knoll Area

Data Gap from Work Plan Addendum: Previously identified isolated areas of groundwater impacts (GP-601 and GP-603). Need to assess groundwater impacts using a monitoring well, and define groundwater flow gradient and direction in the knoll area. Assess if PCB impacts observed at adjacent seep sample location S-16 are present in the knoll area.

Completed Data Gap Assessment: Three soil borings were completed with a Geoprobe drilling rig (GP-MW-12, GP-MW-13, and GP-MW-14) for collection of depth composite soil samples from surface to 12' bgs at each location.

Soil sample GP-MW-12-SS was submitted for laboratory analysis of VOCs, cPAHs, PCB congeners, and dioxins and furans. The boring was extended to approximately 25' bgs in the area of former boring GP-601 and test pit TP-16. Soil lithology consisted of sandy fill material (likely dredged due to presence of shell fragments) down to approximately 18' bgs, underlain by apparent native woody material. A thin layer of gray material that appeared to be pulverized rock was observed at approximately 18.5' bgs (sample collected for dioxin/furan analysis based on Ecology concerns it was buried ash material). Field observations and PID readings did not indicate soil impacts at

this location. A monitoring well (MW-12A) was installed with a hollow-stem auger drilling rig to a depth of 25' bgs with a 10' section of screen. A groundwater sample (MW-12-GW) was collected and submitted for laboratory analysis of VOCs, cPAHs, PCB congeners, dioxin/furans (sample held pending soil results), and metals.

Soil sample GP-MW-13-SS was submitted for laboratory analysis of SVOCs, cPAHs, PCB congeners, and dioxins and furans. The boring was extended to approximately 25' bgs in the area of former boring GP-603. Soil lithology consisted of sandy fill material (likely dredged due to presence of shell fragments) down to approximately 20' bgs, underlain by apparent native woody material. Field observations and PID readings did not indicate soil impacts at this location. A monitoring well (MW-13A) was installed with a hollow-stem auger drilling rig to a depth of 25' bgs with a 10' section of screen. A groundwater sample (MW-13-GW) was collected and submitted for laboratory analysis of SVOCs, cPAHs, PCB congeners, dioxin/furans (sample held pending soil results), and metals.

Soil sample GP-MW-14-SS was submitted for laboratory analysis of SVOCs, cPAHs, PCB congeners, and dioxins and furans. The boring was extended to approximately 23' bgs in the area of former boring GP-604 and upland of seep sample S-16. Soil lithology consisted of sandy fill material (likely dredged due to presence of observed shell fragments) down to approximately 17' bgs, underlain by apparent native woody material. Field observations and PID readings did not indicate soil impacts at this location; however, a section of gravel fill material with a slag-like appearance was observed at 18.5' bgs. A monitoring well (MW-14A) was installed with a hollow-stem auger drilling rig to a depth of 23' bgs with a 10' section of screen. A groundwater sample (MW-14-GW) was collected and submitted for laboratory analysis of SVOCs, cPAHs, PCB congeners, dioxin/furans (sample held pending soil results), and metals.

Findings: Soil analytical results did not measure concentrations of COPCs above PCLs at any of the three borings completed in the knoll area (**Table 1**). Concentrations of metals were measured above PCLs in groundwater at MW-12 (arsenic, copper, lead), MW-13 (copper and lead), and MW-14 (arsenic, copper)(**Table 2**). In addition, total PCB congeners were measured above the human-health based PCL of 7.0 picograms per liter (pg/L) at MW-12, MW-13, and MW-14 at 8,790 pg/L, 29,800 pg/L, and 16,100 pg/L, respectively (**Table 2**). The Toxic Equivalency Quotient (TEQ) value at each of these locations was calculated below the PCL for TEQ using ½ the detection limit for non-detect values.

Area 4 Locations

Data Gap from Work Plan Addendum: Previously identified isolated areas (identified as Area 4 in the RI/FS) of soil impacts at former borings GP-311 and GP-34. Assessment for the presence and trend of groundwater impacts. Further define groundwater flow gradient and direction and apparent mounding at existing monitoring well MW-1. Assess if PCB impacts observed at adjacent seep sample location S-1 are present.

Completed Data Gap Assessment: Two soil borings were completed with a Geoprobe drilling rig (GP-MW-15 and GP-MW-16) for collection of depth composite soil samples from surface to 12' bgs at each location. Soil sample GP-MW-15-SS was submitted for laboratory analysis of VOCs and PCB congeners. The boring was extended to approximately 15' bgs in the area of former boring GP-311 and near seep sample S-1. Soil lithology consisted of sandy fill material down to approximately 10.5' bgs, underlain by an apparent native silt layer. Field observations and PID readings did not indicate soil impacts at this location. A monitoring well (MW-15A) was installed with a hollow-stem auger drilling rig to a depth of 13' bgs with a 10' section of screen. A groundwater sample (MW-15-GW) was collected and submitted for laboratory analysis of PCB congeners and metals.

Soil sample GP-MW-16-SS was submitted for laboratory analysis of TPH, SVOCs, cPAHs, PCB congeners, and dioxins/furans. The boring was extended to approximately 15' bgs in the area of former boring GP-34 and test pit TP-2. Soil lithology consisted of sandy/gravelly fill material down to approximately 12' bgs, underlain by an apparent native silt layer. Field observations and PID readings did not indicate soil impacts at this location. A monitoring well (MW-16A) was installed with a hollow-stem auger drilling rig to a depth of 13' bgs with a 10' section of screen. A groundwater sample (MW-16-GW) was collected and submitted for laboratory analysis of SVOCs, cPAHs, PCB congeners, dioxins/furans (held pending soil results), and metals.

Findings: Soil analytical results did not measure concentrations of COPCs above PCLs at MW-15 (**Table 1**). Concentrations of total PCB congeners and dioxin/furan TEQ were calculated above PCLs at MW-16. In groundwater, total PCB congeners were measured above the PCL of 7.0 pg/L at MW-15 and MW-16 at 125 pg/L and 286 pg/L, respectively. The TEQ value at each of these locations was calculated below the PCL for TEQ using ½ the detection limit for non-detect values.

Stormwater Conveyance System

Data Gap from Work Plan Addendum: Potential impacts from previously identified damaged or plugged facility-related stormwater lines. Assessment if leaks in the stormwater system have contributed to soil and groundwater impacts or show relationship to sediment sample results from outfall OF-8 and OF-9. Need to better define boundary of potential salt water intrusion inland as measured in groundwater.

Completed Data Gap Assessment: Three soil borings were completed with a Geoprobe drilling rig (GP-MW-17, GP-801, and GP-802) for collection of depth composite soil samples from surface to 12' bgs at each location.

Soil sample GP-MW-17-SS was submitted for laboratory analysis of TPH, VOCs, SVOCs, cPAHs, PCB congeners, and dioxins and furans. The boring was extended to approximately 15' bgs in the area of previously identified damaged stormwater lines that discharge to the finger area via outfall OF-4 (**Figure 1**). Soil lithology consisted of sandy fill material. Field observations and PID readings did not indicate soil impacts at this location. A monitoring well (MW-17) was installed with a hollow-stem auger drilling rig to a depth of 13' bgs with a 10' section of screen. A

groundwater sample (MW-17-GW) was collected and submitted for laboratory analysis of TPH, VOCs, SVOCs, cPAHs, PCB congeners, dioxin/furans (sample held pending soil results), and metals.

Soil sample GP-801-SS was submitted for laboratory analysis of TPH, VOCs, SVOCs, cPAHs, PCB congeners, and dioxins and furans. The boring was extended to approximately 15' bgs in the area of previously identified damaged stormwater lines that discharge to outfall OF-6. Soil lithology consisted of sandy fill material. Field observations and PID readings did not indicate soil impacts at this location. A temporary well was set and a groundwater sample (GP-801-GW) was collected and submitted for laboratory analysis of TPH, VOCs, SVOCs, cPAHs, PCB congeners, and dioxin/furans (sample held pending soil results).

Soil sample GP-802-SS was submitted for laboratory analysis of TPH, VOCs, SVOCs, cPAHs, PCB congeners, and dioxins and furans. The boring was extended to approximately 15' bgs in the area of previously identified damaged stormwater lines that discharge to outfalls OF-9 and OF-10. Soil lithology consisted of sandy fill material. Field observations and PID readings did not indicate soil impacts at this location. A temporary well was set and a groundwater sample (GP-802-GW) was collected and submitted for laboratory analysis of TPH, VOCs, SVOCs, cPAHs, PCB congeners, and dioxin/furans (sample held pending soil results).

Findings: Soil analytical results did not measure concentrations of COPCs above PCLs, with the exception of total PCBs at GP-802 that were measured at 4,250 pg/g, above the natural background concentrations of 3,500 pg/g (**Table 1**). In groundwater, total PCB congeners were measured above the PCL of 7.0 pg/L at MW-17, GP-801, and GP-802 at 164 pg/L, 17,600 pg/L, and 174 pg/L, respectively. The TEQ value at each of these locations was calculated below the PCL for TEQ using ½ the detection limit for non-detect values. In addition, arsenic in groundwater was measured at MW-17 at 43.9 µg/L, above the natural background concentration of 5.0 µg/L, and TEQ for cPAHs was calculated above the practical quantitation limit (PQL)-based PCL of 0.015 µg/L at GP-801 (**Table 2**).

Vertical and Horizontal Groundwater Flow and Gradient

Data Gap from Work Plan Addendum: Ecology has identified deep zone groundwater flow direction and gradient, potential vertical gradient, as well as a better understanding of site-wide groundwater gradient (including the knoll area) as data gaps. A transducer study was completed in 2007; however, fewer monitoring wells were present on-site at that time and no monitoring wells were completed as deep wells.

Completed Data Gap Assessment: A follow-up transducer study was performed by installing pressure transducers in select wells from May 6 to May 15. Pressure transducers were installed at all nested well locations (shallow and deep well), as well as several new and existing monitoring wells (**Figure 2**).

Findings: As seen in the 2007 transducer study, tidal influence on groundwater levels are limited to near shore locations including MW-3, MW-15, and MW-16. Minimal undulations associated with the tides were observed at other wells including the knoll area. Estimated tidal influence for a portion of the assessment is portrayed on **Figure 2** and in **Graph 1**. It should be noted that some small discrepancies shown in the wells across the road (MW-9A and MW-10A) may be caused by the adjacent railroad traffic. Estimated groundwater gradient and flow direction were consistent with observations from quarterly groundwater monitoring (see **Figure 3** for estimated gradient and flow for the deep zone wells).

2. FINDINGS FROM DATA GAP ASSESSMENT

Overall exceedances of PCLs from the data gap assessments are displayed on **Figure 1**.

General Soil Analytical Results

Exceedances of PCLs in soil during the data gap assessment were limited to total PCB congeners and dioxins/furans TEQ in soil sample GP-MW-16 and total PCB congeners in sample GP-802-SS. The TEQ value using ½ detection limit for non-detect values for dioxin-like PCB congeners was calculated below the PCL of 2.0 pg/g at each of these locations. Follow-up groundwater sampling at MW-16 and from GP-802 measured relatively low concentrations of total PCB congeners in groundwater and it does not appear that the elevated concentrations observed in the soil samples are readily mobilizing to groundwater at these locations.

Follow-up analysis for dioxins/furans in groundwater at MW-16 was received on June 18, 2019 and the Level IV quality assurance (QA) assessment is currently pending. Concentrations of dioxins/furans in groundwater at MW-16 measured 1.9 pg/L, which is below the PQL-based PCL of 63 pg/L.

General Groundwater Analytical Results

Exceedances of PCLs for metals in groundwater were limited to arsenic at MW-11A, MW-12, MW-14, and MW-16, copper at MW-11A, MW-12, MW-13, and MW-14, and lead at MW-12 and MW-13.

TPH-Dx, VOCs (including COPCs from RI/FS of benzene and naphthalene), and SVOCs were not measured above applicable PCLs in the groundwater samples.

TEQ values for cPAHs were calculated above the PCL from GP-801 and at MW-13. The PCL of 0.015 µg/L is based on the laboratory PQL provided by ARI laboratory using a low detection level method.

Concentrations of total PCB congeners were measured at each groundwater sample location. Relative elevated concentrations were limited to MW-12, MW-13, and MW-14 (knoll area locations) and GP-801. The concentration of total PCB congeners measured at MW-14 was 16,100 pg/L, compared to 16,200 pg/L measured at the adjacent Seep S-16 during the April 2018 seep sampling event; however, an analysis of total PCB congener groupings for the samples was not consistent between the two locations (further discussed below).

Total PCB Congener Assessment

Elevated concentrations of total PCB congeners in soil were observed in samples GP-MW-15-SS, GP-MW-16-SS, and GP-802-SS. Follow-up groundwater sampling at these locations measured relatively low concentrations of total PCB congeners and it does not appear that the elevated concentrations observed in the soil samples are readily mobilizing to groundwater at these locations. **Graph 2** presents the soil and groundwater analytical results for each location. Typically, PCBs are not considered mobile in groundwater however some of the highest groundwater concentrations (knoll area) did not correlate to soil concentrations at the same locations. This could be due to very low detection limits, colloidal interference (particularly at seep sample and temporary well GP-801), or the depth composite soil sampling method.

As one method to assess the potential relationship of the total PCB congener results across the Site, the contribution of each sub group of PCBs (i.e. mono-, Di-, Tri-, etc.) to the total PCB congener concentration was reviewed. As shown on **Graph 3**, some patterns were observed based on sample location; this includes similarities at MW-12 and MW-13 (knoll area), GP-801 and Seep S-16 (as opposed to assumed relationship of knoll area findings and adjacent Seep S-16), and upland locations MW-15, MW-16, MW-17, and GP-802. While the entire Site consists of fill material, filling activities have been completed at various times throughout the operational history of the Site and often from unknown sources of fill material.

Groundwater Gradient and Flow

As assessment of site-wide groundwater gradient and flow confirms the tidal influence of near-shore monitoring wells that was observed in the 2009 tidal assessment (**Figure 2**). In addition, vertical gradient from various groundwater assessments do not appear to be a significant factor in the site-wide hydrology, and minor observed differences between shallow and deep well water elevation measurements may be attributed to errors in measurement versus any vertical gradient.

3. ADDITIONAL ACTIONS TO BE CONSIDERED

With the recent expansion of the site monitoring well network, the scope and schedule for the next quarterly groundwater sampling event is being reviewed based on the recent analytical results and findings from this assessment, however, it is still expected to remain on the current quarterly schedule (July-Aug). Proposed revisions to the groundwater sampling plan will be provided to Ecology for review under separate cover.

JELD-WEN is reviewing available records regarding fill placement. It appears that the knoll area was initially filled in 1960's. The sandy consistency of this material and observed shell fragments in the fill indicate that this material is primarily dredged material. The source of the fill material is unknown.

JELD-WEN is considering solid-phase micro-extraction (SPME) sampling in groundwater at MW-13 and MW-14 concurrently with SPME sampling of seep water from approximate seep locations S-3, S-16, and S-18 (pending observed seep flow at time of sampling event). SPME sampling is a sampling technique to assist with quantifying dissolved phase analytes with limited particle interference. The SPME samples will

be submitted for PCB congeners. Actual SPME sampling locations will be discussed with Ecology and incorporated into a work plan addendum for Ecology's approval.

Sincerely,
SLR International Corporation

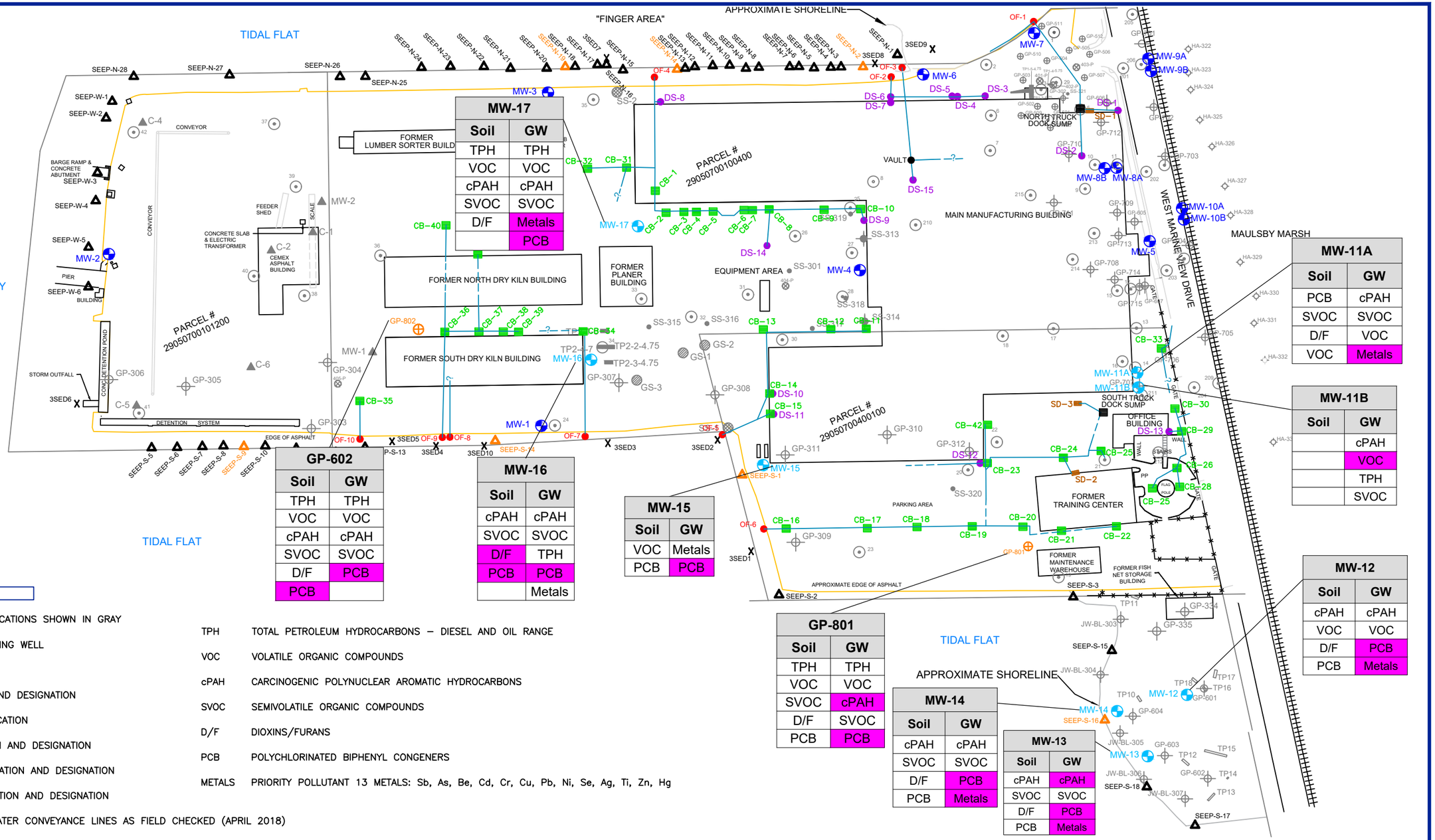
R. Scott Miller, P.E.
Managing Principal

Chris Kramer
Associate Scientist

cc Dwayne Arino, JELD-WEN Inc.

Enc. Figures
Tables
Graphs
Appendices

FIGURES



LEGEND

OTHER FORMER RI SAMPLING LOCATIONS SHOWN IN GRAY

MW-1 EXISTING MONITORING WELL

SCE INVESTIGATION AREAS:

SEEP-N-3 SEEP LOCATION AND DESIGNATION

SEEP-N-2 SEEP SAMPLE LOCATION

OF-1 OUTFALL LOCATION AND DESIGNATION

CB–1 CATCH BASIN LOCATION AND DESIGNATION

DS-1 DOWNSPOUT LOCATION AND DESIGNATION

EXISTING STORMWATER CONVEYANCE LINES AS FIELD CHECKED (APRIL 2018)

MW-11 MONITORING WELL LOCATION (2019)

EXCEEDS PCL

TPH	TOTAL PETROLEUM HYDROCARBONS – DIESEL AND OIL RANGE
VOC	VOLATILE ORGANIC COMPOUNDS
cPAH	CARCINOGENIC POLYNUCLEAR AROMATIC HYDROCARBONS
SVOC	SEMIVOLATILE ORGANIC COMPOUNDS
D/F	DIOXINS/FURANS
PCB	POLYCHLORINATED BIPHENYL CONGENERS
METALS	PRIORITY POLLUTANT 13 METALS: Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Ti, Zn, Hg

NOTES

THE BUILDINGS, SURFACE UTILITIES, EDGE OF PAVEMENT, AND APPROXIMATE SHORELINE SHOWN ON THIS MAP ARE BASED ON A 2006 SURVEY PERFORMED BY WH PACIFIC.

0 175 350 525’

FORMER E.A. NORD SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON

Report
SUMMARY REPORT - 2019 DATA GAP ASSESSMENT

Drawing
SAMPLING LOCATIONS AND ANALYTICAL SUMMARY

Date	June 2019	Scale	AS SHOWN
File Name	SW_SITE PLAN_NORD_2_05-23-19.	Project No.	108.00228.00059

Fig. No. 1

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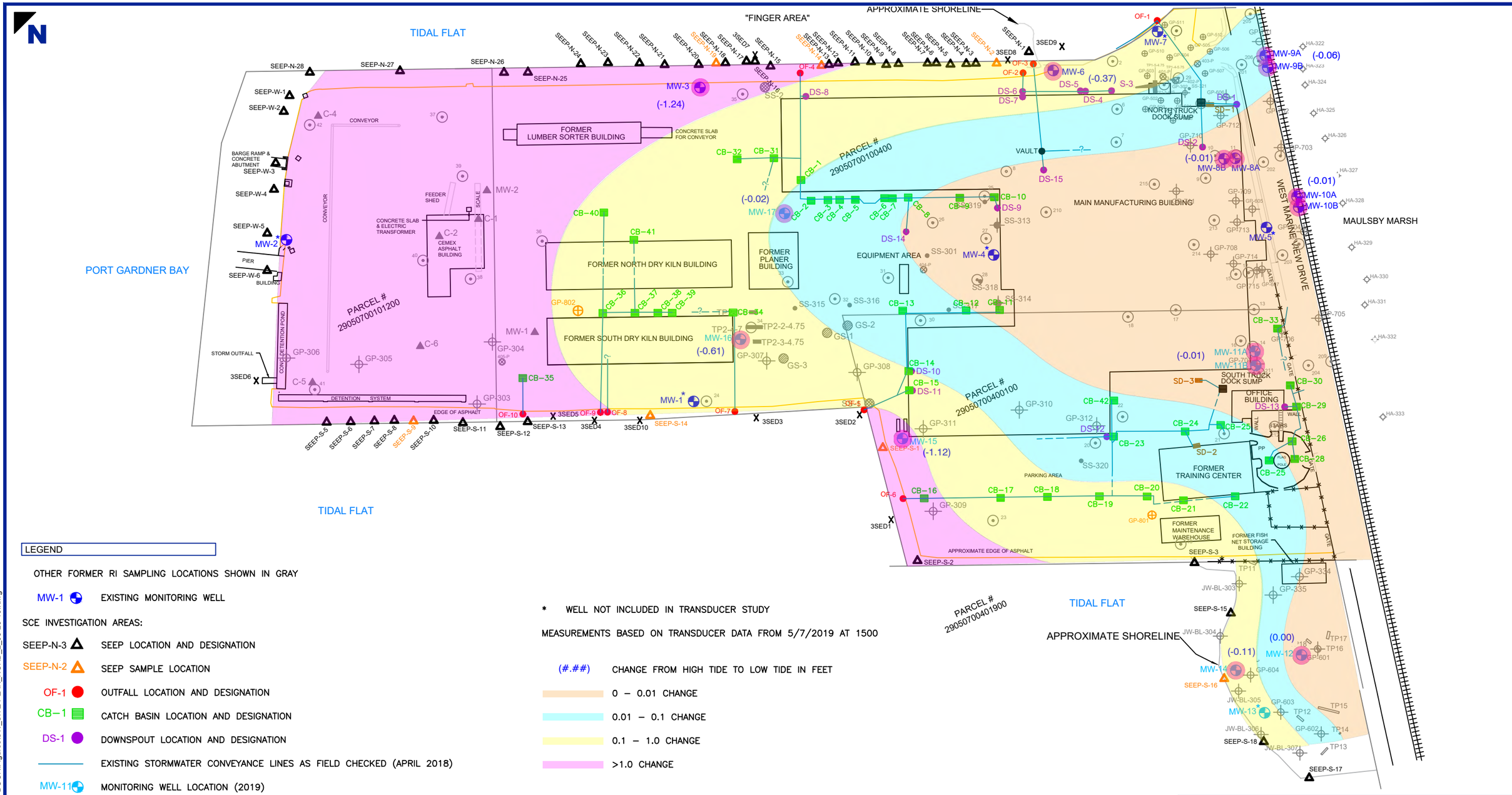

TIDAL FLAT

LEGEND

OTHER FORMER RI SAMPLING LOCATIONS SHOWN IN GRAY

MW-1 EXISTING MONITORING WELL

SCE INVESTIGATION AREAS:

SEEP-N-3 SEEP LOCATION AND DESIGNATION

SEEP-N-2 SEEP SAMPLE LOCATION

OF-1 OUTFALL LOCATION AND DESIGNATION

CB—1 CATCH BASIN LOCATION AND DESIGNATION

DS-1 DOWNSPOUT LOCATION AND DESIGNATION

EXISTING STORMWATER CONVEYANCE LINES AS FIELD CHECKED (APRIL 2018)

MW-11 MONITORING WELL LOCATION (2019)

TRANSDUCER LOCATION

* WELL NOT INCLUDED IN TRANSDUCER STUDY

MEASUREMENTS BASED ON TRANSDUCER DATA FROM 5/7/2019 AT 1500

(#.##) CHANGE FROM HIGH TIDE TO LOW TIDE IN FEET

0 — 0.01 CHANGE

0.01 — 0.1 CHANGE

0.1 — 1.0 CHANGE

>1.0 CHANGE

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0 175 350 525’

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300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON

Report
SUMMARY REPORT - 2019 DATA GAP ASSESSMENT

Drawing
ESTIMATED TIDAL INFLUENCE

Date	June 2019	Scale	AS SHOWN
File Name	SW_SITE PLAN_NORD_2_05-23-19.	Project No.	108.00228.00059

Fig. No. 2

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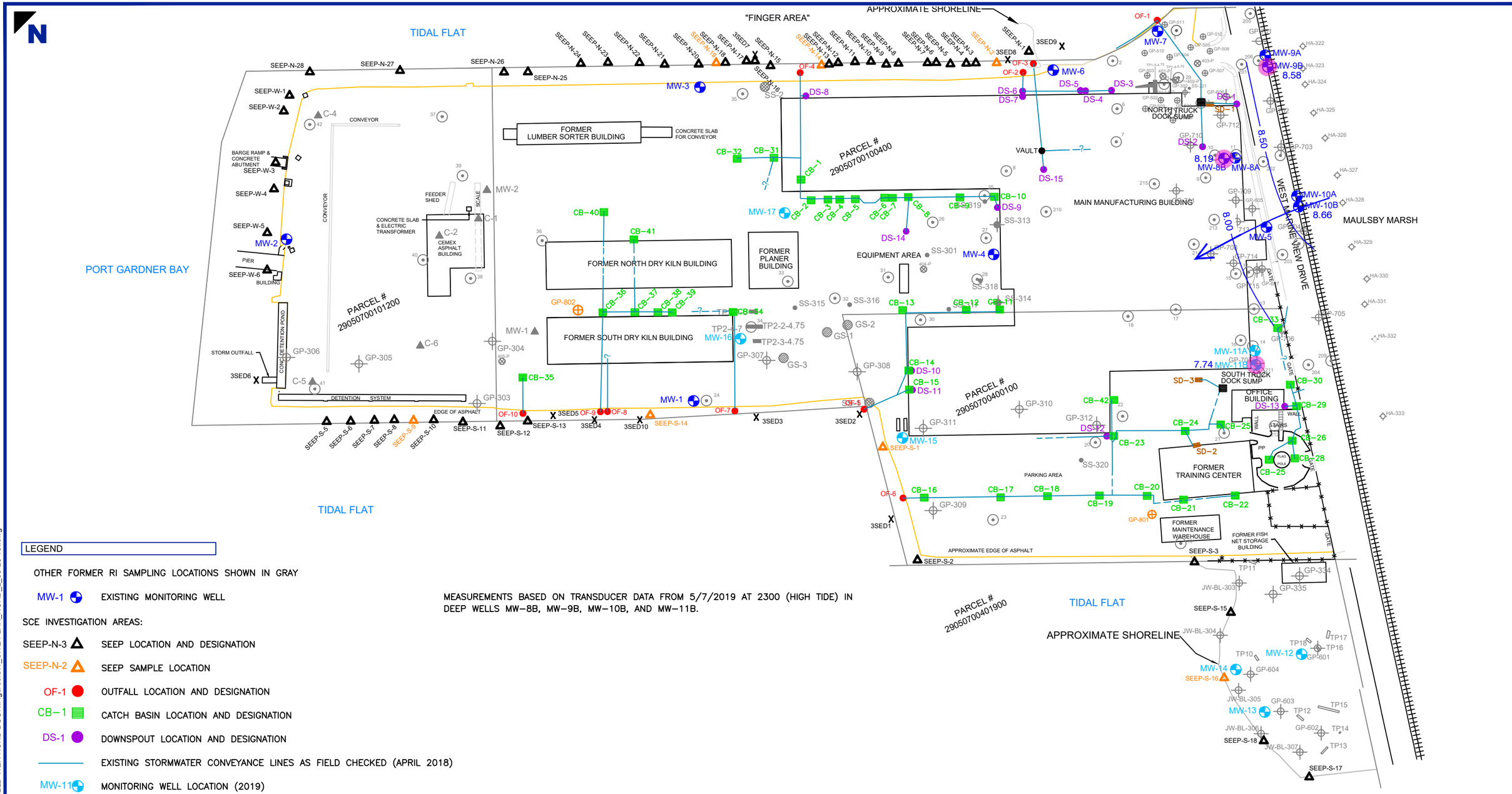

TIDAL FLAT

LEGEND

OTHER FORMER RI SAMPLING LOCATIONS SHOWN IN GRAY

MW-1 EXISTING MONITORING WELL

SCE INVESTIGATION AREAS:

SEEP-N-3 SEEP LOCATION AND DESIGNATION

SEEP-N-2 SEEP SAMPLE LOCATION

OF-1 OUTFALL LOCATION AND DESIGNATION

CB–1 CATCH BASIN LOCATION AND DESIGNATION

DS-1 DOWNSPOUT LOCATION AND DESIGNATION

EXISTING STORMWATER CONVEYANCE LINES AS FIELD CHECKED (APRIL 2018)

MW-11 MONITORING WELL LOCATION (2019)

TRANSDUCER LOCATION

#.# ESTIMATED GROUNDWATER CONTOUR

GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

ESTIMATED GROUNDWATER FLOW DIRECTION

MEASUREMENTS BASED ON TRANSDUCER DATA FROM 5/7/2019 AT 2300 (HIGH TIDE) IN DEEP WELLS MW–8B, MW–9B, MW–10B, AND MW–11B.

NOTES

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0 175 350 525’

FORMER E.A. NORD SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON

Report
SUMMARY REPORT - 2019 DATA GAP ASSESSMENT

Drawing
ESTIMATED GROUNDWATER GRADIENT - DEEP WELLS

Date	June 2019	Scale	AS SHOWN
File Name	SW_SITE PLAN_NORD_2_05-23-19.	Project No.	108.00228.00059

Fig. No. 3

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TABLES

Table 1
Soil Analytical Summary Table
2019 Data Gap Assessment
Former E.A. Nord
Everett, WA

Lab Sample ID			Preliminary Cleanup Levels (PCLs) [a]	L1093844-01		L1093844-02		-		L1093844-04		L1093844-05		L1093844-06		L1093844-07		L1093844-08		L1093844-09		L1093844-10	
Client Sample ID				GP-MW-11-SS		GP-MW-12-SS		GP-MW-12-SS-18-19		GP-MW-13-SS		GP-MW-14-SS		GP-MW-15-SS		GP-MW-16-SS		GP-MW-17-SS		GP-801-SS		GP-802-SS	
Date Collected				04/25/2019		04/25/2019		04/25/2019		04/25/2019		04/25/2019		04/26/2019		04/26/2019		04/26/2019		04/26/2019		04/26/2019	
Method	Analyte	Units		Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
2540 G-2011	TOTAL SOLIDS	%		**82.5**		**87.3**		**-**		**88**		**86.5**		**61.3**		**85**		**80.5**		85		89.3	
Total Petroleum Hydrocarbons - Diesel and Oil Range (TPH-Dx)																							
NWTPHDX-NO SGT	DIESEL RANGE ORGANICS	mg/kg	200	-		-		-		-		-		-		**62.7**		**3.81**	J	<47.1		**2.4**	J
NWTPHDX-NO SGT	RESIDUAL RANGE ORGANICS	mg/kg	2,000	-		-		-		-		-		-		**604**		**11.1**	J	**75**	J	**13.1**	
Volatile Organic Compounds (VOCs)																							
8260C	BENZENE	mg/kg	0.002	**0.000853**	J	<0.00115		-		-		-		<0.00163		-		<0.00124		**0.000507**	J	<0.00112	
8260C	ETHYLBENZENE	mg/kg	0.34	**0.00112**	J	<0.00286		-		-		-		<0.00408		-		<0.00311		<0.00294		<0.00280	
8260C	NAPHTHALENE	mg/kg	0.24	**0.00812**	J	<0.0143		-		-		-		**0.00883**	J	-		<0.0155		<0.0147		<0.0140	
8260C	TETRACHLOROETHENE	mg/kg	476	**0.00242**	J	<0.00286		-		-		-		**0.00162**	J	-		**0.000919**	J	<0.00294		<0.00280	
8260C	TOLUENE	mg/kg	0.22	**0.0043**	J	<0.00573		-		-		-		**0.00268**	J	-		<0.00621		<0.00589		<0.00560	
8260C	1,2,4-TRIMETHYLBENZENE	mg/kg	0.03	**0.00405**	J	<0.00573		-		-		-		<0.00815		-		<0.00621		**0.00167**	J	<0.00560	
8260C	1,2,3-TRIMETHYLBENZENE	mg/kg	0.03	**0.00299**	J	<0.00573		-		-		-		<0.00815		-		<0.00621		<0.00589		<0.00560	
Semivolatile Organic Compounds (SVOCs)																							
8270D	ACENAPHTHENE	mg/kg	5.0	**0.118**	J	-		-		<0.190		<0.193		-		<0.392		<0.207		<0.392		<0.373	
8270D	ANTHRACENE	mg/kg	114	<0.202		-		-		<0.190		**0.0479**	J	-		<0.392		<0.207		<0.392		<0.373	
8270D	BENZO(A)ANTHRACENE	mg/kg	TEQ	<0.202		-		-		<0.190		**0.0992**	J	-		<0.392		<0.207		<0.392		<0.373	
8270D	BENZO(B)FLUORANTHENE	mg/kg	TEQ	<0.202		-		-		<0.190		**0.0813**	J	-		<0.392		<0.207		<0.392		<0.373	
8270D	BENZO(G,H,I)PERYLENE	mg/kg	2,400	<0.202		-		-		<0.190		**0.0458**	J	-		<0.392		<0.207		<0.392		<0.373	
8270D	BENZO(A)PYRENE	mg/kg	TEQ	<0.202		-		-		<0.190		**0.081**	J	-		<0.392		<0.207		<0.392		<0.373	
8270D	CHRYSENE	mg/kg	TEQ	<0.202		-		-		<0.190		**0.0891**	J	-		<0.392		<0.207		<0.392		<0.373	
8270D	FLUORANTHENE	mg/kg	32	<0.202		-		-		<0.190		**0.19**	J	-		<0.392		<0.207		<0.392		<0.373	
8270D	FLUORENE	mg/kg	5.1	**0.058**	J	-		-		<0.190		<0.193		-		<0.392		<0.207		<0.392		<0.373	
8270D	INDENO(1,2,3-CD)PYRENE	mg/kg	TEQ	<0.202		-		-		<0.190		**0.0495**	J	-		<0.392		<0.207		<0.392		<0.373	
8270D	NAPHTHALENE	mg/kg	0.24	<0.202	J3	-		-		<0.190	J3	<0.193	J3	-		<0.392	J3	<0.0414	J3	<0.392	J3	<0.373	J3
8270D	PHENANTHRENE	mg/kg	24,000	**0.0532**	J	-		-		<0.190		**0.116**	J	-		<0.392		<0.207		<0.392		<0.373	
8270D	PYRENE	mg/kg	33	<0.202		-		-		<0.190		**0.187**	J	-		<0.392		<0.207		<0.392		<0.373	
Carcinogenic Polynuclear Aromatic Hydrocarbons (cPAHs)																							
8270SIM	TEQ: ND=1/2DL	mg/kg	0.37	-		**0.004**		**-**		**0.003**		**0.006**		-		**0.009**		**0.009**		**0.024**		**0.004**	
Polychlorinated Biphenyls (PCBs)																							
1668A	Total PCBs	pg/g	3,500	**178**		**321**		-		**546**		**768**		**3,240**		**7,070**		**365**		**1,840**		**4,250**	
1668A	TEQ: ND=1/2DL	pg/g	2.0	**0.017**		**0.030**		-		**0.023**		**0.021**		**0.057**		**0.89**		**0.057**		**0.025**		**0.031**	
Dioxins and Furans																							
8290A	TEQ: ND=1/2DL	pg/g	5.2	**4.4**		**0.38**		**4.1**		**0.38**		**0.30**		-		**8.3**		**0.74**		**2.0**		**4.5**	

Notes:
Bold indicates measured above the laboratory reporting limit
Gray shading indicates measured above Preliminary Cleanup Level (PCL)
<0.00115 indicates measured less than laboratory reporting limit of 0.00115
a - PCL selection process and sources identifed in Table 3
Laboratory qualifiers are defined in laboratory reports (Appendix B) and analyzed in laboratory data review documents (Appendix C).

Table 2
Groundwater Analytical Summary Table
2019 Data Gap Assessment
Former E.A. Nord
Everett, WA

Lab Sample ID			Preliminary Cleanup Levels (PCLs)	L1093831-01		L1093831-03		L1096002-01		L1096002-02		L1096002-03		L1096002-04		L1096002-05		L1096002-08		L1096002-06		L1096002-07	
Field Sample ID				GP-801-GW		GP-802-GW		MW-11A-0519		MW-11B-0519		MW-12-0519		MW-13-0519		MW-14-0519		MW-15-0519		MW-16-0519		MW-17-0519	
Date Collected				04/26/2019		04/26/2019		05/03/2019		05/03/2019		05/03/2019		05/03/2019		05/03/2019		05/03/2019		05/03/2019		05/03/2019	
Method	Analyte	Units		Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Metals																							
6020B	ANTIMONY	µg/L	90	-		-		<2.00		-		**6.55**		**2.05**		<2.00		<2.00		<2.00		<2.00	
6020B	ARSENIC	µg/L	5.0	-		-		**5.95**	J6	-		**18.7**		**4.38**		**16.6**		**0.587**	J	**3.03**		**43.9**	
6020B	CHROMIUM	µg/L	243,060	-		-		**20.5**	J6 O1	-		**4.82**		**2.45**		**3.55**		**1.29**	J	**1.24**	J	**6.43**	
6020B	COPPER	µg/L	5.0	-		-		**6.34**	B O1	-		**7.26**	B	**45.9**		**7.35**	B	**1.24**	J B	**3.49**	J B	**2.27**	J B
6020B	LEAD	µg/L	8.1	-		-		**1.01**	J	-		**11.2**		**23.6**		**2.10**		<2.00		**1.79**	J	**0.911**	J
6020B	NICKEL	µg/L	8.2	-		-		**4.17**		-		**7.67**		**2.96**		**2.85**		<2.00		**1.34**	J	**2.10**	
6020B	SELENIUM	µg/L	71	-		-		**0.49**	J B	-		<2.00		**0.683**	J B	**0.413**	J B	<2.00		<2.00		**0.391**	J B
6020B	ZINC	µg/L	81	-		-		**6.85**	J B O1	-		**27.7**	B	**20.0**	J B	**9.27**	J B	<25.0		**3.95**	J B	**3.76**	J B
7470A	MERCURY	µg/L	0.2	-		-		<0.200		-		<0.200		**0.0664**	J	<0.200		<0.200		<0.200		<0.200	
Total Petroleum Hydrocarbons - Diesel and Oil Range (TPH-Dx)																							
NWTPHDX-NO SGT	DIESEL RANGE ORGANICS	µg/L	500	**324**		<200		-		<200		-		-		-		-		-		**130**	J
NWTPHDX-NO SGT	RESIDUAL RANGE ORGANICS	µg/L	500	**396**		<250		-		<250		-		-		-		-		-		<250	
Volatile Organic Compounds (VOCs)																							
8260C	ACETONE	µg/L	7,200	**4.68**	J	**5.37**	J	**1.97**	J	**4.2**	J	**46.1**		-		-		-		-		**3.22**	J
8260C	BENZENE	µg/L	1.6	<0.500		<0.500		<0.500		<0.500		**0.207**	J	-		-		-		-		<0.500	
8260C	CARBON DISULFIDE	µg/L	400	<0.500		<0.500		<0.500		<0.500		**2.87**		-		-		-		-		<0.500	
8260C	CHLOROFORM	µg/L	1.2	<0.500		<0.500		<0.500		**1.32**		<0.500		-		-		-		-		<0.500	
8260C	N-HEXANE	µg/L	7.8	<5.00		<5.00		<5.00		<5.00		**4.74**	J	-		-		-		-		<5.00	
8260C	P-ISOPROPYLTOLUENE	µg/L	-	<0.500		<0.500		<0.500		<0.500		**3.81**		-		-		-		-		<0.500	
8260C	2-BUTANONE (MEK)	µg/L	1,740,000	<5.00		<5.00		<5.00		<5.00		**4.21**	J	-		-		-		-		<5.00	
8260C	NAPHTHALENE	µg/L	8.9	**1.52**	J	<2.50		**0.188**	JB	<2.50		<2.50		-		-		-		-		<2.50	
8260C	1,2,4-TRIMETHYLBENZENE	µg/L	28	<0.500		<0.500		**0.151**	J	<0.500		<0.500		-		-		-		-		<0.500	
Semivolatile Organic Compounds (SVOCs)																							
8270D	ACENAPHTHENE	µg/L	30	<1.00		<1.00		**32**		<1.00		-		<1.00		<1.00		-		<1.00		**15.9**	
8270D	ANTHRACENE	µg/L	100	<1.00		<1.00		<1.00		<1.00		-		<1.00		**0.361**	J	-		<1.00		<1.00	
8270D	FLUORENE	µg/L	10	<1.00		<1.00		**19.1**		<1.00		-		<1.00		<1.00		-		<1.00		<1.00	
8270D	NAPHTHALENE	µg/L	8.9	**0.801**	J J3	<1.00	J3	<1.00		<1.00		-		<1.00		<1.00		-		<1.00		<1.00	
8270D	PHENANTHRENE	µg/L	100	<1.00	J4	<1.00	J4	**14.1**		<1.00		-		<1.00		<1.00		-		<1.00		<1.00	
8270D	3&4-METHYL PHENOL	µg/L	400	**0.599**	J	<10.0		<10.0		<10.0		-		<10.0		<10.0		-		<10.0		<10.0	
8270D	PHENOL	µg/L	70,000	**18.5**		**11.6**		**1.29**	J	**2.89**	J	-		**1.40**	J	**9.50**	J	-		**1.34**	J	**3.08**	J
Carcinogenic Polynuclear Aromatic Hydrocarbons (cPAHs)																							
8270SIM	TEQ: ND=1/2DL	µg/L	0.015	**0.14**		**0.008**		**0.008**		**0.008**		**0.007**		**0.02**		**0.007**		-		**0.008**		**0.008**	
Polychlorinated Biphenyls (PCBs)																							
1668A	Total PCBs	pg/L	7.0	**17,600**		**174**		-		-		**8,790**		**29,800**		**16,100**		**125**		**286**		**164**	
1668A	TEQ: ND=1/2DL	pg/L	1.3	**0.39**		**0.11**		-		-		**0.15**		**0.13**		**0.15**		**0.15**		**0.092**		**0.043**	
Dioxins and Furans																							
8290A	TEQ: ND=1/2DL	pg/L	63	-		-		-		-		-		-		-		-		**1.9**		-	

Notes:
Bold indicates measured above the laboratory reporting limit
Gray shading indicates measured above Preliminary Cleanup Level (PCL)
<2.0 indicates measured less than laboratory reporting limit of 2.0
a - PCL selection process and sources identifed in Table 4
Laboratory qualifiers are defined in laboratory reports (Appendix B) and analyzed in laboratory data review documents (Appendix C).

Table 3
Soil PCLs
2019 Data Gap Assessment
Former E.A. Nord
Everett, WA

	CLARC Values from May 2019							Selected PCLs - Human Health and Groundwater Protection	
	Soil Protective of Groundwater		Soil, Method A	Soil Protective of Human Direct Contact[e]	Soil Protective of Terrestrial Species	Natural Background Concentration	Laboratory PQL	PCL	Source
	Unsaturated Soil	Saturated Soil		Soil, Method B					
	(gwl-u)	(gwl-s)	(mA)	(mB)	(TEE)	(back)			
Total Petroleum Hydrocarbons (TPH) (mg/kg)									
Diesel Range Hydrocarbons	-	-	2,000	-	200	-	4	200	(TEE)
Oil Range Hydrocarbons	-	-	2,000	-	-	-	10	2,000	(mA)
Volatile Organic Compounds (VOCs) (mg/kg)									
1,2,4-Trimethylbenzene	0.47	0.03	-	-	-	-	0.005	0.03	(gwl-s)
1,2,3-Trimethylbenzene	0.47	0.03	-	-	-	-	0.005	0.03	(gwl-s) (x)
Benzene	0.03	0.002	0.03	18	-	-	0.001	0.002	(gwl-s)
Ethylbenzene	6.1	0.34	6.0	8,000	-	-	0.0025	0.34	(gwl-s)
Tetrachloroethene (PCE)	0.05	0.003	0.05	476	-	-	0.0025	476	Direct
Toluene	4.7	0.27	7	6,400	200	-	0.005	0.27	(gwl-s)
Polycyclic Aromatic Hydrocarbons (PAHs) (mg/kg)									
Total cPAHs TEQ	7.5	0.37	-	3.4	12	-	0.005	0.37	(gwl-s)
Semi-Volatile Organics (SVOCs) (mg/kg)									
Acenaphthene	98	5.0	-	4,800	20	-	0.033	5.0	(gwl-s)
Anthracene	2,270	114	-	24,000	-	-	0.033	114	(gwl-s)
Benzo(g,h,i)perylene	655	33	-	2,400		-	0.033	2,400	Direct (y)
Fluoranthene	631	32	-	3,200	-	-	0.033	32	(gwl-s)
Fluorene	101	5.1	-	3,200	30	-	0.033	5.1	(gwl-s)
Naphthalene	4.5	0.24	5.0	1,600	-	-	0.033	0.24	(gwl-s)
Phenanthrene	2,270	114	-	24,000	-	-	0.033	24,000	Direct (z)
Pyrene	655	33	-	2,400	-	-	0.033	33	(gwl-s)
Benz(a)anthracene	0.86	0.04	-	1.4	-	-	0.006	NA	Calculated TEQ
Benzo(a)pyrene	2.3	0.12	0.10	0.14	12	-	0.006	NA	Calculated TEQ
Benzo(b)fluoranthene	2.95	0.15	-	1.4	-	-	0.006	NA	Calculated TEQ
Chrysene	96	4.8	-	140	-	-	0.006	NA	Calculated TEQ
Indeno(1,2,3-cd)pyrene	8.3	0.42	-	1.4	-	-	0.006	NA	Calculated TEQ
Polychlorinated Biphenyls (PCBs) (mg/kg)									
Total PCBs	-	-	1	0.5	0.65	0.0035	NA	0.0035	(back)
TEQ: ND=1/2 DL	-	-		-	-	-	2.00E-06	2.00E-06	(pql)
Dioxins/Furans (mg/kg)									
Total 2,3,7,8 TCDD (TEQ)	-	-	-	1.3E-05	2.0E-06	5.2E-06	3.80E-08	5.2E-06	(back)

Notes:
All values in miligrams per kilogram (mg/kg)
Gray shading indicates source value for PCL

Explanation of Sources
gwl-s: Saturated Soil Concentration Protective of Leachability to Groundwater for Unrestricted Land Use
mA: Soil, Method A, Unrestricted Land Use, Table Value
Direct: Direct Contact (Per Ecology email dated July 14, 2014, direct contact value used if constituent not detected above the PCL in groundwater)
pql: Applicable Practical Quantitation Level (PQL)
TEE: Soil Protective of Terrestrial Species
back: Published background concentration
x: No CLARC values for compound, used 1,2,4-Trimethylbenzene as surrogate
y: No CLARC values for compound, used Pyrene as surrogate
z: No CLARC values for compound, used Anthracene as surrogate

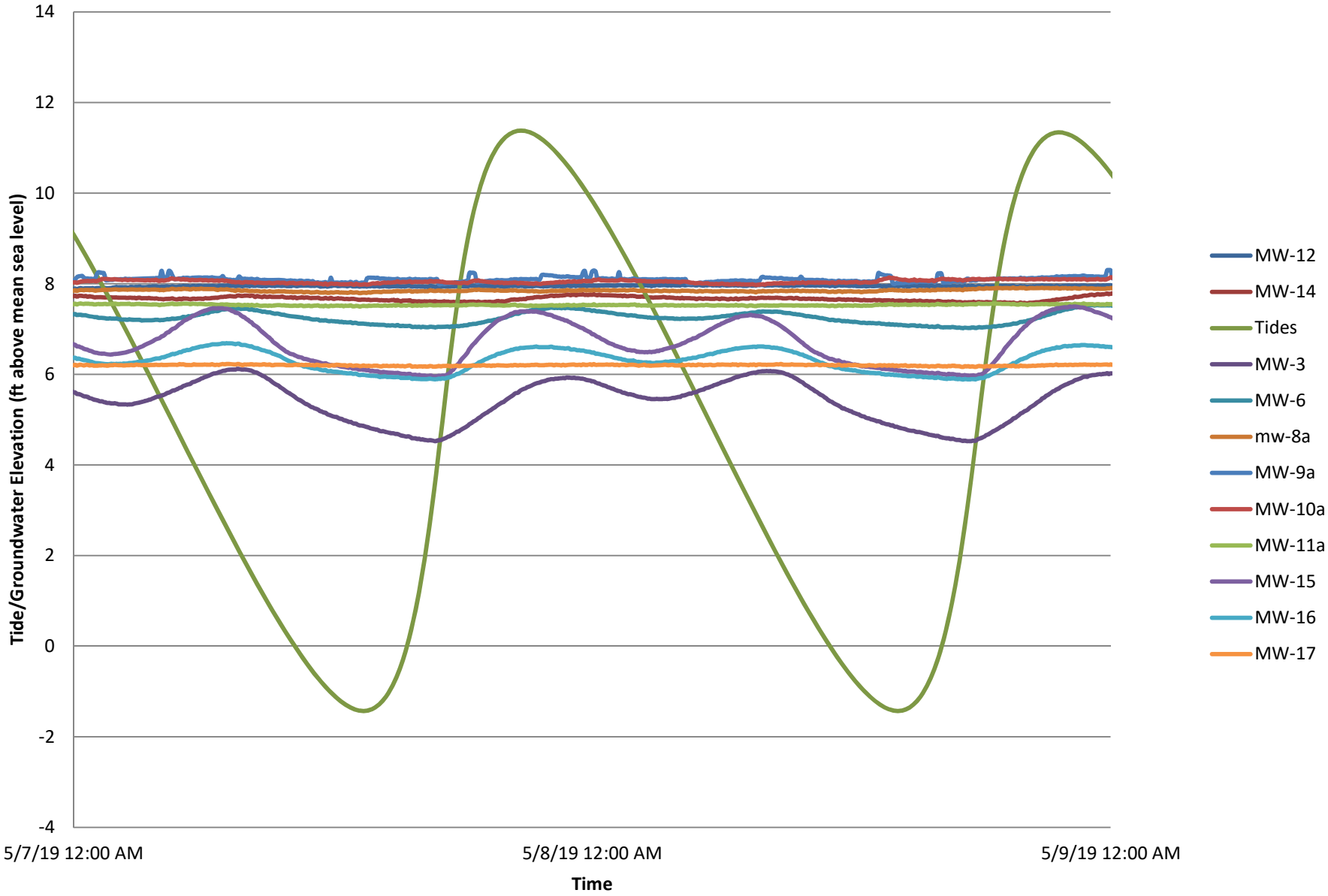
Table 4
Groundwater PCLs
2019 Data Gap Assessment
Former E.A. Nord
Everett, WA

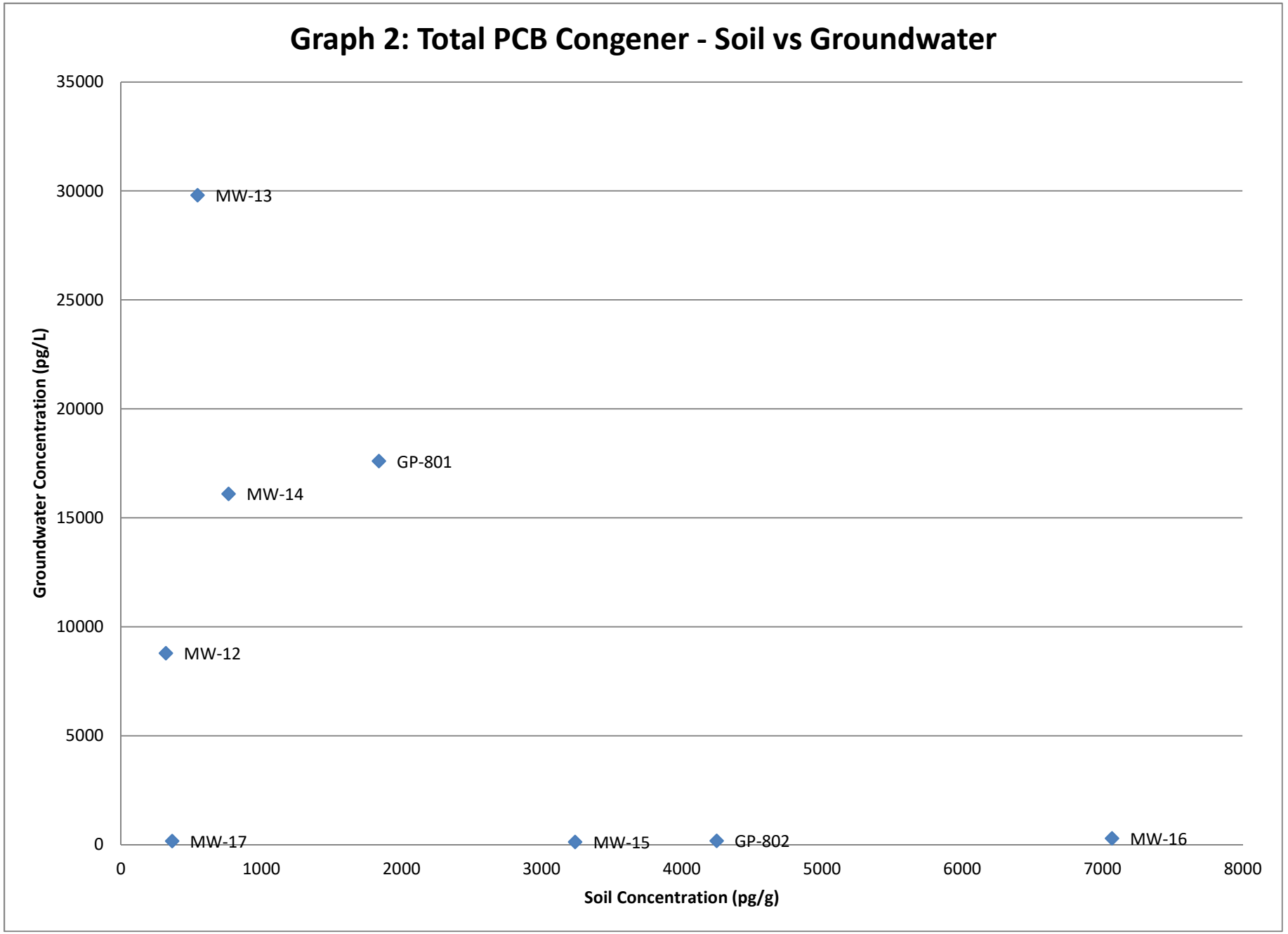
Analyte	CLARC Values - May 2019									Lab PQLs	Selected PCLs - 2019	
	Selection of Method B Surface Water Cleanup Levels						Potable Groundwater Screening Level		GW Protective of Vapor Intrusion - Method B, Unrestricted Land Use		Value	Source
	SW ARAR - Marine/Chronic - Ch. 173-201A WAC	SW ARAR - Marine/Chronic - Clean Water Act §304	SW ARAR - Marine/Chronic - National Toxics Rule, 40 CFR 131	SW ARAR - Human Health – Marine – WA	SW ARAR - Human Health – Marine – EPA	SW, Human Health, Method B						
	(ma-wac)	(ma-cwa)	(ma-ntr)	(hh-wac)	(hh-cwa)	(sw-b)	(pot)	Basis	(vi-b)	(pql)		
Total Petroleum Hydrocarbons (TPH)												
Diesel Range Hydrocarbons	-	-	-	-	-	-	500	-	-	200	500	(pot)
Oil Range Hydrocarbons	-	-	-	-	-	-	500	-	-	250	500	(pot)
Metals												
Antimony	-	-	-	180	90	1,040	6.0	(mcl)	-	2	90	(hh-cwa)
Arsenic	36	36	36	10	0.14	0.098	5.0	(gw-a)	-	2	5.0	(back)
Chromium (Total)	-	-	-	-	-	243,060	50	(gw-a)	-	2	243,060	(sw-b)
Copper	3.1	3.1	2.4	-	-	2,880	640	(gw-b)	-	5	5	(pql)
Lead	8.1	8.1	8.1	-	-	-	15	(gw-a)	-	2	8.1	(ma-wac)
Mercury	0.025	0.94	0.025	-	-	-	2	(gw-a)	0.89	0.2	0.2	(pql)
Nickel	8.2	8.2	8.2	190	100	1,100	100	(mcl)	-	2	8.2	(ma-wac)
Selenium	71	71	71	480	200	2,700	50	(mcl)	-	2	71	(ma-wac)
Zinc	81	81	81	2,900	1,000	16,500	4,800	(gw-b)	-	25	81	(ma-wac)
Volatile Organic Compounds (VOCs)												
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	28	0.5	28	(vi-b)
Acetone	-	-	-	-	-	-	7,200	(gw-b)	-	25	7,200	(gw-b)
Carbon Disulfide	-	-	-	-	-	-	800	(gw-b)	400	0.5	400	(vi-b)
Benzene	-	-	-	1.6	1.6	22.7	5	(gw-a)	2.4	0.5	1.6	(hh-wac)
Chloroform	-	-	-	1,200	600	55	1.4	(gw-b)	1.2	0.5	1.2	(vi-b)
N-Hexane	-	-	-	-	-	-	480	(gw-b)	7.8	5	7.8	(vi-b)
p-Isopropyltoluene	-	-	-	-	-	-	-	-	-	0.5	0.5	(pql)
2-Butanone (MEK)	-	-	-	-	-	-	4,800	(gw-b)	1,740,000	5	1,740,000	(vi-b)
Naphthalene	-	-	-	-	-	4,710	160	(gw-a)	8.9	2.5	8.9	(vi-b)
Polycyclic Aromatic Hydrocarbons (PAHs)												
Acenaphthene	-	-	-	110	30	648	960	(gw-b)	-	1	30	(hh-cwa)
Anthracene	-	-	-	4,600	100	25,900	4800	(gw-b)	-	1	100	(hh-cwa)
Fluorene	-	-	-	610	10	3,460	640	(gw-b)	-	1	10	(hh-cwa)
Naphthalene	-	-	-	-	-	4,710	160	(gw-a)	8.9	1	8.9	(vi-b)
Phenanthrene	-	-	-	4,600	100	25,900	4800	(gw-b)	-	1	100	(hh-cwa)
Total cPAHs TEQ [e]	-	-	-	0.051	0.0004	0.69	-	-	-	0.015	0.015	(pql)
Semi-Volatile Organics (SVOCs)												
3,4-Methylphenol (m,p-cresol)	-	-	-	-	-	-	400	(gw-b)	-	10	400	(pot)
Phenol	-	-	-	200,000	70,000	556,000	2,400	(gw-b)	-	10	70,000	(hh-cwa)
Dioxins/Furans												
Total 2,3,7,8 TCDD (TEQ) [e]	-	-	-	6.4E-08	1.4E-08	1.0E-08	1.12E-05	(gw-b)	-	5.70E-05	5.70E-05	(pql)
Polychlorinated Bipheyls (PCBs)												
Total PCBs	0.003	0.003	0.003	-	7.0E-06	1.1E-04	0.10	(gw-a)	-	-	7.0E-06	(hh-cwa)

Notes:
All values in micrograms per liter (µg/L)
Gray shading indicates source value for PCL

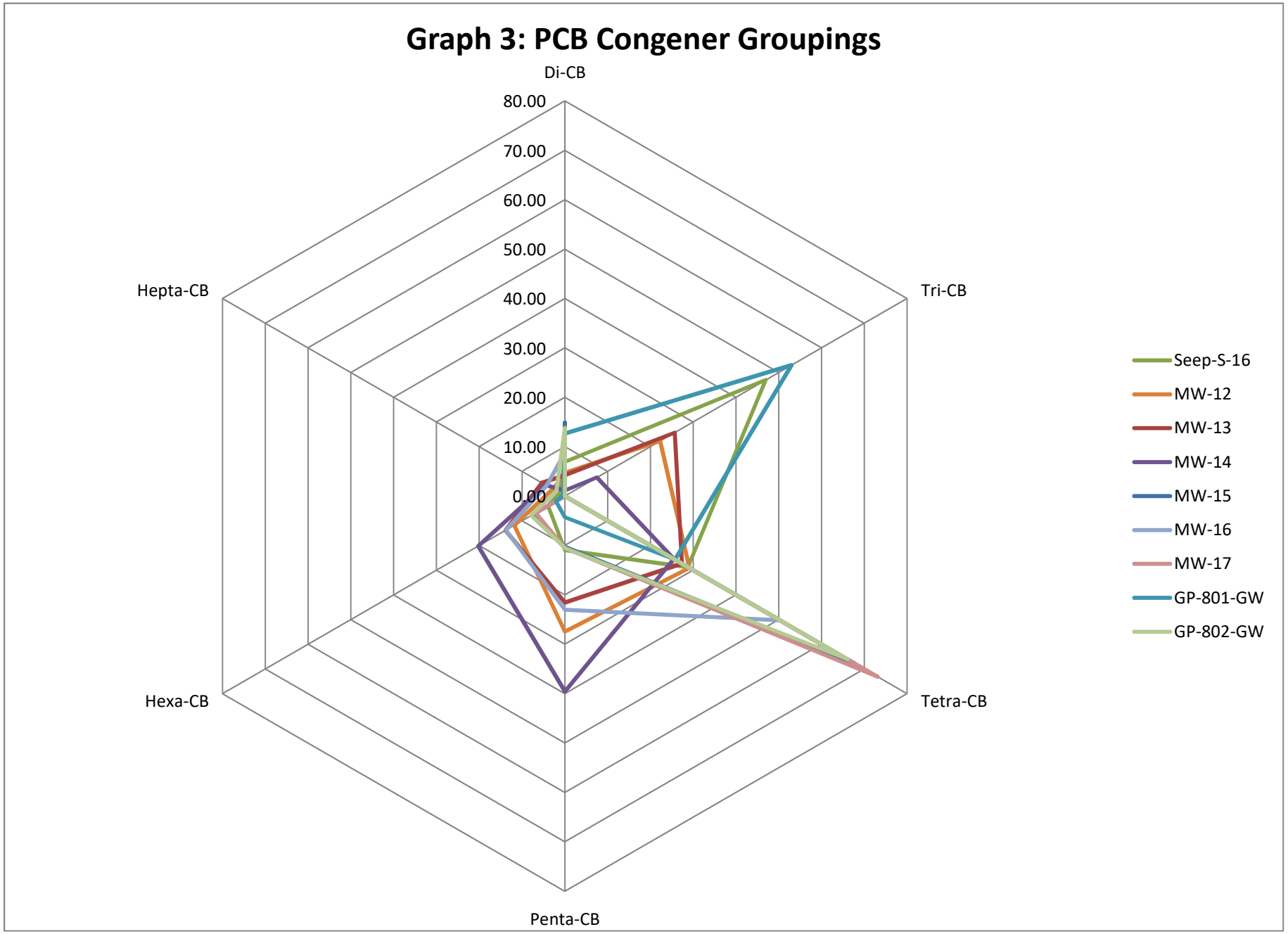
GRAPHS

Graph 1: Tidal Influence




Graph 2: Total PCB Congener - Soil vs Groundwater
Groundwater Concentration (pg/L)
35000
30000
25000
20000
15000
10000
5000
0
MW-13
GP-801
MW-14
MW-12
MW-17
MW-15
GP-802
MW-16
0
1000
2000
3000
4000
5000
6000
7000
8000
Soil Concentration (pg/g)

Graph 3: PCB Congener Groupings



APPENDIX A

Field Notes

FLUID MEASUREMENT FIELD DATA FORM

SHEET: 1 OF 1

DATE: 5/3/19 | PROJECT # 108.00228.00059 | PROJECT LOCATION Everett, WA

Water Level Measurement Instrument:

Product Detection Instrument: N/A

Equipment Decon: ☒ Alconox Wash ☐ Distilled Water ☒ Tap Water Final Rinse
☐ Tap Water Wash ☐ Hexane Wash ☐ Liquinox Wash ☐ Air Dry

Well ID	Depth to Product Below TOC	Depth to Water Below TOC	Well Depth	Product Thickness	Time
MW-11A	N/A	4.33	12.92	N/A	0913
MW-11B	N/A	4.056 SL	41.03	SL N/A	0916
MW-12	N/A	~~15.76~~ 21.69	~~25.19~~ 26.80	N/A	0855
MW-13	N/A	20.70 SL	26.67	SL N/A	0849
MW-14	N/A	~~21.69~~ 15.76	~~26.80~~ 25.19	N/A	0852
MW-15	N/A	5.60	13.04	N/A	0909
MW-16	N/A	6.29	12.86	N/A	0901
MW-17	N/A	5.97	12.99	N/A	0905

Prepared by: Steven Losleben

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA SHEET

SLR

Project No. 108.00226.00059 Purged By: SML Well I.D.: MW-11A

Project Name: Former E.A. Nord Inc. and as through its successor Sample I.D.: MW-11A-0519

Location: Everett, WA QA Samples: 0

Date Purged: 5/3/19 Start (2400hr): 1516 End (2400hr): 1537

Date Sampled: 5/3/19 Sample Time (2400hr): 1537

Casing Diameter:	2" X	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

Total depth (feet from TOC) = 12.92 Casing Volume (gal) =

Depth to water (feet from TOC) = 4.33 Minimum Purge (gal) =

Water column height (feet) = Actual Purge (gal) =

FIELD MEASUREMENTS

Volume (Gal)	Time (2400hr)	Temp. (degrees C)	Conductivity (mS/cm)	TDS (g/L)	DO (mg/L)	pH (units)	ORP (mV)	Turbidity (Visual)	Color (Visual)
0	1516	14.21	0.768	0.499	82.1	6.81	15.1	clear	clear
0.25	1519	13.48	0.803	0.522	3.08	6.58	-26.1	clear	clear
0.5	1522	13.51	0.812	0.528	1.74	6.55	-31.6	clear	clear
0.75	1525	13.49	0.806	0.524	1.08	6.54	-34.9	clear	clear
1.0	1528	13.45	0.806	0.526	0.86	6.65	-49.8	clear	clear
1.25	1531	13.50	0.801	0.521	0.72	6.64	-56.3	clear	clear
1.5	1534	13.48	0.805	0.523	0.67	6.66	-61.3	clear	clear
1.75	1537	13.46	0.801	0.523	0.63	6.65	-63.1	clear	clear

PURGING & SAMPLING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
X Peristaltic Pump
Other: ___
Pump Intake Depth: 8.0' (feet)

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
X Dedicated tubing

SAMPLE VESSELS

___ 40mL VOA
3 40mL VOA w/ HCL
2 100 mL amber glass
___ ___mL amber glass w/ HCl
___ ___mL HDPE
1 250 mL HDPE w/ HNO3

___ ___mL HDPE w/ H2SO4
2 500 mL ambers APE
2 1000mL amber SAS

Well Integrity: Good Odor: No

Remarks: N/A

Tide Status: Low: 0.01 @ 1102; High: 10.05 @ 1739 Reference: NOAA

Signature:

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA SHEET

SLR

Project No. 105.00226.00059 | Purged By: SML | Well I.D.: MW-11B

Project Name: Former T.A. Marel Inc. and as through JELD-WEN, Inc. | Sampled By: SML | Sample I.D.: MW-11B-0519

Location: Everett, WA | QA Samples: 0

Date Purged: 5/3/19 | Start (2400hr): 1556 | End (2400hr): 1617

Date Sampled: 5/3/19 | Sample Time (2400hr): 1617

Casing Diameter:	2" X	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

Total depth (feet from TOC) = 41.83 | Casing Volume (gal) =

Depth to water (feet from TOC) = 4.08 | Minimum Purge (gal) =

Water column height (feet) = | Actual Purge (gal) =

FIELD MEASUREMENTS

Volume (Gal)	Time (2400hr)	Temp. (degrees C)	Conductivity (mS/cm)	TDS (g/L)	DO (mg/L)	pH (units)	ORP (mV)	Turbidity (Visual)	Color (Visual)
0	1556	14.06	1.117	0.764	7.21	7.67	19.2	clear	clear
0.25	1559	14.52	1.247	0.811	1.30	8.13	13.0	clear	clear
0.5	1602	14.12	1.279	0.833	0.97	8.24	10.1	clear	clear
0.75	1605	14.20	1.302	0.849	0.78	4.29	7.9	clear	clear
1.0	1608	14.16	1.314	0.854	0.64	8.37	6.5	clear	clear
1.25	1611	14.16	1.312	0.853	0.64	4.32	5.8	clear	clear
1.5	1614	14.18	1.316	0.856	0.64	4.34	5.9	clear	clear
1.75	1617	14.26	1.312	0.853	0.60	4.36	5.2	clear	clear

PURGING & SAMPLING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
X Peristaltic Pump
Other: ___
Pump Intake Depth: 23.0 (feet)

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
X Dedicated tubing

SAMPLE VESSELS

2 40mL VOA ESC
5 40mL VOA w/ HCL ESC
2 100 mL amber glass ESC
___ ___mL amber glass w/ HCl
___ ___mL HDPE
___ ___mL HDPE w/ HNO3
___ ___mL HDPE w/ H2SO4
2 500 mL amber glass
2 [illegible] amber

Well Integrity: Good | Odor: No

Remarks: NA

Tide Status: Low: 0.61 @ 1102; High: 11.05 @ 1729 | Reference: NOAA

Signature: [signature]

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA SHEET

SLR

Project No. 108.00278.00059 Purged By: SML Well I.D.: MW-12

Project Name: Former E.A. Nord Inc. and as through its successor JELD-WEN Inc Sampled By: SML Sample I.D.: MW-12-0519

Location: Everett, WA QA Samples: 0

Date Purged: 5/3/19 Start (2400hr): 1056 End (2400hr): 1120

Date Sampled: 5/3/19 Sample Time (2400hr): 1120

Casing Diameter:	2" X	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

Total depth (feet from TOC) = ~~25.19~~ 21.69 SL

Depth to water (feet from TOC) = ~~14.76~~ 26.80 SL

Water column height (feet) =

Casing Volume (gal) =

Minimum Purge (gal) =

Actual Purge (gal) =

FIELD MEASUREMENTS

Volume (Gal)	Time (2400hr)	Temp. (degrees C)	Conductivity (mS/cm)	TDS (g/L)	DO (mg/L)	pH (units)	ORP (mV)	Turbidity (Visual)	Color (Visual)
0	1056	11.86	2.045	1.320	3.42	10.40	-89.9	clear	Dark blue
0.25	1059	11.62	1.996	1.291	1.57	10.56	-138.5	clear	Dark blue
0.5	1102	11.65	1.990	1.293	1.23	10.38	-162.1	clear	dark blue
0.75	1105	11.67	2.000	1.300	1.15	10.22	-186.3	clear	dark blue
1.0	1108	11.70	2.011	1.307	1.07	10.15	-199.0	clear	dark blue
1.25	1111	11.73	2.033	1.322	1.04	10.06	-214.8	clear	dark blue
1.50	1114	11.72	2.072	1.347	1.06	9.93	-232.8	clear	dark blue
1.75	1117	11.76	2.116	1.377	1.02	9.89	-248.9	clear	dark blue
2.0	1120	11.79	2.115	1.402	0.94	9.79	-255.5	clear	dark blue

PURGING & SAMPLING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
X Peristaltic Pump
Other: ___
Pump Intake Depth: 23 (feet)

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
X Dedicated tubing

SAMPLE VESSELS

___ 40mL VOA
3 40mL VOA w/ HCL ESL
___ ___mL amber glass
___ ___mL amber glass w/ HCl
___ ___mL HDPE
1 250mL HDPE w/ HNO3 ESL
___ ___mL HDPE w/ H2SO4
2 500 mL amber ART
2 1000 mL amber SGS

Well Integrity: Good

Odor: organic-like odor / sulfur-like

Remarks: N/A

Tide Status: Low: 0.81 @ 1102; High: 10.05 @ 1739

Reference: NOAA

Signature:

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA SHEET

SLR

Project No. 106.00726.00059 Purged By: SML Well I.D.: MW-13

Project Name: Former E.A. Nord Inc and its successor JELD-WEN Inc. Sampled By: SML Sample I.D.: MW-13-0519

Location: _____ QA Samples: 0

Date Purged: 5/3/19 Start (2400hr): 1001 End (2400hr): 1025

Date Sampled: 5/3/19 Sample Time (2400hr): 1025

Casing Diameter:	2" ✓	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

Total depth (feet from TOC) = 26.67 Casing Volume (gal) = _____

Depth to water (feet from TOC) = 20.30 Minimum Purge (gal) = _____

Water column height (feet) = Actual Purge (gal) =

FIELD MEASUREMENTS

Volume (Gal)	Time (2400hr)	Temp. (degrees C)	Conductivity (mS/cm)	TDS (g/L)	DO (mg/L)	pH (units)	ORP (mV)	Turbidity (Visual)	Color (Visual)
0	1001	11.90	3.672	2.498	4.23	4.43	138.6	clear	clear
0.25	1004	11.60	3.744	2.458	3.28	4.55	121.4	clear	clear
0.5	1007	11.54	3.737	2.429	1.97	4.52	116.8	clear	clear
0.75	1010	11.54	3.732	2.426	1.83	4.54	116.0	clear	clear
1.0	1013	11.58	3.703	2.407	1.46	4.52	115.1	clear	clear
1.25	1016	11.61	3.696	2.402	1.37	4.57	114.6	clear	clear
1.5	1019	11.64	3.686	2.398	1.16	4.52	113.3	clear	clear
1.75	1022	11.65	3.685	2.382	1.10	4.55	112.7	clear	clear
2.0	1025	11.72	3.656	2.377	1.02	4.53	112.6	clear	clear

PURGING & SAMPLING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
X Peristaltic Pump
Other: _____
Pump Intake Depth: 23.0 (feet)

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
X Dedicated tubing

SAMPLE VESSELS

6 40mL VOA ESC
___ 40mL VOA w/ HCL
2 100 mL amber glass ESC
___ ___ mL amber glass w/ HCl
___ ___ mL HDPE
2 250 mL HDPE w/ HNO3 ESC
___ ___ mL HDPE w/ H2SO4
2 1000 mL amber glass SGS
2 500 mL amber glass ARI

Well Integrity: Good Odor: No

Remarks: n/a

Tide Status: Low: 0.81 @ 1102 ; High: 10.03 @ 1739 Reference: NOAA

Signature:

Page 1 of 1

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA SHEET

SLR

Project No. 106.002246.00059 Purged By: SML Well I.D.: MW-14

Project Name: Former E.A. Nord Inc. and as through its successor TELD-WEN, Inc Sampled By: SML Sample I.D.: MW-14-0519

Location: Everett, WA QA Samples: 0

Date Purged: 5/3/19 Start (2400hr): 1146 End (2400hr): 1207

Date Sampled: 5/3/19 Sample Time (2400hr): 1207

Casing Diameter:	2" X	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

Total depth (feet from TOC) = ~~26.80~~ 25.19 SL Casing Volume (gal) =

Depth to water (feet from TOC) = ~~21.69~~ 18.76 SL Minimum Purge (gal) =

Water column height (feet) = Actual Purge (gal) =

FIELD MEASUREMENTS

Volume (Gal)	Time (2400hr)	Temp. (degrees C)	Conductivity (mS/cm)	TDS (g/L)	DO (mg/L)	pH (units)	ORP (mV)	Turbidity (Visual)	Color (Visual)
0	1146	12.26	7.951	5.166	6.40	7.24	-42.4	clear	dark brn
0.25	1149	12.11	7.792	5.064	1.41	7.10	-52.4	clear	dark brn
0.5	1152	12.06	7.745	5.030	1.29	7.07	-64.7	clear	dark brn
0.75	1155	12.07	7.664	4.981	1.88	7.05	-75.6	clear	dark brn
1.0	1158	12.15	7.612	4.949	1.06	7.05	-83.5	clear	dark brn
1.25	1201	12.13	7.600	4.946	0.93	7.05	-87.6	clear	dark brn
1.5	1204	12.13	7.597	4.939	0.88	7.03	-89.1	clear	dark brn
1.75	1207	12.18	7.606	4.945	0.84	7.04	-91.2	clear	dark brn

PURGING & SAMPLING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
X Peristaltic Pump
Other: ___
Pump Intake Depth: 23.75 (feet)

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
X Dedicated Tubing

SAMPLE VESSELS

___ 40mL VOA
___ 40mL VOA w/ HCL
2 100 mL amber glass ESC
___ ___mL amber glass w/ HCl
___ ___mL HDPE
1 250 mL HDPE w/ HNO3 ESC
___ ___mL HDPE w/ H2SO4
2 500 mL amber ARI
2 1000 mL amber SGS

Well Integrity: Good Odor: No

Remarks: N/A

Tide Status: Low: 0.81 @ 1102; High: 10.05 @ 1739 Reference: NOAA

Signature: Steve Teeple

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA SHEET

SLR

Project No. 105.00276.00019 Purged By: SML Well I.D.: MW-15

Project Name: Former EA Need Inc. and as through its successor JE20. LOEA, Inc. Sampled By: SML Sample I.D.: MW-15-0519

Location: Everett, WA QA Samples: 0

Date Purged: 5/3/19 Start (2400hr): 1251 End (2400hr): 1315

Date Sampled: 5/3/19 Sample Time (2400hr): 1315

Casing Diameter:	2" X	3"___	4"___	5"___	6"___	8"___	Other___
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

Total depth (feet from TOC) = 13.04 Casing Volume (gal) = ___

Depth to water (feet from TOC) = 5.60 Minimum Purge (gal) = ___

Water column height (feet) = Actual Purge (gal) =

FIELD MEASUREMENTS

Volume (Gal)	Time (2400hr)	Temp. (degrees C)	Conductivity (mS/cm)	TDS (g/L)	DO (mg/L)	pH (units)	ORP (mV)	Turbidity (Visual)	Color (Visual)
0	1251	14.04	14.81	9.674	23.98	7.14	-101.2	clear	clear
0.25	1254	12.42	15.01	9.726	3.26	6.82	-191.8	clear	clear
0.5	1257	12.29	15.17	9.861	2.10	6.61	-236.5	clear	clear
0.75	1300	12.23	15.18	9.864	1.43	6.60	-252.9	clear	clear
1.0	1303	12.25	15.15	9.850	0.92	6.72	-273.5	clear	clear
1.25	1306	12.23	15.21	9.887	0.99	6.77	-283.2	clear	clear
1.5	1309	12.22	15.26	9.927	0.80	6.77	-286.4	clear	clear
1.75	1312	12.24	15.22	9.892	0.63	6.77	-291.0	clear	clear
2.0	1315	12.35	15.20	9.876	0.91	6.76	-293.1	clear	clear

PURGING & SAMPLING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
X Peristaltic Pump
Other: ___
Pump Intake Depth: 9.75' (feet)

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
X Dedicated tubing

SAMPLE VESSELS

___ 40mL VOA
___ 40mL VOA w/ HCL
___ ___mL amber glass
___ ___mL amber glass w/ HCl
___ ___mL HDPE
1 250mL HDPE w/ HNO3

___ ___mL HDPE w/ H2SO4
2 1000 mL amber
___
___
___
___

Well Integrity: Good Odor: No

Remarks: N/A

Tide Status: Low: 0.31 @ 1152; High: 10.05 @ 1739 Reference: NOAA

Signature:

Page of

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA SHEET

SLR

Project No. 105.00529.00059 Purged By: SML Well I.D.: MW-16

Project Name: Former E.A. Nord Inc. and its through its successor JELD-WEN, Inc. Sampled By: SML Sample I.D.: MW-16-0519

Location: Everett, WA QA Samples: 0

Date Purged: 5/3/19 Start (2400hr): 1333 End (2400hr): 1357

Date Sampled: 5/3/19 Sample Time (2400hr): 1357

Casing Diameter:	2" X	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

Total depth (feet from TOC) = 12.49 Casing Volume (gal) =

Depth to water (feet from TOC) = 6.29 Minimum Purge (gal) =

Water column height (feet) = Actual Purge (gal) =

FIELD MEASUREMENTS

Volume (Gal)	Time (2400hr)	Temp. (degrees C)	Conductivity (mS/cm)	TDS (g/L)	DO (mg/L)	pH (units)	ORP (mV)	Turbidity (Visual)	Color (Visual)
0	1333	16.00	1.171	0.748	12.30	8.47	-93.9	clear	clear
0.25	1336	12.98	0.589	0.371	2.14	7.69	-75.7	clear	clear
0.5	1339	12.96	0.439	0.285	1.84	7.48	-62.3	clear	clear
0.75	1342	12.96	0.446	0.286	1.22	7.35	-61.0	clear	clear
1.0	1345	13.04	0.441	0.287	1.16	7.24	-53.0	clear	clear
1.25	1348	13.06	0.436	0.284	0.93	7.22	-49.4	clear	clear
1.5	1351	12.64	0.447	0.291	0.93	7.16	-44.8	clear	clear
1.75	1354	12.95	0.444	0.288	0.65	7.15	-43.2	clear	clear
2.0	1357	13.00	0.443	0.288	0.95	7.12	-43.5	clear	clear

PURGING & SAMPLING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
X Peristaltic Pump
Other: ___
Pump Intake Depth: 9.75 (feet)

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
X Dedicated Tubing

SAMPLE VESSELS

___ 40mL VOA
___ 40mL VOA w/ HCL
2 100 mL amber glass ESC
___ ___mL amber glass w/ HCl
___ ___mL HDPE
1 250 mL HDPE w/ HNO3 ESC

___ ___mL HDPE w/ H2SO4
2 500 mL amber APH
2 1000 mL amber SGS

Well Integrity: Good Odor: No

Remarks: N/A

Tide Status: Low: 0.0' @ 1102; High: 10.0' @ 1739 Reference: NOAA

Signature: [signature]

Page 1 of 1

LOW-FLOW GROUNDWATER SAMPLING FIELD DATA SHEET

SLR

Project No. 105.00716.00019 Purged By: SML Well I.D.: MW-17

Project Name: Former E.A. Nord, Inc. and as through its successor JELD-WEN, Inc. Sampled By: SML Sample I.D.: MW-17-0519

Location: Everett, WA QA Samples: 0

Date Purged: 5/3/19 Start (2400hr): 1423 End (2400hr): 1444

Date Sampled: 5/3/19 Sample Time (2400hr): 1444

Casing Diameter:	2" X	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

Total depth (feet from TOC) = 12.99 Casing Volume (gal) =

Depth to water (feet from TOC) = 5.97 Minimum Purge (gal) =

Water column height (feet) = Actual Purge (gal) =

FIELD MEASUREMENTS

Volume (Gal)	Time (2400hr)	Temp. (degrees C)	Conductivity (mS/cm)	TDS (g/L)	DO (mg/L)	pH (units)	ORP (mV)	Turbidity (Visual)	Color (Visual)
0	1423	14.46	0.606	0.394	10.77	6.83	6.1	clear	clear
0.25	1426	14.16	0.607	0.391	4.05	6.66	-29.6	clear	clear
0.5	1429	14.16	0.608	0.392	2.62	6.66	-41.1	clear	clear
0.75	1432	14.19	0.609	0.394	1.74	6.62	-52.8	clear	clear
1.0	1435	14.16	0.606	0.394	1.20	6.56	-64.6	clear	clear
1.25	1438	14.18	0.608	0.395	1.08	6.57	-72.1	clear	clear
1.5	1441	14.16	0.608	0.396	1.02	6.61	-83.0	clear	clear
1.75	1444	14.15	0.608	0.395	0.92	6.65	-90.7	clear	clear

PURGING & SAMPLING EQUIPMENT

___ Well Wizard Bladder Pump
___ Active Extraction Well Pump
___ Submersible Pump
X Peristaltic Pump
Other: ___
Pump Intake Depth: 10.0 (feet)

___ Bailer (disposable)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
X Dedicated tubing

SAMPLE VESSELS

2 40mL VOA ESC
5 40mL VOA w/ HCL ESC
2 ~~1~~ mL amber glass ESC
___ ___mL amber glass w/ HCl
___ ___mL HDPE
1 250 mL HDPE w/ HNO3 ESC
___ ___mL HDPE w/ H2SO4
2 500 mL amber ARI
2 1000 mL amber ESC

Well Integrity: Good Odor: No

Remarks: N/A

Tide Status: Low: 0.81 @ 1102; High 10.05 @ 1739 Reference: NOAA

Signature: Page of

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WELL NUMBER MW-11A

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/25/19 **COMPLETED** 4/29/19
GROUND ELEVATION 12.39 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 5.5 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0							0.3 **ASPHALT PAVEMENT** 12.1		Concrete
		Direct Push		80	SW		**SAND**, gray, fine to coarse grained, moist, no odor	0.1	Hydrated bentonite chips
5								0.0	2-inch sch 40 PVC riser
			GP-MW-11-SS*				5.5 ▼ 6.9 **SAND**, gray, fine to medium grained, wet, no odor		#10/20 silica sand
					SP		7.0 5.4	0.0	
		Direct Push		100	ML		**SILT**, brown-gray with some mottling, trace organic debris, moist, no odor		0.01" slot screen
10							8.0 4.4		
					SP		**SAND**, gray, fine to medium grained, trace fine gravel, wet, no odor	0.0	
		Direct Push		100				0.6	
							13.0 -0.6		End cap

WELL COMPLETION DETAILS:

0.0 to 1.0 feet: Concrete.
1.0 to 2.5 feet: Hydrated bentonite chips.
2.5 to 13.0 feet: 10x20 silica sand pack.

REMARKS

Boring continued to 40.0 feet bgs. (description included in boring log for MW-11B)
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

(Continued Next Page)

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WELL NUMBER MW-11A

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/25/19 **COMPLETED** 4/29/19
GROUND ELEVATION 12.39 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
▼ **AT TIME OF DRILLING** 5.5 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM

0.0 to 3.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC riser.
3.0 to 12.8 feet: 2"-diameter, flush-threaded Sch. 40 PVC 0.010-slotted well screen.
12.8 to 13.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC cap.

REMARKS

Boring continued to 40.0 feet bgs. (description included in boring log for MW-11B)
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

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WELL NUMBER MW-11B

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/25/19 **COMPLETED** 4/29/19
GROUND ELEVATION 12.39 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 5.5 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0							0.3 **ASPHALT PAVEMENT** 12.1		
		Direct Push		80	SW		**SAND**, gray, fine to coarse grained, moist, no odor	0.1	Concrete
5								0.0	
							5.5 ▼ 6.9		
		Direct Push		100	SP		**SAND**, gray, fine to medium grained, wet, no odor	0.0	
					ML		7.0 5.4 **SILT**, brown-gray with some mottling, trace organic debris, moist, no odor		
10							8.0 4.4		
		Direct Push		100	SP		**SAND**, gray, fine to medium grained, trace fine gravel, wet, no odor	0.0	
								0.6	
							13.0 -0.6		
					ML		**SILT**, gray, wet, no odor	0.3	
							14.0 -1.6		
15					SP		**SAND**, gray, fine to medium grained, trace fine gravel, wet, no odor		

REMARKS

Boring completed at 40.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.

(Continued Next Page)

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WELL NUMBER MW-11B

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/25/19 **COMPLETED** 4/29/19
GROUND ELEVATION 12.39 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 5.5 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
15							**SAND**, gray, fine to medium grained, trace fine gravel, wet, no odor *(continued)*		
		Direct Push		100				0.2	Hydrated bentonite chips
20								0.0	
		Direct Push		90	SP			0.0	
25								0.2	
		Direct Push		100				0.1	
30								0.0	2-inch sch 40 PVC riser

REMARKS

Boring completed at 40.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.

(Continued Next Page)

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WELL NUMBER MW-11B

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/25/19 **COMPLETED** 4/29/19
GROUND ELEVATION 12.39 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 5.5 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
30							**SAND**, gray, fine to medium grained, trace fine gravel, wet, no odor *(continued)*	0.2	
35		Direct Push		100	SP			0.1	#10/20 silica sand; 0.01" slot screen
40		Direct Push		100				0.1	
							38.5 -26.1	0.0	
					SM		**SILTY SAND with GRAVEL**, gray, fine grained, little silt, few fine gravel, wet, no odor		
							40.0 -27.6		2-inch sch 40 PVC sump; End cap

WELL COMPLETION DETAILS:

0.0 to 2.0 feet: Concrete.
2.0 to 28.0 feet: Hydrated bentonite chips.
28.0 to 41.5 feet: 10x20 silica sand pack.

0.0 to 29.5 feet: 2"-diameter, flush-threaded Sch. 40 PVC riser.
29.5 to 39.5 feet: 2"-diameter, flush-threaded Sch. 40 PVC 0.010-slotted well screen.
39.5 to 41.3 feet: 2"-diameter, flush-threaded Sch. 40 PVC sump.
41.3 to 41.5 feet: 2"-diameter, flush-threaded Sch. 40 PVC cap.

REMARKS

Boring completed at 40.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.

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WELL NUMBER MW-12

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/25/19 **COMPLETED** 4/30/19
GROUND ELEVATION 29.66 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 19.0 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0					SM		0.5 **ORGANIC SILTY SAND** dark brown, fine grained, some silty fines, trace fine gravel, trace root debris, moist, no odor 29.2		
							SAND, brown-gray, fine grained, abundant shell fragments, moist, no odor	NT	Concrete
		Direct Push		40				0.1	
5									
			GP-MW-12-SS*					NT	
		Direct Push		50	SP				Hydrated bentonite chips
								0.0	
10									
								0.4	
		Direct Push		100			@ 12.5 feet bgs: Becomes dark gray		
								0.7	
15									2-inch sch 40 PVC riser

REMARKS

Boring completed at 25.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

(Continued Next Page)

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WELL NUMBER MW-12

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/25/19 **COMPLETED** 4/30/19
GROUND ELEVATION 29.66 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 19.0 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
15							**SAND**, brown-gray, fine grained, abundant shell fragments, moist, no odor *(continued)*		
		Direct Push		100	SP		17.0 — 12.7 **SAND**, black-gray, fine to coarse grained, trace fine to coarse gravel, moist, no odor	1.5	
					SP		18.5 — 11.2 **ROCK FRAGMENTS**, gray and dark gray, pulverized rock debris	2.9	
20							19.5 — 10.2 **SANDY SILT**, gray, some fine sand, trace native wood debris		0.01" slot screen
		Direct Push		100	ML			0.4	#10/20 silica sand
							23.0 — 6.7 **SAND**, black-gray, fine to coarse grained, few silty fines, abundant decomposing native wood and organic debris, wet, organic-like odor	18.9	
25					SP		25.0 — 4.7		End cap

WELL COMPLETION DETAILS:

0.0 to 1.5 feet: Concrete.
1.5 to 14.0 feet: Hydrated bentonite chips.
14.0 to 25.0 feet: 10x20 silica sand pack.

0.0 to 15.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC riser.
15.0 to 24.8 feet: 2"-diameter, flush-threaded Sch. 40 PVC 0.010-slotted well screen.
24.8 to 25.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC cap.

REMARKS

Boring completed at 25.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

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WELL NUMBER MW-13

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/25/19 **COMPLETED** 4/30/19
GROUND ELEVATION 28.68 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 18.0 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0					SM		0.3 **ORGANIC SILTY SAND**, dark brown, fine grained, some silty fines, some organics, moist, no odor — 28.4		Concrete
5		Direct Push		40			**SAND**, brown-gray, fine grained, abundant shell fragments, trace native wood debris, moist, no odor	NT 0.0	
10		Direct Push	GP-MW-13-SS*	80	SP		@ 10.0 feet bgs: Becomes dark gray	0.0 0.0	Hydrated bentonite chips
15		Direct Push		80				0.5 3.8	2-inch sch 40 PVC riser

REMARKS

Boring completed at 25.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

(Continued Next Page)

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WELL NUMBER MW-13

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/25/19 **COMPLETED** 4/30/19
GROUND ELEVATION 28.68 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 18.0 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
15							**SAND**, brown-gray, fine grained, abundant shell fragments, trace native wood debris, moist, no odor *(continued)*	NT	
20		Direct Push		50	SP		@ 18.0 feet bgs: Becomes wet	1.5	0.01" slot screen
							19.8 — 8.9 **SAND**, black-gray, fine to coarse grained, trace silt, abundant decomposing native wood debris, wet, no odor	NT	#10/20 silica sand
25		Direct Push		10	SP		25.0 — 3.7	1.0	End cap

WELL COMPLETION DETAILS:

0.0 to 1.5 feet: Concrete.
1.5 to 13.5 feet: Hydrated bentonite chips.
13.5 to 24.5 feet: 10x20 silica sand pack.

0.0 to 14.5 feet: 2"-diameter, flush-threaded Sch. 40 PVC riser.
14.5 to 24.3 feet: 2"-diameter, flush-threaded Sch. 40 PVC 0.010-slotted well screen.
24.3 to 24.5 feet: 2"-diameter, flush-threaded Sch. 40 PVC cap.

REMARKS

Boring completed at 25.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

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WELL NUMBER MW-14

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/25/19 **COMPLETED** 5/1/19
GROUND ELEVATION 26.68 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
▼ **AT TIME OF DRILLING** 14.0 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0					SM		0.5 **ORGANIC SILTY SAND**, dark brown, fine grained, some silty fines, some organics, moist, no odor — 26.2	0.0
5		Direct Push		75			**SAND**, brown-gray, fine grained, abundant shell fragments, moist, no odor	0.5
10		Direct Push	GP-MW-14-SS*	75	SP			0.3
		Direct Push		95			▼ @ 14.0 feet bgs: becomes wet	0.2
15								0.5
								0.3

WELL DIAGRAM: Concrete; Hydrated bentonite chips; 2-inch sch 40 PVC riser

REMARKS

Boring completed at 25.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

CONTINENTAL-UNITED MODIFIED WELL LOG NORD DOOR.GPJ GINT US.GDT 5/20/19

(Continued Next Page)

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WELL NUMBER MW-14

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/25/19 **COMPLETED** 5/1/19
GROUND ELEVATION 26.68 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 14.0 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
15							**SAND**, brown-gray, fine grained, abundant shell fragments, moist, no odor *(continued)*		
					SP			3.0	
		Direct Push		90			17.0 — 9.7 **SAND with GRAVEL**, dark gray, coarse grained, few fine to coarse gravel, wet, no odor		
					SP				
							18.5 — 8.2 **GRAVEL**, black, orange, tan, fine to coarse grained, vesicular, wet, no odor, slag-like fill material	0.9	
20					GP				
		Direct Push		95			21.5 — 5.2 **WOOD**, dark brown-black, solid and fragmented native wood debris	0.8	
							23.5 — 3.2 **SAND interbedded with SILT**, gray, fine grained, few 4-inch silt lenses, moist, no odor	0.8	
25					SP		25.0 — 1.7		

#10/20 silica sand
0.01" slot screen
End cap

WELL COMPLETION DETAILS:

0.0 to 2.0 feet: Concrete.
2.0 to 12.0 feet: Hydrated bentonite chips.
12.0 to 23.0 feet: 10x20 silica sand pack.

0.0 to 13.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC riser.
13.0 to 22.8 feet: 2"-diameter, flush-threaded Sch. 40 PVC 0.010-slotted well screen.
22.8 to 23.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC cap.

REMARKS

Boring completed at 25.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

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WELL NUMBER MW-15

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/26/19 **COMPLETED** 4/29/19
GROUND ELEVATION 12.24 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 6.0 ft
LOGGED BY C. Lee **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0							0.3 **ASPHALT PAVEMENT** 11.9		Concrete
		Direct Push		70	SP		**GRAVELLY SAND**, brown, fine grained, some fine to medium gravel, moist, no odor, no staining	0.0	
							3.0	0.1	Hydrated bentonite chips
							SAND, dark gray, fine grained, few wood fragments, moist, no odor, no staining 9.2	0.4	2-inch sch 40 PVC riser
5								0.3	
		Direct Push	SB-MW-15-SS*	80	SP		@ 6.0 feet: Becomes wet	0.0	#10/20 silica sand
								0.0	
								0.0	0.01" slot screen
10								0.0	
							10.5 1.7		
					ML		**SILT**, dark gray, trace wood debris, wet, no odor, no staining	0.0	
							11.3 1.0		
		Direct Push		100	SP		**SAND**, dark gray, fine grained, wet, no odor, no staining	0.0	
								0.0	End cap
15							15.0 -2.8	0.0	

REMARKS

Boring completed at 15.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

(Continued Next Page)

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22118 20th Ave. SE, Suite G-202
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-15

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/26/19 **COMPLETED** 4/29/19
GROUND ELEVATION 12.24 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
▼ **AT TIME OF DRILLING** 6.0 ft
LOGGED BY C. Lee **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM

WELL COMPLETION DETAILS:

0.0 to 1.0 feet: Concrete.
1.0 to 2.5 feet: Hydrated bentonite chips.
2.5 to 13.0 feet: 10x20 silica sand pack.

0.0 to 3.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC riser.
3.0 to 12.8 feet: 2"-diameter, flush-threaded Sch. 40 PVC 0.010-slotted well screen.
12.8 to 13.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC cap.

REMARKS

Boring completed at 15.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

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WELL NUMBER MW-16

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/26/19 **COMPLETED** 4/29/19
GROUND ELEVATION 12.89 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 5.5 ft
LOGGED BY C. Lee **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0							0.2 **ASPHALT PAVEMENT** 12.7		Concrete
		Direct Push		80	GP		**GRAVEL**, gray, fine to coarse grained, few fine grained sand, moist, no odor, no staining	0.5	
							2.0 10.9		Hydrated bentonite chips
					SP		**SAND with GRAVEL**, gray-brown, fine grained, few fine gravel, moist, no odor, no staining	1.5	
							3.5 9.4	0.7	2-inch sch 40 PVC riser
					GP		**GRAVEL**, gray, fine to coarse grained, few fine grained sand, few silty fines, moist, no odor, no staining		
							4.3 8.6	0.4	
5					SP		**SAND with GRAVEL**, black, coarse grained, few fine gravel, moist, no odor, no staining		
							5.0 7.9	0.3	
		Direct Push	GP-MW-16-SS*	20	SM		**SILTY SAND with GRAVEL**, gray, fine grained, some silty fines, few coarse gravel, moist, no odor @ 5.5 feet bgs: Becomes wet	0.0	#10/20 silica sand
10									0.01" slot screen
		Direct Push		90	SP		11.0 1.9 **SAND**, gray, fine grained, few silty fines, few wood debris, wet, no odor, no staining		
							12.0 0.9	0.0	
					ML		**SILT**, red-brown, few wood fragments, moist, no odor, no staining	0.0	End cap
							13.5 -0.6		
					SP		**SAND**, gray, fine grained, wet, no odor, no staing	0.0	
15							15.0 -2.1		

REMARKS

Boring completed at 15.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

(Continued Next Page)

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WELL NUMBER MW-16

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/26/19 **COMPLETED** 4/29/19
GROUND ELEVATION 12.89 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
▼ **AT TIME OF DRILLING** 5.5 ft
LOGGED BY C. Lee **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM

WELL COMPLETION DETAILS:

0.0 to 1.0 feet: Concrete.
1.0 to 2.5 feet: Hydrated bentonite chips.
2.5 to 13.0 feet: 10x20 silica sand pack.

0.0 to 3.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC riser.
3.0 to 12.8 feet: 2"-diameter, flush-threaded Sch. 40 PVC 0.010-slotted well screen.
12.8 to 13.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC cap.

REMARKS

Boring completed at 15.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

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WELL NUMBER MW-17

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/26/19 **COMPLETED** 4/30/19
GROUND ELEVATION 12.61 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
AT TIME OF DRILLING 7.5 ft
LOGGED BY C. Lee **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
0							0.3 **ASPHALT PAVEMENT** 12.3		Concrete
					GP		**SANDY GRAVEL**, brown, medium to coarse grained, little fine sand, moist, no odor, no staining		
							1.5 11.1	0.2	Hydrated bentonite chips
		Direct Push		75			**SAND**, brown, fine grained, moist, no odor, no staining		2-inch sch 40 PVC riser
5					SP			0.1	
			GP-MW-17-SS*						#10/20 silica sand
		Direct Push		100			@ 7.5 feet bgs: Becomes wet	0.0	
							8.0 4.6		0.01" slot screen
					ML		**SILT**, dark gray, wet, no odor, no staining		
							8.5 4.1	0.0	
					SM		**SILTY SAND**, dark gray, fine grained, some silty fines, few wood debris, wet, no odor, no staining 9.0 3.6		
10							**SAND**, dark gray, fine grained, wet, no odor, no staining		
		Direct Push		100	SP			0.0	
								0.0	End cap
15							15.0 -2.4		

REMARKS

Boring completed at 15.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

(Continued Next Page)

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WELL NUMBER MW-17

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/26/19 **COMPLETED** 4/30/19
GROUND ELEVATION 12.61 ft **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
▼ **AT TIME OF DRILLING** 7.5 ft
LOGGED BY C. Lee **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM

WELL COMPLETION DETAILS:

0.0 to 1.0 feet: Concrete.
1.0 to 2.5 feet: Hydrated bentonite chips.
2.5 to 13.0 feet: 10x20 silica sand pack.

0.0 to 3.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC riser.
3.0 to 12.8 feet: 2"-diameter, flush-threaded Sch. 40 PVC 0.010-slotted well screen.
12.8 to 13.0 feet: 2"-diameter, flush-threaded Sch. 40 PVC cap.

REMARKS

Boring completed at 15.0 feet bgs.
Monitoring well installed adjacent to Geoprobe boring with a hollow stem auger. Lithology descriptions based on Geoprobe borings.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.

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BORING NUMBER GP-801

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/26/19 **COMPLETED** 4/26/19
GROUND ELEVATION _____ **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
▼ **AT TIME OF DRILLING** 5.0 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0							0.3 **ASPHALT PAVEMENT**	
					SP		**SAND**, gray-brown, fine to coarse grained, trace fine gravel, moist, no odor	NT
		Direct Push		40			2.5	
							SILTY SAND, gray, fine to medium grained, little silty fines, trace fine gravel, moist, no odor	2.4
5					SM		▽ @ 5.0 feet bgs: Becomes wet	
			GP-801-SS*				6.5	NT
							WOOD, dark brown-black, solid and fragmented native wood debris 7.0	
		Direct Push		50			**SAND**, dark gray, fine to medium grained, wet, no odor	0.2
10								
					SP			0.0
		Direct Push		100				0.0
15							15.0	

REMARKS

Boring completed at 15.0 feet bgs.
Temporary monitoring well installed and sampled.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate liner.
* = Soil sample consisted of composite sample fronm 0-12 feet bgs.
▽ Water level at time of drilling.

SLR SB LOG (LARGE FOOTER) NORD DOOR.GPJ GINT US.GDT 5/22/19

SLR
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Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER GP-802

CLIENT JELD-WEN, Inc.
PROJECT NAME Former E.A. Nord Door, Inc.
PROJECT NUMBER 108.00228.00059
PROJECT LOCATION 300 West Marine View Drive, Everett, WA
DATE STARTED 4/26/19 **COMPLETED** 4/26/19
GROUND ELEVATION _____ **HOLE SIZE** 4" - diameter
DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING METHOD Direct Push
▼ **AT TIME OF DRILLING** 6.0 ft
LOGGED BY S. Losleben **CHECKED BY** C. Kramer
AFTER DRILLING N/A
NOTES

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0							0.3 **CRUSHED ROCK**, gray, crushed 1-inch minus, trace aspahlt fragments	
					SP		**GRAVELLY SAND**, light orange-brown, medium to coarse grained, some fine gravel, trace silt, moist, no odor	0.2
							3.5	
		Hand Auger		100	SP		**SAND**, light brown, fine grained, trace silt, moist, no odor	0.1
							4.5	
5			GP-802-SS*				**SAND**, gray, fine to medium grained, moist, no odor	
							▽ @ 6.0 feet bgs: Becomes wet	0.0
		Direct Push		100	SP			0.1
10								
		Direct Push		80				0.0
							13.0	
					SP		**SAND**, dark gray, fine grained, wet, no odor	0.0
15							15.0	

REMARKS

Boring completed at 15.0 feet bgs.
Temporary monitoring well installed and sampled.
NT = Not tested
PID = Photoionization detector readings in parts per million (ppm).
Geoprobe = Soil samples collected as a continuous core within a 5-foot acetate line

▽ Water level at time of drilling.

SLR SB LOG (LARGE FOOTER) NORD DOOR.GPJ GINT US.GDT 5/22/19

APPENDIX B

Laboratory Analytical Reports

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

May 04, 2019

SLR International Corp. - West Linn, OR

Sample Delivery Group:	L1093831
Samples Received:	04/30/2019
Project Number:	108.00228.00059
Description:	Nord Door Project - Everett, WA
Site:	EVERETT, WA
Report To:	Chris Kramer 1800 Blankenship Road, Suite 440 West Linn, OR 97068

Entire Report Reviewed By:

Jared Starkey
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

GP-801-GW L1093831-01 GW

Collected by: S.L.
Collected date/time: 04/26/19 09:00
Received date/time: 04/30/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1274531	1	05/01/19 19:14	05/01/19 19:14	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1274142	1	05/01/19 17:02	05/02/19 17:48	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1274172	1	05/01/19 16:08	05/02/19 02:07	JF	Mt. Juliet, TN

GP-802-GW L1093831-03 GW

Collected by: S.L.
Collected date/time: 04/26/19 16:35
Received date/time: 04/30/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1274531	1	05/01/19 19:34	05/01/19 19:34	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1274142	1	05/01/19 17:02	05/02/19 18:10	TH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1274172	1	05/01/19 16:08	05/02/19 02:28	JF	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jared Starkey
Project Manager

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	4.68	J	1.05	25.0	1	05/01/2019 19:14	WG1274531
Acrylonitrile	U		0.873	5.00	1	05/01/2019 19:14	WG1274531
Benzene	U		0.0896	0.500	1	05/01/2019 19:14	WG1274531
Bromobenzene	U		0.133	0.500	1	05/01/2019 19:14	WG1274531
Bromodichloromethane	U		0.0800	0.500	1	05/01/2019 19:14	WG1274531
Bromochloromethane	U		0.145	0.500	1	05/01/2019 19:14	WG1274531
Bromoform	U		0.186	0.500	1	05/01/2019 19:14	WG1274531
Bromomethane	U		0.157	2.50	1	05/01/2019 19:14	WG1274531
n-Butylbenzene	U		0.143	0.500	1	05/01/2019 19:14	WG1274531
sec-Butylbenzene	U		0.134	0.500	1	05/01/2019 19:14	WG1274531
tert-Butylbenzene	U		0.183	0.500	1	05/01/2019 19:14	WG1274531
Carbon disulfide	U		0.101	0.500	1	05/01/2019 19:14	WG1274531
Carbon tetrachloride	U		0.159	0.500	1	05/01/2019 19:14	WG1274531
Chlorobenzene	U		0.140	0.500	1	05/01/2019 19:14	WG1274531
Chlorodibromomethane	U		0.128	0.500	1	05/01/2019 19:14	WG1274531
Chloroethane	U		0.141	2.50	1	05/01/2019 19:14	WG1274531
Chloroform	U		0.0860	0.500	1	05/01/2019 19:14	WG1274531
Chloromethane	U		0.153	1.25	1	05/01/2019 19:14	WG1274531
2-Chlorotoluene	U		0.111	0.500	1	05/01/2019 19:14	WG1274531
4-Chlorotoluene	U		0.0972	0.500	1	05/01/2019 19:14	WG1274531
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	05/01/2019 19:14	WG1274531
1,2-Dibromoethane	U		0.193	0.500	1	05/01/2019 19:14	WG1274531
Dibromomethane	U		0.117	0.500	1	05/01/2019 19:14	WG1274531
1,2-Dichlorobenzene	U		0.101	0.500	1	05/01/2019 19:14	WG1274531
1,3-Dichlorobenzene	U		0.130	0.500	1	05/01/2019 19:14	WG1274531
1,4-Dichlorobenzene	U		0.121	0.500	1	05/01/2019 19:14	WG1274531
Dichlorodifluoromethane	U		0.127	2.50	1	05/01/2019 19:14	WG1274531
1,1-Dichloroethane	U		0.114	0.500	1	05/01/2019 19:14	WG1274531
1,2-Dichloroethane	U		0.108	0.500	1	05/01/2019 19:14	WG1274531
1,1-Dichloroethene	U		0.188	0.500	1	05/01/2019 19:14	WG1274531
cis-1,2-Dichloroethene	U		0.0933	0.500	1	05/01/2019 19:14	WG1274531
trans-1,2-Dichloroethene	U		0.152	0.500	1	05/01/2019 19:14	WG1274531
1,2-Dichloropropane	U		0.190	0.500	1	05/01/2019 19:14	WG1274531
1,1-Dichloropropene	U		0.128	0.500	1	05/01/2019 19:14	WG1274531
1,3-Dichloropropane	U		0.147	1.00	1	05/01/2019 19:14	WG1274531
cis-1,3-Dichloropropene	U		0.0976	0.500	1	05/01/2019 19:14	WG1274531
trans-1,3-Dichloropropene	U		0.222	0.500	1	05/01/2019 19:14	WG1274531
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	05/01/2019 19:14	WG1274531
2,2-Dichloropropane	U		0.0929	0.500	1	05/01/2019 19:14	WG1274531
Di-isopropyl ether	U		0.0924	0.500	1	05/01/2019 19:14	WG1274531
Ethylbenzene	U		0.158	0.500	1	05/01/2019 19:14	WG1274531
Hexachloro-1,3-butadiene	U		0.157	1.00	1	05/01/2019 19:14	WG1274531
2-Hexanone	U		0.757	5.00	1	05/01/2019 19:14	WG1274531
n-Hexane	U		0.305	5.00	1	05/01/2019 19:14	WG1274531
Iodomethane	U		0.377	10.0	1	05/01/2019 19:14	WG1274531
Isopropylbenzene	U		0.126	0.500	1	05/01/2019 19:14	WG1274531
p-Isopropyltoluene	U		0.138	0.500	1	05/01/2019 19:14	WG1274531
2-Butanone (MEK)	U		1.28	5.00	1	05/01/2019 19:14	WG1274531
Methylene Chloride	U		1.07	2.50	1	05/01/2019 19:14	WG1274531
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	05/01/2019 19:14	WG1274531
Methyl tert-butyl ether	U		0.102	0.500	1	05/01/2019 19:14	WG1274531
Naphthalene	1.52	J	0.174	2.50	1	05/01/2019 19:14	WG1274531
n-Propylbenzene	U		0.162	0.500	1	05/01/2019 19:14	WG1274531
Styrene	U		0.117	0.500	1	05/01/2019 19:14	WG1274531
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	05/01/2019 19:14	WG1274531
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	05/01/2019 19:14	WG1274531

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	05/01/2019 19:14	WG1274531
Tetrachloroethene	U		0.199	0.500	1	05/01/2019 19:14	WG1274531
Toluene	U		0.412	0.500	1	05/01/2019 19:14	WG1274531
1,2,3-Trichlorobenzene	U		0.164	0.500	1	05/01/2019 19:14	WG1274531
1,2,4-Trichlorobenzene	U		0.355	0.500	1	05/01/2019 19:14	WG1274531
1,1,1-Trichloroethane	U		0.0940	0.500	1	05/01/2019 19:14	WG1274531
1,1,2-Trichloroethane	U		0.186	0.500	1	05/01/2019 19:14	WG1274531
Trichloroethene	U		0.153	0.500	1	05/01/2019 19:14	WG1274531
Trichlorofluoromethane	U	J4	0.130	2.50	1	05/01/2019 19:14	WG1274531
1,2,3-Trichloropropane	U		0.247	2.50	1	05/01/2019 19:14	WG1274531
1,2,4-Trimethylbenzene	U		0.123	0.500	1	05/01/2019 19:14	WG1274531
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	05/01/2019 19:14	WG1274531
1,3,5-Trimethylbenzene	U		0.124	0.500	1	05/01/2019 19:14	WG1274531
Vinyl acetate	U		0.645	5.00	1	05/01/2019 19:14	WG1274531
Vinyl chloride	U	J4	0.118	0.500	1	05/01/2019 19:14	WG1274531
Xylenes, Total	U		0.316	1.50	1	05/01/2019 19:14	WG1274531
(S) Toluene-d8	*96.9*			*80.0-120*		*05/01/2019 19:14*	WG1274531
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*05/01/2019 19:14*	WG1274531
(S) 1,2-Dichloroethane-d4	*95.9*			*70.0-130*		*05/01/2019 19:14*	WG1274531

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	324		66.7	200	1	05/02/2019 17:48	WG1274142
Residual Range Organics (RRO)	396		83.3	250	1	05/02/2019 17:48	WG1274142
(S) o-Terphenyl	*84.7*			*52.0-156*		*05/02/2019 17:48*	WG1274142

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.316	1.00	1	05/02/2019 02:07	WG1274172
Acenaphthylene	U		0.309	1.00	1	05/02/2019 02:07	WG1274172
Anthracene	U		0.291	1.00	1	05/02/2019 02:07	WG1274172
Benzo(a)anthracene	U		0.0975	1.00	1	05/02/2019 02:07	WG1274172
Benzo(b)fluoranthene	U		0.0896	1.00	1	05/02/2019 02:07	WG1274172
Benzo(k)fluoranthene	U		0.355	1.00	1	05/02/2019 02:07	WG1274172
Benzo(g,h,i)perylene	U		0.161	1.00	1	05/02/2019 02:07	WG1274172
Benzo(a)pyrene	U		0.340	1.00	1	05/02/2019 02:07	WG1274172
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	05/02/2019 02:07	WG1274172
Bis(2-chloroethyl)ether	U		1.62	10.0	1	05/02/2019 02:07	WG1274172
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	05/02/2019 02:07	WG1274172
4-Bromophenyl-phenylether	U		0.335	10.0	1	05/02/2019 02:07	WG1274172
2-Chloronaphthalene	U	J4	0.330	1.00	1	05/02/2019 02:07	WG1274172
4-Chlorophenyl-phenylether	U		0.303	10.0	1	05/02/2019 02:07	WG1274172
Chrysene	U		0.332	1.00	1	05/02/2019 02:07	WG1274172
Dibenz(a,h)anthracene	U		0.279	1.00	1	05/02/2019 02:07	WG1274172
3,3-Dichlorobenzidine	U		2.02	10.0	1	05/02/2019 02:07	WG1274172
2,4-Dinitrotoluene	U		1.65	10.0	1	05/02/2019 02:07	WG1274172
2,6-Dinitrotoluene	U		0.279	10.0	1	05/02/2019 02:07	WG1274172
Fluoranthene	U		0.310	1.00	1	05/02/2019 02:07	WG1274172
Fluorene	U		0.323	1.00	1	05/02/2019 02:07	WG1274172
Hexachlorobenzene	U		0.341	1.00	1	05/02/2019 02:07	WG1274172
Hexachloro-1,3-butadiene	U	J3	0.329	10.0	1	05/02/2019 02:07	WG1274172
Hexachlorocyclopentadiene	U		2.33	10.0	1	05/02/2019 02:07	WG1274172
Hexachloroethane	U		0.365	10.0	1	05/02/2019 02:07	WG1274172

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	05/02/2019 02:07	WG1274172
Isophorone	U		0.272	10.0	1	05/02/2019 02:07	WG1274172
Naphthalene	0.801	J J3	0.372	1.00	1	05/02/2019 02:07	WG1274172
Nitrobenzene	U		0.367	10.0	1	05/02/2019 02:07	WG1274172
n-Nitrosodimethylamine	U		1.26	10.0	1	05/02/2019 02:07	WG1274172
n-Nitrosodiphenylamine	U		1.19	10.0	1	05/02/2019 02:07	WG1274172
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	05/02/2019 02:07	WG1274172
Phenanthrene	U	J4	0.366	1.00	1	05/02/2019 02:07	WG1274172
Pyridine	U		1.37	10.0	1	05/02/2019 02:07	WG1274172
Benzylbutyl phthalate	U		0.275	3.00	1	05/02/2019 02:07	WG1274172
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	05/02/2019 02:07	WG1274172
Di-n-butyl phthalate	U		0.266	3.00	1	05/02/2019 02:07	WG1274172
Diethyl phthalate	U		0.282	3.00	1	05/02/2019 02:07	WG1274172
Dimethyl phthalate	U		0.283	3.00	1	05/02/2019 02:07	WG1274172
Di-n-octyl phthalate	U		0.278	3.00	1	05/02/2019 02:07	WG1274172
Pyrene	U		0.330	1.00	1	05/02/2019 02:07	WG1274172
1,2,4-Trichlorobenzene	U	J3	0.355	10.0	1	05/02/2019 02:07	WG1274172
4-Chloro-3-methylphenol	U		0.263	10.0	1	05/02/2019 02:07	WG1274172
2-Chlorophenol	U		0.283	10.0	1	05/02/2019 02:07	WG1274172
2,4-Dichlorophenol	U		0.284	10.0	1	05/02/2019 02:07	WG1274172
2,4-Dimethylphenol	U		0.264	10.0	1	05/02/2019 02:07	WG1274172
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	05/02/2019 02:07	WG1274172
2,4-Dinitrophenol	U	J3	3.25	10.0	1	05/02/2019 02:07	WG1274172
2-Methylphenol	U		0.312	10.0	1	05/02/2019 02:07	WG1274172
3&4-Methyl Phenol	0.599	J	0.266	10.0	1	05/02/2019 02:07	WG1274172
2-Nitrophenol	U		0.320	10.0	1	05/02/2019 02:07	WG1274172
4-Nitrophenol	U		2.01	10.0	1	05/02/2019 02:07	WG1274172
Pentachlorophenol	U		0.313	10.0	1	05/02/2019 02:07	WG1274172
Phenol	18.5		0.334	10.0	1	05/02/2019 02:07	WG1274172
2,4,6-Trichlorophenol	U		0.297	10.0	1	05/02/2019 02:07	WG1274172
2,4,5-Trichlorophenol	U		0.236	10.0	1	05/02/2019 02:07	WG1274172
(S) 2-Fluorophenol	*39.9*			*10.0-120*		*05/02/2019 02:07*	WG1274172
(S) Phenol-d5	*28.6*			*10.0-120*		*05/02/2019 02:07*	WG1274172
(S) Nitrobenzene-d5	*69.9*			*10.0-127*		*05/02/2019 02:07*	WG1274172
(S) 2-Fluorobiphenyl	*65.7*			*10.0-130*		*05/02/2019 02:07*	WG1274172
(S) 2,4,6-Tribromophenol	*92.3*			*10.0-155*		*05/02/2019 02:07*	WG1274172
(S) p-Terphenyl-d14	*78.1*			*10.0-128*		*05/02/2019 02:07*	WG1274172

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	5.37	J	1.05	25.0	1	05/01/2019 19:34	WG1274531
Acrylonitrile	U		0.873	5.00	1	05/01/2019 19:34	WG1274531
Benzene	U		0.0896	0.500	1	05/01/2019 19:34	WG1274531
Bromobenzene	U		0.133	0.500	1	05/01/2019 19:34	WG1274531
Bromodichloromethane	U		0.0800	0.500	1	05/01/2019 19:34	WG1274531
Bromochloromethane	U		0.145	0.500	1	05/01/2019 19:34	WG1274531
Bromoform	U		0.186	0.500	1	05/01/2019 19:34	WG1274531
Bromomethane	U		0.157	2.50	1	05/01/2019 19:34	WG1274531
n-Butylbenzene	U		0.143	0.500	1	05/01/2019 19:34	WG1274531
sec-Butylbenzene	U		0.134	0.500	1	05/01/2019 19:34	WG1274531
tert-Butylbenzene	U		0.183	0.500	1	05/01/2019 19:34	WG1274531
Carbon disulfide	U		0.101	0.500	1	05/01/2019 19:34	WG1274531
Carbon tetrachloride	U		0.159	0.500	1	05/01/2019 19:34	WG1274531
Chlorobenzene	U		0.140	0.500	1	05/01/2019 19:34	WG1274531
Chlorodibromomethane	U		0.128	0.500	1	05/01/2019 19:34	WG1274531
Chloroethane	U		0.141	2.50	1	05/01/2019 19:34	WG1274531
Chloroform	U		0.0860	0.500	1	05/01/2019 19:34	WG1274531
Chloromethane	U		0.153	1.25	1	05/01/2019 19:34	WG1274531
2-Chlorotoluene	U		0.111	0.500	1	05/01/2019 19:34	WG1274531
4-Chlorotoluene	U		0.0972	0.500	1	05/01/2019 19:34	WG1274531
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	05/01/2019 19:34	WG1274531
1,2-Dibromoethane	U		0.193	0.500	1	05/01/2019 19:34	WG1274531
Dibromomethane	U		0.117	0.500	1	05/01/2019 19:34	WG1274531
1,2-Dichlorobenzene	U		0.101	0.500	1	05/01/2019 19:34	WG1274531
1,3-Dichlorobenzene	U		0.130	0.500	1	05/01/2019 19:34	WG1274531
1,4-Dichlorobenzene	U		0.121	0.500	1	05/01/2019 19:34	WG1274531
Dichlorodifluoromethane	U		0.127	2.50	1	05/01/2019 19:34	WG1274531
1,1-Dichloroethane	U		0.114	0.500	1	05/01/2019 19:34	WG1274531
1,2-Dichloroethane	U		0.108	0.500	1	05/01/2019 19:34	WG1274531
1,1-Dichloroethene	U		0.188	0.500	1	05/01/2019 19:34	WG1274531
cis-1,2-Dichloroethene	U		0.0933	0.500	1	05/01/2019 19:34	WG1274531
trans-1,2-Dichloroethene	U		0.152	0.500	1	05/01/2019 19:34	WG1274531
1,2-Dichloropropane	U		0.190	0.500	1	05/01/2019 19:34	WG1274531
1,1-Dichloropropene	U		0.128	0.500	1	05/01/2019 19:34	WG1274531
1,3-Dichloropropane	U		0.147	1.00	1	05/01/2019 19:34	WG1274531
cis-1,3-Dichloropropene	U		0.0976	0.500	1	05/01/2019 19:34	WG1274531
trans-1,3-Dichloropropene	U		0.222	0.500	1	05/01/2019 19:34	WG1274531
trans-1,4-Dichloro-2-butene	U		0.257	5.00	1	05/01/2019 19:34	WG1274531
2,2-Dichloropropane	U		0.0929	0.500	1	05/01/2019 19:34	WG1274531
Di-isopropyl ether	U		0.0924	0.500	1	05/01/2019 19:34	WG1274531
Ethylbenzene	U		0.158	0.500	1	05/01/2019 19:34	WG1274531
Hexachloro-1,3-butadiene	U		0.157	1.00	1	05/01/2019 19:34	WG1274531
2-Hexanone	U		0.757	5.00	1	05/01/2019 19:34	WG1274531
n-Hexane	U		0.305	5.00	1	05/01/2019 19:34	WG1274531
Iodomethane	U		0.377	10.0	1	05/01/2019 19:34	WG1274531
Isopropylbenzene	U		0.126	0.500	1	05/01/2019 19:34	WG1274531
p-Isopropyltoluene	U		0.138	0.500	1	05/01/2019 19:34	WG1274531
2-Butanone (MEK)	U		1.28	5.00	1	05/01/2019 19:34	WG1274531
Methylene Chloride	U		1.07	2.50	1	05/01/2019 19:34	WG1274531
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	05/01/2019 19:34	WG1274531
Methyl tert-butyl ether	U		0.102	0.500	1	05/01/2019 19:34	WG1274531
Naphthalene	U		0.174	2.50	1	05/01/2019 19:34	WG1274531
n-Propylbenzene	U		0.162	0.500	1	05/01/2019 19:34	WG1274531
Styrene	U		0.117	0.500	1	05/01/2019 19:34	WG1274531
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	05/01/2019 19:34	WG1274531
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	05/01/2019 19:34	WG1274531

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	05/01/2019 19:34	WG1274531
Tetrachloroethene	U		0.199	0.500	1	05/01/2019 19:34	WG1274531
Toluene	U		0.412	0.500	1	05/01/2019 19:34	WG1274531
1,2,3-Trichlorobenzene	U		0.164	0.500	1	05/01/2019 19:34	WG1274531
1,2,4-Trichlorobenzene	U		0.355	0.500	1	05/01/2019 19:34	WG1274531
1,1,1-Trichloroethane	U		0.0940	0.500	1	05/01/2019 19:34	WG1274531
1,1,2-Trichloroethane	U		0.186	0.500	1	05/01/2019 19:34	WG1274531
Trichloroethene	U		0.153	0.500	1	05/01/2019 19:34	WG1274531
Trichlorofluoromethane	U	J4	0.130	2.50	1	05/01/2019 19:34	WG1274531
1,2,3-Trichloropropane	U		0.247	2.50	1	05/01/2019 19:34	WG1274531
1,2,4-Trimethylbenzene	U		0.123	0.500	1	05/01/2019 19:34	WG1274531
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	05/01/2019 19:34	WG1274531
1,3,5-Trimethylbenzene	U		0.124	0.500	1	05/01/2019 19:34	WG1274531
Vinyl acetate	U		0.645	5.00	1	05/01/2019 19:34	WG1274531
Vinyl chloride	U	J4	0.118	0.500	1	05/01/2019 19:34	WG1274531
Xylenes, Total	U		0.316	1.50	1	05/01/2019 19:34	WG1274531
(S) Toluene-d8	*106*			*80.0-120*		*05/01/2019 19:34*	WG1274531
(S) 4-Bromofluorobenzene	*109*			*77.0-126*		*05/01/2019 19:34*	WG1274531
(S) 1,2-Dichloroethane-d4	*95.2*			*70.0-130*		*05/01/2019 19:34*	WG1274531

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		66.7	200	1	05/02/2019 18:10	WG1274142
Residual Range Organics (RRO)	U		83.3	250	1	05/02/2019 18:10	WG1274142
(S) o-Terphenyl	*84.2*			*52.0-156*		*05/02/2019 18:10*	WG1274142

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.316	1.00	1	05/02/2019 02:28	WG1274172
Acenaphthylene	U		0.309	1.00	1	05/02/2019 02:28	WG1274172
Anthracene	U		0.291	1.00	1	05/02/2019 02:28	WG1274172
Benzo(a)anthracene	U		0.0975	1.00	1	05/02/2019 02:28	WG1274172
Benzo(b)fluoranthene	U		0.0896	1.00	1	05/02/2019 02:28	WG1274172
Benzo(k)fluoranthene	U		0.355	1.00	1	05/02/2019 02:28	WG1274172
Benzo(g,h,i)perylene	U		0.161	1.00	1	05/02/2019 02:28	WG1274172
Benzo(a)pyrene	U		0.340	1.00	1	05/02/2019 02:28	WG1274172
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	05/02/2019 02:28	WG1274172
Bis(2-chloroethyl)ether	U		1.62	10.0	1	05/02/2019 02:28	WG1274172
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	05/02/2019 02:28	WG1274172
4-Bromophenyl-phenylether	U		0.335	10.0	1	05/02/2019 02:28	WG1274172
2-Chloronaphthalene	U	J4	0.330	1.00	1	05/02/2019 02:28	WG1274172
4-Chlorophenyl-phenylether	U		0.303	10.0	1	05/02/2019 02:28	WG1274172
Chrysene	U		0.332	1.00	1	05/02/2019 02:28	WG1274172
Dibenz(a,h)anthracene	U		0.279	1.00	1	05/02/2019 02:28	WG1274172
3,3-Dichlorobenzidine	U		2.02	10.0	1	05/02/2019 02:28	WG1274172
2,4-Dinitrotoluene	U		1.65	10.0	1	05/02/2019 02:28	WG1274172
2,6-Dinitrotoluene	U		0.279	10.0	1	05/02/2019 02:28	WG1274172
Fluoranthene	U		0.310	1.00	1	05/02/2019 02:28	WG1274172
Fluorene	U		0.323	1.00	1	05/02/2019 02:28	WG1274172
Hexachlorobenzene	U		0.341	1.00	1	05/02/2019 02:28	WG1274172
Hexachloro-1,3-butadiene	U	J3	0.329	10.0	1	05/02/2019 02:28	WG1274172
Hexachlorocyclopentadiene	U		2.33	10.0	1	05/02/2019 02:28	WG1274172
Hexachloroethane	U		0.365	10.0	1	05/02/2019 02:28	WG1274172

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	05/02/2019 02:28	WG1274172
Isophorone	U		0.272	10.0	1	05/02/2019 02:28	WG1274172
Naphthalene	U	J3	0.372	1.00	1	05/02/2019 02:28	WG1274172
Nitrobenzene	U		0.367	10.0	1	05/02/2019 02:28	WG1274172
n-Nitrosodimethylamine	U		1.26	10.0	1	05/02/2019 02:28	WG1274172
n-Nitrosodiphenylamine	U		1.19	10.0	1	05/02/2019 02:28	WG1274172
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	05/02/2019 02:28	WG1274172
Phenanthrene	U	J4	0.366	1.00	1	05/02/2019 02:28	WG1274172
Pyridine	U		1.37	10.0	1	05/02/2019 02:28	WG1274172
Benzylbutyl phthalate	U		0.275	3.00	1	05/02/2019 02:28	WG1274172
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	05/02/2019 02:28	WG1274172
Di-n-butyl phthalate	U		0.266	3.00	1	05/02/2019 02:28	WG1274172
Diethyl phthalate	U		0.282	3.00	1	05/02/2019 02:28	WG1274172
Dimethyl phthalate	U		0.283	3.00	1	05/02/2019 02:28	WG1274172
Di-n-octyl phthalate	U		0.278	3.00	1	05/02/2019 02:28	WG1274172
Pyrene	U		0.330	1.00	1	05/02/2019 02:28	WG1274172
1,2,4-Trichlorobenzene	U	J3	0.355	10.0	1	05/02/2019 02:28	WG1274172
4-Chloro-3-methylphenol	U		0.263	10.0	1	05/02/2019 02:28	WG1274172
2-Chlorophenol	U		0.283	10.0	1	05/02/2019 02:28	WG1274172
2,4-Dichlorophenol	U		0.284	10.0	1	05/02/2019 02:28	WG1274172
2,4-Dimethylphenol	U		0.264	10.0	1	05/02/2019 02:28	WG1274172
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	05/02/2019 02:28	WG1274172
2,4-Dinitrophenol	U	J3	3.25	10.0	1	05/02/2019 02:28	WG1274172
2-Methylphenol	U		0.312	10.0	1	05/02/2019 02:28	WG1274172
3&4-Methyl Phenol	U		0.266	10.0	1	05/02/2019 02:28	WG1274172
2-Nitrophenol	U		0.320	10.0	1	05/02/2019 02:28	WG1274172
4-Nitrophenol	U		2.01	10.0	1	05/02/2019 02:28	WG1274172
Pentachlorophenol	U		0.313	10.0	1	05/02/2019 02:28	WG1274172
Phenol	11.6		0.334	10.0	1	05/02/2019 02:28	WG1274172
2,4,6-Trichlorophenol	U		0.297	10.0	1	05/02/2019 02:28	WG1274172
2,4,5-Trichlorophenol	U		0.236	10.0	1	05/02/2019 02:28	WG1274172
(S) 2-Fluorophenol	*48.1*			*10.0-120*		*05/02/2019 02:28*	WG1274172
(S) Phenol-d5	*31.3*			*10.0-120*		*05/02/2019 02:28*	WG1274172
(S) Nitrobenzene-d5	*78.8*			*10.0-127*		*05/02/2019 02:28*	WG1274172
(S) 2-Fluorobiphenyl	*70.5*			*10.0-130*		*05/02/2019 02:28*	WG1274172
(S) 2,4,6-Tribromophenol	*85.2*			*10.0-155*		*05/02/2019 02:28*	WG1274172
(S) p-Terphenyl-d14	*70.8*			*10.0-128*		*05/02/2019 02:28*	WG1274172

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3407196-3 05/01/19 14:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromochloromethane	U		0.145	0.500
Bromodichloromethane	U		0.0800	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
Carbon disulfide	U		0.101	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
2,2-Dichloropropane	U		0.0929	0.500
2-Hexanone	U		0.757	5.00

Method Blank (MB)

(MB) R3407196-3 05/01/19 14:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
n-Hexane	U		0.305	5.00
Di-isopropyl ether	U		0.0924	0.500
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	0.364	J	0.157	1.00
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
Naphthalene	U		0.174	2.50
1,1,2,2-Tetrachloroethane	U		0.130	0.500
Tetrachloroethene	U		0.199	0.500
Vinyl acetate	U		0.645	5.00
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Toluene	U		0.412	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,2,4-Trimethylbenzene	U		0.123	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*95.3*			*80.0-120*
(S) 4-Bromofluorobenzene	*104*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*94.9*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3407196-1 05/01/19 13:00 • (LCSD) R3407196-2 05/01/19 13:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromochloromethane	25.0	24.8	23.3	99.1	93.2	76.0-122			6.07	20
Carbon disulfide	25.0	31.6	29.0	126	116	61.0-128			8.78	20
Acetone	125	171	172	137	138	19.0-160			0.538	27
Acrylonitrile	125	152	164	122	131	55.0-149			7.52	20
Bromobenzene	25.0	22.4	22.8	89.6	91.0	73.0-121			1.56	20
Bromodichloromethane	25.0	22.6	20.4	90.6	81.8	75.0-120			10.2	20
Bromoform	25.0	27.2	26.7	109	107	68.0-132			1.80	20
Bromomethane	25.0	16.8	15.6	67.2	62.4	10.0-160			7.45	25
trans-1,4-Dichloro-2-butene	25.0	19.8	19.9	79.3	79.7	33.0-144			0.492	20
n-Butylbenzene	25.0	20.9	21.6	83.7	86.5	73.0-125			3.29	20
sec-Butylbenzene	25.0	22.2	22.1	88.6	88.2	75.0-125			0.452	20
tert-Butylbenzene	25.0	22.7	23.1	90.8	92.4	76.0-124			1.77	20
2-Hexanone	125	136	141	109	112	67.0-149			2.94	20
Carbon tetrachloride	25.0	24.2	24.2	96.8	96.9	68.0-126			0.0831	20
Chlorobenzene	25.0	24.3	23.9	97.3	95.8	80.0-121			1.61	20
n-Hexane	25.0	30.0	31.2	120	125	57.0-133			3.89	20
Chlorodibromomethane	25.0	24.4	23.8	97.6	95.2	77.0-125			2.53	20
Iodomethane	125	145	132	116	106	33.0-147			8.95	26
Chloroethane	25.0	16.1	14.3	64.4	57.1	47.0-150			12.0	20
Chloroform	25.0	22.3	22.2	89.2	88.7	73.0-120			0.549	20
Chloromethane	25.0	21.8	20.0	87.2	79.9	41.0-142			8.74	20
2-Chlorotoluene	25.0	21.7	21.8	87.0	87.2	76.0-123			0.258	20
Benzene	25.0	26.1	26.3	104	105	70.0-123			1.07	20
4-Chlorotoluene	25.0	22.3	22.3	89.2	89.3	75.0-122			0.138	20
1,2-Dibromo-3-Chloropropane	25.0	25.8	26.4	103	106	58.0-134			2.11	20
1,2-Dibromoethane	25.0	23.7	23.3	94.9	93.4	80.0-122			1.64	20
Dibromomethane	25.0	23.3	21.0	93.1	83.8	80.0-120			10.5	20
1,2-Dichlorobenzene	25.0	22.9	23.2	91.8	92.7	79.0-121			1.02	20
1,3-Dichlorobenzene	25.0	22.6	22.8	90.4	91.0	79.0-120			0.627	20
1,4-Dichlorobenzene	25.0	22.2	22.1	88.8	88.3	79.0-120			0.623	20
Dichlorodifluoromethane	25.0	25.1	22.8	100	91.2	51.0-149			9.69	20
1,1-Dichloroethane	25.0	24.3	25.4	97.4	102	70.0-126			4.35	20
1,2-Dichloroethane	25.0	21.2	21.8	84.9	87.2	70.0-128			2.68	20
1,1-Dichloroethene	25.0	27.6	25.2	110	101	71.0-124			9.13	20
cis-1,2-Dichloroethene	25.0	24.3	23.8	97.2	95.2	73.0-120			2.05	20
trans-1,2-Dichloroethene	25.0	25.1	24.9	100	99.5	73.0-120			0.882	20
1,2-Dichloropropane	25.0	26.3	23.7	105	94.6	77.0-125			10.8	20
1,1-Dichloropropene	25.0	24.7	25.1	98.7	100	74.0-126			1.53	20
1,3-Dichloropropane	25.0	24.5	24.1	98.1	96.2	80.0-120			1.92	20
cis-1,3-Dichloropropene	25.0	24.2	22.1	96.8	88.6	80.0-123			8.90	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3407196-1 05/01/19 13:00 • (LCSD) R3407196-2 05/01/19 13:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Vinyl acetate	125	122	136	97.4	109	11.0-160			11.3	20
trans-1,3-Dichloropropene	25.0	23.1	22.6	92.4	90.3	78.0-124			2.24	20
2,2-Dichloropropane	25.0	30.4	30.6	121	122	58.0-130			0.649	20
Di-isopropyl ether	25.0	27.1	30.0	108	120	58.0-138			10.4	20
Hexachloro-1,3-butadiene	25.0	26.9	27.7	108	111	54.0-138			2.73	20
Isopropylbenzene	25.0	26.2	25.6	105	102	76.0-127			2.41	20
p-Isopropyltoluene	25.0	22.9	22.6	91.6	90.5	76.0-125			1.18	20
2-Butanone (MEK)	125	151	168	120	134	44.0-160			11.0	20
Methylene Chloride	25.0	25.0	25.0	100	100	67.0-120			0.215	20
4-Methyl-2-pentanone (MIBK)	125	133	130	106	104	68.0-142			2.31	20
Ethylbenzene	25.0	24.8	24.2	99.1	96.8	79.0-123			2.30	20
n-Propylbenzene	25.0	21.6	22.0	86.3	88.0	77.0-124			2.01	20
Styrene	25.0	27.7	27.1	111	108	73.0-130			2.40	20
1,1,1,2-Tetrachloroethane	25.0	24.0	23.7	95.9	94.8	75.0-125			1.07	20
1,1,2,2-Tetrachloroethane	25.0	21.3	21.7	85.1	86.7	65.0-130			1.87	20
Tetrachloroethene	25.0	26.6	25.8	106	103	72.0-132			3.02	20
1,1,2-Trichlorotrifluoroethane	25.0	26.2	24.1	105	96.6	69.0-132			8.24	20
1,2,3-Trichlorobenzene	25.0	23.7	24.3	94.7	97.4	50.0-138			2.83	20
1,2,4-Trichlorobenzene	25.0	24.9	25.4	99.5	102	57.0-137			2.03	20
1,1,1-Trichloroethane	25.0	24.0	23.5	96.1	94.0	73.0-124			2.22	20
1,1,2-Trichloroethane	25.0	22.9	22.5	91.6	90.1	80.0-120			1.71	20
Trichloroethene	25.0	26.1	24.2	105	96.9	78.0-124			7.61	20
Trichlorofluoromethane	25.0	16.0	14.6	64.2	58.3	59.0-147		J4	9.60	20
1,2,3-Trichloropropane	25.0	19.6	20.0	78.4	80.0	73.0-130			1.90	20
Methyl tert-butyl ether	25.0	24.3	24.8	97.4	99.1	68.0-125			1.76	20
1,2,3-Trimethylbenzene	25.0	21.3	21.0	85.0	83.9	77.0-120			1.30	20
1,2,4-Trimethylbenzene	25.0	21.6	21.6	86.5	86.6	76.0-121			0.129	20
1,3,5-Trimethylbenzene	25.0	21.8	22.1	87.3	88.2	76.0-122			1.10	20
Naphthalene	25.0	23.6	24.3	94.3	97.2	54.0-135			3.09	20
Vinyl chloride	25.0	17.1	15.2	68.3	60.9	67.0-131		J4	11.4	20
Toluene	25.0	26.1	25.4	104	102	79.0-120			2.46	20
Xylenes, Total	75.0	74.9	73.8	99.9	98.4	79.0-123			1.48	20
(S) Toluene-d8				*101*	*100*	*80.0-120*				
(S) 4-Bromofluorobenzene				*109*	*111*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*89.8*	*102*	*70.0-130*				

Method Blank (MB)

(MB) R3407446-1 05/02/19 00:20

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	*79.0*			*52.0-156*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3407446-2 05/02/19 01:03 • (LCSD) R3407446-3 05/02/19 01:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	750	883	841	118	112	50.0-150			4.87	20
Residual Range Organics (RRO)	750	665	620	88.7	82.7	50.0-150			7.00	20
(S) o-Terphenyl				*92.0*	*89.0*	*52.0-156*				

Method Blank (MB)

(MB) R3407356-3 05/01/19 23:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acenaphthene	U		0.316	1.00
Acenaphthylene	U		0.309	1.00
Anthracene	U		0.291	1.00
Benzo(a)anthracene	U		0.0975	1.00
Benzo(b)fluoranthene	U		0.0896	1.00
Benzo(k)fluoranthene	U		0.355	1.00
Benzo(g,h,i)perylene	U		0.161	1.00
Benzo(a)pyrene	U		0.340	1.00
Bis(2-chlorethoxy)methane	U		0.329	10.0
Bis(2-chloroethyl)ether	U		1.62	10.0
Bis(2-chloroisopropyl)ether	U		0.445	10.0
4-Bromophenyl-phenylether	U		0.335	10.0
2-Chloronaphthalene	U		0.330	1.00
4-Chlorophenyl-phenylether	U		0.303	10.0
Chrysene	U		0.332	1.00
Dibenz(a,h)anthracene	U		0.279	1.00
3,3-Dichlorobenzidine	U		2.02	10.0
2,4-Dinitrotoluene	U		1.65	10.0
2,6-Dinitrotoluene	U		0.279	10.0
Fluoranthene	U		0.310	1.00
Fluorene	U		0.323	1.00
Hexachlorobenzene	U		0.341	1.00
Hexachloro-1,3-butadiene	U		0.329	10.0
Hexachlorocyclopentadiene	U		2.33	10.0
Hexachloroethane	U		0.365	10.0
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Isophorone	U		0.272	10.0
Naphthalene	U		0.372	1.00
Nitrobenzene	U		0.367	10.0
n-Nitrosodimethylamine	U		1.26	10.0
n-Nitrosodiphenylamine	U		1.19	10.0
n-Nitrosodi-n-propylamine	U		0.403	10.0
Phenanthrene	U		0.366	1.00
Benzylbutyl phthalate	U		0.275	3.00
Bis(2-ethylhexyl)phthalate	U		0.709	3.00
Di-n-butyl phthalate	U		0.266	3.00
Diethyl phthalate	U		0.282	3.00
Dimethyl phthalate	U		0.283	3.00
Di-n-octyl phthalate	U		0.278	3.00
Pyrene	U		0.330	1.00

Method Blank (MB)

(MB) R3407356-3 05/01/19 23:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Pyridine	U		1.37	10.0
1,2,4-Trichlorobenzene	U		0.355	10.0
4-Chloro-3-methylphenol	U		0.263	10.0
2-Chlorophenol	U		0.283	10.0
2-Methylphenol	U		0.312	10.0
3&4-Methyl Phenol	U		0.266	10.0
2,4-Dichlorophenol	U		0.284	10.0
2,4-Dimethylphenol	U		0.264	10.0
4,6-Dinitro-2-methylphenol	U		2.62	10.0
2,4-Dinitrophenol	U		3.25	10.0
2-Nitrophenol	U		0.320	10.0
4-Nitrophenol	U		2.01	10.0
Pentachlorophenol	U		0.313	10.0
Phenol	U		0.334	10.0
2,4,5-Trichlorophenol	U		0.236	10.0
2,4,6-Trichlorophenol	U		0.297	10.0
(S) Nitrobenzene-d5	*64.6*			*10.0-127*
(S) 2-Fluorobiphenyl	*64.2*			*10.0-130*
(S) p-Terphenyl-d14	*75.0*			*10.0-128*
(S) Phenol-d5	*25.8*			*10.0-120*
(S) 2-Fluorophenol	*40.3*			*10.0-120*
(S) 2,4,6-Tribromophenol	*74.0*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3407356-1 05/01/19 22:44 • (LCSD) R3407356-2 05/01/19 23:04

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	50.0	23.3	20.8	46.6	41.6	41.0-120			11.3	22
Acenaphthylene	50.0	28.2	24.0	56.4	48.0	43.0-120			16.1	22
Anthracene	50.0	23.8	23.1	47.6	46.2	45.0-120			2.99	20
Benzo(a)anthracene	50.0	28.3	27.9	56.6	55.8	47.0-120			1.42	20
Benzo(b)fluoranthene	50.0	27.4	27.5	54.8	55.0	46.0-120			0.364	20
Benzo(k)fluoranthene	50.0	28.1	28.4	56.2	56.8	46.0-120			1.06	21
Benzo(g,h,i)perylene	50.0	26.1	26.0	52.2	52.0	48.0-121			0.384	20
Benzo(a)pyrene	50.0	27.2	27.0	54.4	54.0	47.0-120			0.738	20
Bis(2-chlorethoxy)methane	50.0	25.3	23.8	50.6	47.6	33.0-120			6.11	24
Bis(2-chloroethyl)ether	50.0	25.0	21.1	50.0	42.2	23.0-120			16.9	33
Bis(2-chloroisopropyl)ether	50.0	22.4	17.4	44.8	34.8	28.0-120			25.1	31

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3407356-1 05/01/19 22:44 • (LCSD) R3407356-2 05/01/19 23:04

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Bromophenyl-phenylether	50.0	26.6	24.6	53.2	49.2	45.0-120			7.81	20
2-Chloronaphthalene	50.0	20.9	17.6	41.8	35.2	37.0-120		J4	17.1	25
4-Chlorophenyl-phenylether	50.0	28.9	26.6	57.8	53.2	44.0-120			8.29	20
Chrysene	50.0	26.2	26.7	52.4	53.4	48.0-120			1.89	20
Dibenz(a,h)anthracene	50.0	27.3	27.3	54.6	54.6	47.0-120			0.000	20
3,3-Dichlorobenzidine	100	55.8	53.7	55.8	53.7	44.0-120			3.84	20
2,4-Dinitrotoluene	50.0	32.4	34.3	64.8	68.6	49.0-124			5.70	20
2,6-Dinitrotoluene	50.0	29.1	30.5	58.2	61.0	46.0-120			4.70	21
Fluoranthene	50.0	30.2	30.6	60.4	61.2	51.0-120			1.32	20
Fluorene	50.0	28.6	26.7	57.2	53.4	47.0-120			6.87	20
Hexachlorobenzene	50.0	28.1	25.3	56.2	50.6	44.0-120			10.5	20
Hexachloro-1,3-butadiene	50.0	22.8	16.2	45.6	32.4	19.0-120		J3	33.8	32
Hexachlorocyclopentadiene	50.0	18.7	14.0	37.4	28.0	15.0-120			28.7	31
Indeno(1,2,3-cd)pyrene	50.0	27.2	27.0	54.4	54.0	49.0-122			0.738	20
Isophorone	50.0	28.3	26.0	56.6	52.0	36.0-120			8.47	23
Naphthalene	50.0	21.3	16.1	42.6	32.2	27.0-120		J3	27.8	27
Nitrobenzene	50.0	23.6	20.2	47.2	40.4	27.0-120			15.5	29
n-Nitrosodimethylamine	50.0	17.3	16.8	34.6	33.6	10.0-120			2.93	40
n-Nitrosodiphenylamine	50.0	25.0	23.7	50.0	47.4	47.0-120			5.34	20
n-Nitrosodi-n-propylamine	50.0	28.4	25.7	56.8	51.4	31.0-120			9.98	28
Phenanthrene	50.0	23.7	22.3	47.4	44.6	46.0-120		J4	6.09	20
Benzylbutyl phthalate	50.0	26.9	26.5	53.8	53.0	43.0-121			1.50	20
Bis(2-ethylhexyl)phthalate	50.0	27.9	27.7	55.8	55.4	43.0-122			0.719	20
Di-n-butyl phthalate	50.0	32.4	32.7	64.8	65.4	49.0-121			0.922	20
Diethyl phthalate	50.0	34.6	36.0	69.2	72.0	48.0-122			3.97	20
Dimethyl phthalate	50.0	29.6	32.1	59.2	64.2	48.0-120			8.10	20
Di-n-octyl phthalate	50.0	29.7	29.2	59.4	58.4	42.0-125			1.70	20
Pyrene	50.0	24.2	23.9	48.4	47.8	47.0-120			1.25	20
Pyridine	50.0	17.0	16.4	34.0	32.8	10.0-120			3.59	38
1,2,4-Trichlorobenzene	50.0	19.1	13.8	38.2	27.6	24.0-120		J3	32.2	29
4-Chloro-3-methylphenol	50.0	31.3	30.3	62.6	60.6	40.0-120			3.25	21
2-Chlorophenol	50.0	23.1	20.1	46.2	40.2	25.0-120			13.9	35
2-Methylphenol	50.0	24.5	21.7	49.0	43.4	28.0-120			12.1	29
3&4-Methyl Phenol	50.0	26.6	23.6	53.2	47.2	31.0-120			12.0	30
2,4-Dichlorophenol	50.0	25.6	22.0	51.2	44.0	36.0-120			15.1	26
2,4-Dimethylphenol	50.0	27.2	24.9	54.4	49.8	33.0-120			8.83	26
4,6-Dinitro-2-methylphenol	50.0	30.0	27.6	60.0	55.2	38.0-138			8.33	25
2,4-Dinitrophenol	50.0	30.7	13.4	61.4	26.8	10.0-120		J3	78.5	39
2-Nitrophenol	50.0	24.3	21.1	48.6	42.2	31.0-120			14.1	29
4-Nitrophenol	50.0	15.8	14.7	31.6	29.4	10.0-120			7.21	33

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3407356-1 05/01/19 22:44 • (LCSD) R3407356-2 05/01/19 23:04

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Pentachlorophenol	50.0	27.0	25.1	54.0	50.2	23.0-120			7.29	25
Phenol	50.0	12.5	11.3	25.0	22.6	10.0-120			10.1	36
2,4,5-Trichlorophenol	50.0	29.1	28.9	58.2	57.8	44.0-120			0.690	22
2,4,6-Trichlorophenol	50.0	28.6	26.7	57.2	53.4	42.0-120			6.87	23
(S) Nitrobenzene-d5				*49.9*	*39.5*	*10.0-127*				
(S) 2-Fluorobiphenyl				*50.1*	*40.9*	*10.0-130*				
(S) p-Terphenyl-d14				*54.1*	*54.2*	*10.0-128*				
(S) Phenol-d5				*22.8*	*20.5*	*10.0-120*				
(S) 2-Fluorophenol				*34.0*	*29.6*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*63.5*	*61.0*	*10.0-155*				

L1093799-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1093799-01 05/02/19 03:08 • (MS) R3407356-4 05/02/19 03:29 • (MSD) R3407356-5 05/02/19 03:49

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	50.0	U	32.8	34.5	65.6	69.0	1	28.0-120			5.05	25
Acenaphthylene	50.0	U	38.7	40.9	77.4	81.8	1	31.0-121			5.53	25
Anthracene	50.0	U	35.4	37.6	70.8	75.2	1	36.0-120			6.03	23
Benzo(a)anthracene	50.0	U	40.6	42.7	81.2	85.4	1	39.0-120			5.04	23
Benzo(b)fluoranthene	50.0	U	42.6	43.3	85.2	86.6	1	37.0-120			1.63	23
Benzo(k)fluoranthene	50.0	U	40.1	40.6	80.2	81.2	1	37.0-120			1.24	26
Benzo(g,h,i)perylene	50.0	U	35.7	38.8	71.4	77.6	1	37.0-123			8.32	25
Benzo(a)pyrene	50.0	U	39.9	40.7	79.8	81.4	1	37.0-120			1.99	24
Bis(2-chlorethoxy)methane	50.0	U	33.9	34.8	67.8	69.6	1	17.0-120			2.62	31
Bis(2-chloroethyl)ether	50.0	U	58.5	78.9	117	158	1	14.0-120		J5	29.7	33
Bis(2-chloroisopropyl)ether	50.0	U	35.6	72.4	71.2	145	1	18.0-120		J3 J5	68.1	34
4-Bromophenyl-phenylether	50.0	U	40.6	44.3	81.2	88.6	1	37.0-120			8.72	24
2-Chloronaphthalene	50.0	U	29.8	33.9	59.6	67.8	1	29.0-120			12.9	28
4-Chlorophenyl-phenylether	50.0	U	41.6	42.0	83.2	84.0	1	36.0-120			0.957	23
Chrysene	50.0	U	37.2	38.3	74.4	76.6	1	38.0-120			2.91	23
Dibenz(a,h)anthracene	50.0	U	37.0	38.8	74.0	77.6	1	36.0-121			4.75	24
3,3-Dichlorobenzidine	100	U	ND	ND	0.000	0.000	1	10.0-134	J6	J6	0.000	30
2,4-Dinitrotoluene	50.0	U	44.1	44.0	88.2	88.0	1	39.0-125			0.227	25
2,6-Dinitrotoluene	50.0	U	43.1	40.8	86.2	81.6	1	36.0-120			5.48	27
Fluoranthene	50.0	U	43.3	45.1	86.6	90.2	1	41.0-121			4.07	22
Fluorene	50.0	U	41.2	41.9	82.4	83.8	1	37.0-120			1.68	24
Hexachlorobenzene	50.0	U	39.6	43.9	79.2	87.8	1	35.0-122			10.3	24
Hexachloro-1,3-butadiene	50.0	U	26.3	39.0	52.6	78.0	1	12.0-120		J3	38.9	34

L1093799-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1093799-01 05/02/19 03:08 • (MS) R3407356-4 05/02/19 03:29 • (MSD) R3407356-5 05/02/19 03:49

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexachlorocyclopentadiene	50.0	U	18.9	16.1	37.8	32.2	1	10.0-120			16.0	33
Indeno(1,2,3-cd)pyrene	50.0	U	37.6	39.4	75.2	78.8	1	38.0-125			4.68	24
Isophorone	50.0	U	34.7	42.9	69.4	85.8	1	21.0-120			21.1	27
Naphthalene	50.0	2.29	25.9	36.1	47.2	67.6	1	10.0-120		J3	32.9	31
Nitrobenzene	50.0	U	27.7	39.7	55.4	79.4	1	12.0-120		J3	35.6	30
n-Nitrosodimethylamine	50.0	U	33.0	46.7	66.0	93.4	1	10.0-120			34.4	40
n-Nitrosodiphenylamine	50.0	U	38.8	42.4	77.6	84.8	1	37.0-120			8.87	24
n-Nitrosodi-n-propylamine	50.0	U	50.5	71.3	101	143	1	16.0-120		J3 J5	34.2	30
Phenanthrene	50.0	U	35.3	37.0	70.6	74.0	1	33.0-120			4.70	22
Benzylbutyl phthalate	50.0	U	42.0	43.5	84.0	87.0	1	34.0-126			3.51	24
Bis(2-ethylhexyl)phthalate	50.0	3.08	47.8	55.1	89.4	104	1	33.0-126			14.2	25
Di-n-butyl phthalate	50.0	U	47.8	49.2	95.6	98.4	1	35.0-128			2.89	23
Diethyl phthalate	50.0	U	49.6	47.5	99.2	95.0	1	39.0-125			4.33	24
Dimethyl phthalate	50.0	U	40.4	42.3	80.8	84.6	1	37.0-120			4.59	24
Di-n-octyl phthalate	50.0	U	43.1	44.8	86.2	89.6	1	25.0-135			3.87	26
Pyrene	50.0	U	39.3	39.5	78.6	79.0	1	39.0-120			0.508	22
Pyridine	50.0	4.35	26.5	36.8	44.3	64.9	1	10.0-120			32.5	37
1,2,4-Trichlorobenzene	50.0	U	19.1	28.0	38.2	56.0	1	15.0-120		J3	37.8	31
4-Chloro-3-methylphenol	50.0	U	62.1	73.2	124	146	1	26.0-120	J5	J5	16.4	27
2-Chlorophenol	50.0	U	10.9	15.3	21.8	30.6	1	18.0-120			33.6	34
2-Methylphenol	50.0	U	51.5	61.7	103	123	1	10.0-120		J5	18.0	30
3&4-Methyl Phenol	50.0	215	240	298	50.0	166	1	10.0-120		E V	21.6	36
2,4-Dichlorophenol	50.0	U	33.8	43.8	67.6	87.6	1	19.0-120			25.8	27
2,4-Dimethylphenol	50.0	U	42.1	51.0	84.2	102	1	15.0-120			19.1	28
4,6-Dinitro-2-methylphenol	50.0	U	35.9	36.4	71.8	72.8	1	10.0-144			1.38	39
2,4-Dinitrophenol	50.0	U	36.6	33.6	73.2	67.2	1	10.0-120			8.55	40
2-Nitrophenol	50.0	U	23.5	32.6	47.0	65.2	1	20.0-120		J3	32.4	30
4-Nitrophenol	50.0	U	75.2	82.2	150	164	1	10.0-120	J5	J5	8.89	40
Pentachlorophenol	50.0	U	45.5	46.0	91.0	92.0	1	10.0-128			1.09	37
Phenol	50.0	60.9	70.8	94.7	19.8	67.6	1	10.0-120			28.9	40
2,4,5-Trichlorophenol	50.0	U	42.6	44.6	85.2	89.2	1	33.0-120			4.59	31
2,4,6-Trichlorophenol	50.0	U	35.6	39.9	71.2	79.8	1	26.0-120			11.4	31
(S) Nitrobenzene-d5					*54.0*	*74.8*		*10.0-127*				
(S) 2-Fluorobiphenyl					*67.6*	*94.2*		*10.0-130*				
(S) p-Terphenyl-d14					*92.0*	*98.8*		*10.0-128*				
(S) Phenol-d5					*58.5*	*8.80*		*10.0-120*		J2		
(S) 2-Fluorophenol					*44.8*	*55.0*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*94.5*	*105*		*10.0-155*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

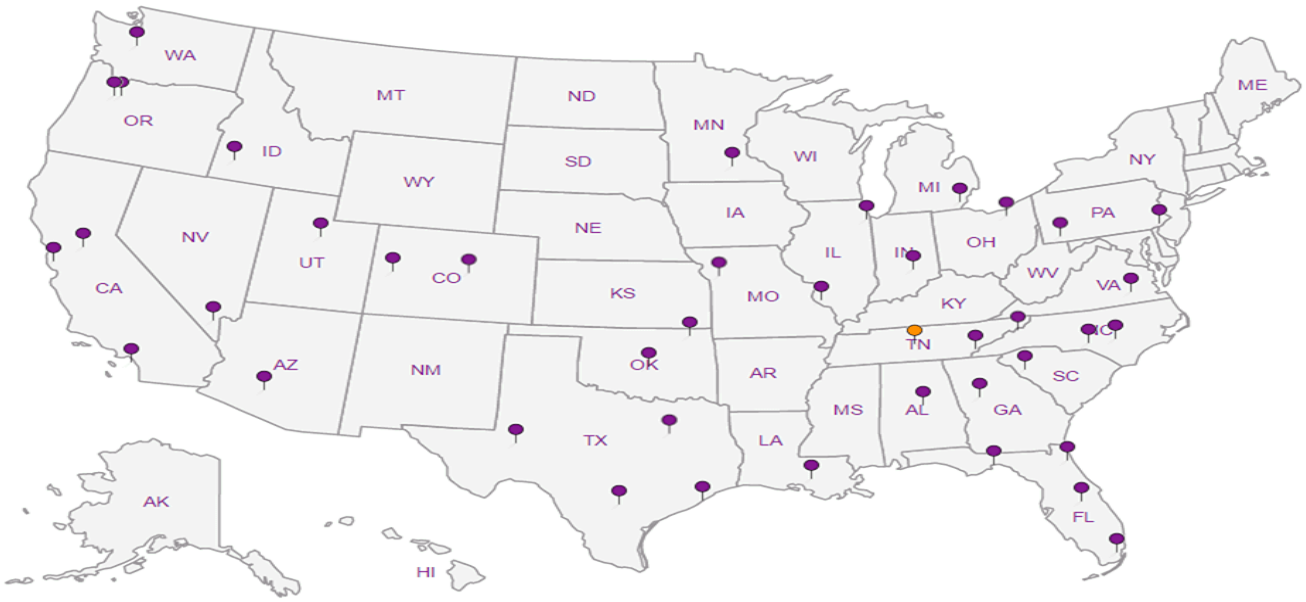
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



SLR International Corp. - West Linn, OR

1800 Blankenship Road, Suite 440

Billing Information:
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West Linn, OR 97068

Report to: Chris Kramer

Email To: ckramer@slrconsulting.com; smiller@slrconsulting.com;

Project Description: Nord Door Project - Everett, WA

City/State Collected: Everett, WA

Phone: 503-723-4423
Fax: 503-723-4436

Client Project # 108.00228.00048 59

Lab Project # SLRWLOR-NORDDOOR

Collected by (print): Steven Losleben

Site/Facility ID # EVERETT, WA

P.O. # 4

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Standard TAT

Immediately Packed on Ice N ___ Y X

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No of Cntrs	Benzene Naph 8260LLC 40mlAmb-HCl	NWTPHDX LVINOSGT 40mlAmb-HCl-BT	SVOCs 8270D 100ml Amb NoPres	Total PP Metals 6020 250mlHDPE-HNO3	VOCs V8260LLC 40mlAmb-HCl	cPAHs (PAHSIMLVID) 40mlAmb-NoPres-WT	Remarks	Sample # (lab only)
GP-601-GW	-	GW	-	4/26/19	0900	9		X	X		X	X		-01
GP-601-GW	-	GW	-	4/26/19	1635	9		X	X		X	X		
		GW												
		GW												
		GW								RAD SCREEN: <0.5 mR/hr				
		GW												
		GW												
		GW												
		GW												
		GW												
		GW												

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
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L# L1093831

Tab B036

Acctnum: SLRWLOR

Template: T148768

Prelogin: P703211

TSR: 110 - Brian Ford

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS ✓ FedEx __ Courier __ _____

Tracking # 4686 6470 0200

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes (No) HCL / MeoH TBR
	4/29/19		1400	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 0.6±0.0.6 PW AL 18
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/30/19 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: (NCF) / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

May 08, 2019

SLR International Corp. - West Linn, OR

Sample Delivery Group:	L1093844
Samples Received:	04/30/2019
Project Number:	108.00228.00059
Description:	Nord Door Project - Everett, WA
Site:	EVERETT, WA
Report To:	Chris Kramer 1800 Blankenship Road, Suite 440 West Linn, OR 97068

Entire Report Reviewed By:

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

GP-MW-11-SS L1093844-01 Solid

Collected by: S.L. | Collected date/time: 04/25/19 15:10 | Received date/time: 04/30/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1275562	1	05/03/19 14:20	05/03/19 14:31	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1274486	1	04/25/19 15:10	05/01/19 12:58	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1275175	1	04/25/19 15:10	05/02/19 14:11	JHH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1275198	5	05/03/19 07:41	05/04/19 17:45	SNR	Mt. Juliet, TN

GP-MW-12-SS L1093844-02 Solid

Collected by: S.L. | Collected date/time: 04/25/19 11:40 | Received date/time: 04/30/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1275562	1	05/03/19 14:20	05/03/19 14:31	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1274486	1	04/25/19 11:40	05/01/19 13:17	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1275238	1	05/02/19 16:00	05/03/19 14:55	DMG	Mt. Juliet, TN

GP-MW-13-SS L1093844-04 Solid

Collected by: S.L. | Collected date/time: 04/25/19 09:40 | Received date/time: 04/30/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1275562	1	05/03/19 14:20	05/03/19 14:31	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1275198	5	05/03/19 07:41	05/04/19 17:07	SNR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1275238	1	05/02/19 16:00	05/03/19 15:16	DMG	Mt. Juliet, TN

GP-MW-14-SS L1093844-05 Solid

Collected by: S.L. | Collected date/time: 04/25/19 14:15 | Received date/time: 04/30/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1275562	1	05/03/19 14:20	05/03/19 14:31	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1275198	5	05/03/19 07:41	05/04/19 17:26	SNR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1276612	1	05/06/19 12:55	05/07/19 12:19	DMG	Mt. Juliet, TN

GP-MW-15-SS L1093844-06 Solid

Collected by: S.L. | Collected date/time: 04/26/19 13:42 | Received date/time: 04/30/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1275562	1	05/03/19 14:20	05/03/19 14:31	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1274486	1	04/26/19 13:42	05/01/19 13:37	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1275175	1	04/26/19 13:42	05/02/19 14:30	JHH	Mt. Juliet, TN

GP-MW-16-SS L1093844-07 Solid

Collected by: S.L. | Collected date/time: 04/26/19 13:15 | Received date/time: 04/30/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1275562	1	05/03/19 14:20	05/03/19 14:31	KDW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1274928	10	05/02/19 08:58	05/02/19 22:43	AAT	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1275198	10	05/03/19 07:41	05/06/19 17:36	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1276612	1	05/06/19 12:55	05/07/19 13:44	DMG	Mt. Juliet, TN

GP-MW-17-SS L1093844-08 Solid

Collected by: S.L. | Collected date/time: 04/26/19 14:50 | Received date/time: 04/30/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1275562	1	05/03/19 14:20	05/03/19 14:31	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1274486	1	04/26/19 14:50	05/01/19 13:57	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1274928	1	05/02/19 08:58	05/02/19 21:25	AAT	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1275198	1	05/03/19 07:41	05/04/19 16:47	SNR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1275198	5	05/03/19 07:41	05/06/19 19:32	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1276612	1	05/06/19 12:55	05/07/19 12:41	DMG	Mt. Juliet, TN

GP-801-SS L1093844-09 Solid

Collected by: S.L. | Collected date/time: 04/26/19 08:45 | Received date/time: 04/30/19 08:45

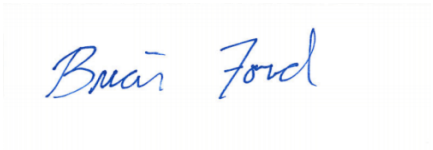
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1275562	1	05/03/19 14:20	05/03/19 14:31	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1274486	1	04/26/19 08:45	05/01/19 14:16	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1274928	10	05/02/19 08:58	05/02/19 23:09	AAT	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1275198	10	05/03/19 07:41	05/06/19 18:15	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1276612	1	05/06/19 12:55	05/07/19 13:02	DMG	Mt. Juliet, TN

GP-802-SS L1093844-10 Solid

Collected by: S.L. | Collected date/time: 04/26/19 16:15 | Received date/time: 04/30/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1275563	1	05/03/19 14:01	05/03/19 14:10	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1274486	1	04/26/19 16:15	05/01/19 14:36	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1274928	1	05/02/19 08:58	05/02/19 22:04	AAT	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1275198	10	05/03/19 07:41	05/06/19 17:56	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1276612	1	05/06/19 12:55	05/07/19 13:23	DMG	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.5		1	05/03/2019 14:31	WG1275562

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0166	0.0303	1	05/01/2019 12:58	WG1274486
Acrylonitrile	U		0.00230	0.0151	1	05/01/2019 12:58	WG1274486
Benzene	0.000853	J	0.000485	0.00121	1	05/01/2019 12:58	WG1274486
Bromobenzene	U		0.00127	0.0151	1	05/01/2019 12:58	WG1274486
Bromodichloromethane	U		0.000955	0.00303	1	05/01/2019 12:58	WG1274486
Bromoform	U		0.00724	0.0303	1	05/01/2019 12:58	WG1274486
Bromomethane	U		0.00448	0.0151	1	05/01/2019 12:58	WG1274486
n-Butylbenzene	U		0.00465	0.0151	1	05/01/2019 12:58	WG1274486
sec-Butylbenzene	U		0.00306	0.0151	1	05/01/2019 12:58	WG1274486
tert-Butylbenzene	U		0.00188	0.00606	1	05/01/2019 12:58	WG1274486
Carbon tetrachloride	U		0.00131	0.00606	1	05/01/2019 12:58	WG1274486
Chlorobenzene	U		0.000694	0.00303	1	05/01/2019 12:58	WG1274486
Chlorodibromomethane	U		0.000545	0.00303	1	05/01/2019 12:58	WG1274486
Chloroethane	U		0.00131	0.00606	1	05/01/2019 12:58	WG1274486
Chloroform	U		0.000503	0.00303	1	05/01/2019 12:58	WG1274486
Chloromethane	U		0.00168	0.0151	1	05/01/2019 12:58	WG1274486
2-Chlorotoluene	U		0.00111	0.00303	1	05/01/2019 12:58	WG1274486
4-Chlorotoluene	U		0.00137	0.00606	1	05/01/2019 12:58	WG1274486
1,2-Dibromo-3-Chloropropane	U	J0	0.00618	0.0303	1	05/01/2019 12:58	WG1274486
1,2-Dibromoethane	U		0.000636	0.00303	1	05/01/2019 12:58	WG1274486
Dibromomethane	U		0.00121	0.00606	1	05/01/2019 12:58	WG1274486
1,2-Dichlorobenzene	U		0.00176	0.00606	1	05/01/2019 12:58	WG1274486
1,3-Dichlorobenzene	U		0.00206	0.00606	1	05/01/2019 12:58	WG1274486
1,4-Dichlorobenzene	U		0.00239	0.00606	1	05/01/2019 12:58	WG1274486
Dichlorodifluoromethane	U	J4	0.000991	0.00303	1	05/01/2019 12:58	WG1274486
1,1-Dichloroethane	U		0.000697	0.00303	1	05/01/2019 12:58	WG1274486
1,2-Dichloroethane	U		0.000575	0.00303	1	05/01/2019 12:58	WG1274486
1,1-Dichloroethene	U		0.000606	0.00303	1	05/01/2019 12:58	WG1274486
cis-1,2-Dichloroethene	U		0.000836	0.00303	1	05/01/2019 12:58	WG1274486
trans-1,2-Dichloroethene	U		0.00173	0.00606	1	05/01/2019 12:58	WG1274486
1,2-Dichloropropane	U		0.00154	0.00606	1	05/01/2019 12:58	WG1274486
1,1-Dichloropropene	U		0.000848	0.00303	1	05/01/2019 12:58	WG1274486
1,3-Dichloropropane	U		0.00212	0.00606	1	05/01/2019 12:58	WG1274486
cis-1,3-Dichloropropene	U		0.000821	0.00303	1	05/01/2019 12:58	WG1274486
trans-1,3-Dichloropropene	U		0.00185	0.00606	1	05/01/2019 12:58	WG1274486
2,2-Dichloropropane	U		0.000961	0.00303	1	05/01/2019 12:58	WG1274486
Di-isopropyl ether	U		0.000424	0.00121	1	05/01/2019 12:58	WG1274486
Ethylbenzene	0.00112	J	0.000642	0.00303	1	05/01/2019 12:58	WG1274486
Hexachloro-1,3-butadiene	U	J0	0.0154	0.0303	1	05/01/2019 12:58	WG1274486
Isopropylbenzene	U		0.00105	0.00303	1	05/01/2019 12:58	WG1274486
p-Isopropyltoluene	U		0.00282	0.00606	1	05/01/2019 12:58	WG1274486
2-Butanone (MEK)	U		0.0151	0.0303	1	05/01/2019 12:58	WG1274486
Methylene Chloride	U		0.00804	0.0303	1	05/01/2019 12:58	WG1274486
4-Methyl-2-pentanone (MIBK)	U		0.0121	0.0303	1	05/01/2019 12:58	WG1274486
Methyl tert-butyl ether	U		0.000357	0.00121	1	05/01/2019 12:58	WG1274486
Naphthalene	0.00812	J	0.00378	0.0151	1	05/02/2019 14:11	WG1275175
n-Propylbenzene	U		0.00143	0.00606	1	05/01/2019 12:58	WG1274486
Styrene	U		0.00331	0.0151	1	05/01/2019 12:58	WG1274486
1,1,1,2-Tetrachloroethane	U		0.000606	0.00303	1	05/01/2019 12:58	WG1274486
1,1,2,2-Tetrachloroethane	U		0.000472	0.00303	1	05/01/2019 12:58	WG1274486

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.000818	0.00303	1	05/01/2019 12:58	WG1274486
Tetrachloroethene	0.00242	J	0.000848	0.00303	1	05/01/2019 12:58	WG1274486
Toluene	0.00430	J	0.00151	0.00606	1	05/01/2019 12:58	WG1274486
1,2,3-Trichlorobenzene	U	J0	0.000757	0.00303	1	05/01/2019 12:58	WG1274486
1,2,4-Trichlorobenzene	U	J0	0.00584	0.0151	1	05/01/2019 12:58	WG1274486
1,1,1-Trichloroethane	U		0.000333	0.00303	1	05/01/2019 12:58	WG1274486
1,1,2-Trichloroethane	U		0.00107	0.00303	1	05/01/2019 12:58	WG1274486
Trichloroethene	U		0.000485	0.00121	1	05/01/2019 12:58	WG1274486
Trichlorofluoromethane	U		0.000606	0.00303	1	05/01/2019 12:58	WG1274486
1,2,3-Trichloropropane	U		0.00618	0.0151	1	05/01/2019 12:58	WG1274486
1,2,4-Trimethylbenzene	0.00405	J	0.00141	0.00606	1	05/01/2019 12:58	WG1274486
1,2,3-Trimethylbenzene	0.00299	J	0.00139	0.00606	1	05/01/2019 12:58	WG1274486
Vinyl chloride	U		0.000827	0.00303	1	05/01/2019 12:58	WG1274486
1,3,5-Trimethylbenzene	U		0.00131	0.00606	1	05/01/2019 12:58	WG1274486
Xylenes, Total	U		0.00579	0.00787	1	05/01/2019 12:58	WG1274486
(S) Toluene-d8	*109*			*75.0-131*		*05/01/2019 12:58*	WG1274486
(S) Toluene-d8	*108*			*75.0-131*		*05/02/2019 14:11*	WG1275175
(S) 4-Bromofluorobenzene	*95.9*			*67.0-138*		*05/01/2019 12:58*	WG1274486
(S) 4-Bromofluorobenzene	*95.2*			*67.0-138*		*05/02/2019 14:11*	WG1275175
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*05/01/2019 12:58*	WG1274486
(S) 1,2-Dichloroethane-d4	*98.6*			*70.0-130*		*05/02/2019 14:11*	WG1275175

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	0.118	J	0.0389	0.202	5	05/04/2019 17:45	WG1275198
Acenaphthylene	U		0.0406	0.202	5	05/04/2019 17:45	WG1275198
Anthracene	U		0.0383	0.202	5	05/04/2019 17:45	WG1275198
Benzo(a)anthracene	U		0.0259	0.202	5	05/04/2019 17:45	WG1275198
Benzo(b)fluoranthene	U		0.0420	0.202	5	05/04/2019 17:45	WG1275198
Benzo(k)fluoranthene	U		0.0353	0.202	5	05/04/2019 17:45	WG1275198
Benzo(g,h,i)perylene	U		0.0437	0.202	5	05/04/2019 17:45	WG1275198
Benzo(a)pyrene	U		0.0332	0.202	5	05/04/2019 17:45	WG1275198
Bis(2-chlorethoxy)methane	U	J3	0.0466	2.02	5	05/04/2019 17:45	WG1275198
Bis(2-chloroethyl)ether	U	J3	0.0543	2.02	5	05/04/2019 17:45	WG1275198
Bis(2-chloroisopropyl)ether	U	J3	0.0460	2.02	5	05/04/2019 17:45	WG1275198
4-Bromophenyl-phenylether	U		0.0691	2.02	5	05/04/2019 17:45	WG1275198
2-Chloronaphthalene	U		0.0388	0.202	5	05/04/2019 17:45	WG1275198
4-Chlorophenyl-phenylether	U		0.0380	2.02	5	05/04/2019 17:45	WG1275198
Chrysene	U		0.0337	0.202	5	05/04/2019 17:45	WG1275198
Dibenz(a,h)anthracene	U		0.0498	0.202	5	05/04/2019 17:45	WG1275198
3,3-Dichlorobenzidine	U		0.481	2.02	5	05/04/2019 17:45	WG1275198
2,4-Dinitrotoluene	U		0.0368	2.02	5	05/04/2019 17:45	WG1275198
2,6-Dinitrotoluene	U		0.0447	2.02	5	05/04/2019 17:45	WG1275198
Fluoranthene	U		0.0300	0.202	5	05/04/2019 17:45	WG1275198
Fluorene	0.0580	J	0.0413	0.202	5	05/04/2019 17:45	WG1275198
Hexachlorobenzene	U		0.0518	2.02	5	05/04/2019 17:45	WG1275198
Hexachloro-1,3-butadiene	U	J3	0.0606	2.02	5	05/04/2019 17:45	WG1275198
Hexachlorocyclopentadiene	U	J3	0.355	2.02	5	05/04/2019 17:45	WG1275198
Hexachloroethane	U	J3	0.0812	2.02	5	05/04/2019 17:45	WG1275198
Indeno(1,2,3-cd)pyrene	U		0.0468	0.202	5	05/04/2019 17:45	WG1275198
Isophorone	U		0.0316	2.02	5	05/04/2019 17:45	WG1275198
Naphthalene	U	J3	0.0539	0.202	5	05/04/2019 17:45	WG1275198
Nitrobenzene	U	J3	0.0420	2.02	5	05/04/2019 17:45	WG1275198
n-Nitrosodimethylamine	U		0.391	2.02	5	05/04/2019 17:45	WG1275198
n-Nitrosodiphenylamine	U		0.545	2.02	5	05/04/2019 17:45	WG1275198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
n-Nitrosodi-n-propylamine	U	J3	0.0549	2.02	5	05/04/2019 17:45	WG1275198
Phenanthrene	0.0532	J	0.0320	0.202	5	05/04/2019 17:45	WG1275198
Pyridine	U	J3	0.380	2.02	5	05/04/2019 17:45	WG1275198
Benzylbutyl phthalate	U		0.0624	2.02	5	05/04/2019 17:45	WG1275198
Bis(2-ethylhexyl)phthalate	U		0.0727	2.02	5	05/04/2019 17:45	WG1275198
Di-n-butyl phthalate	U		0.0660	2.02	5	05/04/2019 17:45	WG1275198
Diethyl phthalate	U		0.0419	2.02	5	05/04/2019 17:45	WG1275198
Dimethyl phthalate	U		0.0327	2.02	5	05/04/2019 17:45	WG1275198
Di-n-octyl phthalate	U		0.0550	2.02	5	05/04/2019 17:45	WG1275198
Pyrene	U		0.0745	0.202	5	05/04/2019 17:45	WG1275198
1,2,4-Trichlorobenzene	U	J3	0.0531	2.02	5	05/04/2019 17:45	WG1275198
4-Chloro-3-methylphenol	U		0.0290	2.02	5	05/04/2019 17:45	WG1275198
2-Chlorophenol	U	J3	0.0503	2.02	5	05/04/2019 17:45	WG1275198
2,4-Dichlorophenol	U		0.0452	2.02	5	05/04/2019 17:45	WG1275198
2,4-Dimethylphenol	U		0.286	2.02	5	05/04/2019 17:45	WG1275198
4,6-Dinitro-2-methylphenol	U		0.751	2.02	5	05/04/2019 17:45	WG1275198
2,4-Dinitrophenol	U	J3	0.594	2.02	5	05/04/2019 17:45	WG1275198
2-Methylphenol	U	J3	0.0597	2.02	5	05/04/2019 17:45	WG1275198
3&4-Methyl Phenol	U		0.0475	2.02	5	05/04/2019 17:45	WG1275198
2-Nitrophenol	U	J3	0.0787	2.02	5	05/04/2019 17:45	WG1275198
4-Nitrophenol	U		0.319	2.02	5	05/04/2019 17:45	WG1275198
Pentachlorophenol	U		0.291	2.02	5	05/04/2019 17:45	WG1275198
Phenol	U		0.0420	2.02	5	05/04/2019 17:45	WG1275198
2,4,6-Trichlorophenol	U		0.0471	2.02	5	05/04/2019 17:45	WG1275198
2,4,5-Trichlorophenol	U		0.0630	2.02	5	05/04/2019 17:45	WG1275198
(S) 2-Fluorophenol	*52.8*			*12.0-120*		*05/04/2019 17:45*	WG1275198
(S) Phenol-d5	*51.7*			*10.0-120*		*05/04/2019 17:45*	WG1275198
(S) Nitrobenzene-d5	*44.7*			*10.0-122*		*05/04/2019 17:45*	WG1275198
(S) 2-Fluorobiphenyl	*52.2*			*15.0-120*		*05/04/2019 17:45*	WG1275198
(S) 2,4,6-Tribromophenol	*61.0*			*10.0-127*		*05/04/2019 17:45*	WG1275198
(S) p-Terphenyl-d14	*60.7*			*10.0-120*		*05/04/2019 17:45*	WG1275198

Sample Narrative:

L1093844-01 WG1275198: Dilution due to viscosity.

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.3		1	05/03/2019 14:31	WG1275562

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0157	0.0286	1	05/01/2019 13:17	WG1274486
Acrylonitrile	U		0.00218	0.0143	1	05/01/2019 13:17	WG1274486
Benzene	U		0.000458	0.00115	1	05/01/2019 13:17	WG1274486
Bromobenzene	U		0.00120	0.0143	1	05/01/2019 13:17	WG1274486
Bromodichloromethane	U		0.000903	0.00286	1	05/01/2019 13:17	WG1274486
Bromoform	U		0.00685	0.0286	1	05/01/2019 13:17	WG1274486
Bromomethane	U		0.00424	0.0143	1	05/01/2019 13:17	WG1274486
n-Butylbenzene	U		0.00440	0.0143	1	05/01/2019 13:17	WG1274486
sec-Butylbenzene	U		0.00290	0.0143	1	05/01/2019 13:17	WG1274486
tert-Butylbenzene	U		0.00178	0.00573	1	05/01/2019 13:17	WG1274486
Carbon tetrachloride	U		0.00124	0.00573	1	05/01/2019 13:17	WG1274486
Chlorobenzene	U		0.000657	0.00286	1	05/01/2019 13:17	WG1274486
Chlorodibromomethane	U		0.000516	0.00286	1	05/01/2019 13:17	WG1274486
Chloroethane	U		0.00124	0.00573	1	05/01/2019 13:17	WG1274486
Chloroform	U		0.000476	0.00286	1	05/01/2019 13:17	WG1274486
Chloromethane	U		0.00159	0.0143	1	05/01/2019 13:17	WG1274486
2-Chlorotoluene	U		0.00105	0.00286	1	05/01/2019 13:17	WG1274486
4-Chlorotoluene	U		0.00129	0.00573	1	05/01/2019 13:17	WG1274486
1,2-Dibromo-3-Chloropropane	U	J0	0.00584	0.0286	1	05/01/2019 13:17	WG1274486
1,2-Dibromoethane	U		0.000602	0.00286	1	05/01/2019 13:17	WG1274486
Dibromomethane	U		0.00115	0.00573	1	05/01/2019 13:17	WG1274486
1,2-Dichlorobenzene	U		0.00166	0.00573	1	05/01/2019 13:17	WG1274486
1,3-Dichlorobenzene	U		0.00195	0.00573	1	05/01/2019 13:17	WG1274486
1,4-Dichlorobenzene	U		0.00226	0.00573	1	05/01/2019 13:17	WG1274486
Dichlorodifluoromethane	U	J4	0.000937	0.00286	1	05/01/2019 13:17	WG1274486
1,1-Dichloroethane	U		0.000659	0.00286	1	05/01/2019 13:17	WG1274486
1,2-Dichloroethane	U		0.000544	0.00286	1	05/01/2019 13:17	WG1274486
1,1-Dichloroethene	U		0.000573	0.00286	1	05/01/2019 13:17	WG1274486
cis-1,2-Dichloroethene	U		0.000791	0.00286	1	05/01/2019 13:17	WG1274486
trans-1,2-Dichloroethene	U		0.00164	0.00573	1	05/01/2019 13:17	WG1274486
1,2-Dichloropropane	U		0.00146	0.00573	1	05/01/2019 13:17	WG1274486
1,1-Dichloropropene	U		0.000802	0.00286	1	05/01/2019 13:17	WG1274486
1,3-Dichloropropane	U		0.00201	0.00573	1	05/01/2019 13:17	WG1274486
cis-1,3-Dichloropropene	U		0.000777	0.00286	1	05/01/2019 13:17	WG1274486
trans-1,3-Dichloropropene	U		0.00175	0.00573	1	05/01/2019 13:17	WG1274486
2,2-Dichloropropane	U		0.000909	0.00286	1	05/01/2019 13:17	WG1274486
Di-isopropyl ether	U		0.000401	0.00115	1	05/01/2019 13:17	WG1274486
Ethylbenzene	U		0.000607	0.00286	1	05/01/2019 13:17	WG1274486
Hexachloro-1,3-butadiene	U	J0	0.0146	0.0286	1	05/01/2019 13:17	WG1274486
Isopropylbenzene	U		0.000989	0.00286	1	05/01/2019 13:17	WG1274486
p-Isopropyltoluene	U		0.00267	0.00573	1	05/01/2019 13:17	WG1274486
2-Butanone (MEK)	U		0.0143	0.0286	1	05/01/2019 13:17	WG1274486
Methylene Chloride	U		0.00761	0.0286	1	05/01/2019 13:17	WG1274486
4-Methyl-2-pentanone (MIBK)	U		0.0115	0.0286	1	05/01/2019 13:17	WG1274486
Methyl tert-butyl ether	U		0.000338	0.00115	1	05/01/2019 13:17	WG1274486
Naphthalene	U		0.00358	0.0143	1	05/01/2019 13:17	WG1274486
n-Propylbenzene	U		0.00135	0.00573	1	05/01/2019 13:17	WG1274486
Styrene	U		0.00313	0.0143	1	05/01/2019 13:17	WG1274486
1,1,1,2-Tetrachloroethane	U		0.000573	0.00286	1	05/01/2019 13:17	WG1274486
1,1,2,2-Tetrachloroethane	U		0.000447	0.00286	1	05/01/2019 13:17	WG1274486

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.000773	0.00286	1	05/01/2019 13:17	WG1274486
Tetrachloroethene	U		0.000802	0.00286	1	05/01/2019 13:17	WG1274486
Toluene	U		0.00143	0.00573	1	05/01/2019 13:17	WG1274486
1,2,3-Trichlorobenzene	U	J0	0.000716	0.00286	1	05/01/2019 13:17	WG1274486
1,2,4-Trichlorobenzene	U	J0	0.00552	0.0143	1	05/01/2019 13:17	WG1274486
1,1,1-Trichloroethane	U		0.000315	0.00286	1	05/01/2019 13:17	WG1274486
1,1,2-Trichloroethane	U		0.00101	0.00286	1	05/01/2019 13:17	WG1274486
Trichloroethene	U		0.000458	0.00115	1	05/01/2019 13:17	WG1274486
Trichlorofluoromethane	U		0.000573	0.00286	1	05/01/2019 13:17	WG1274486
1,2,3-Trichloropropane	U		0.00584	0.0143	1	05/01/2019 13:17	WG1274486
1,2,4-Trimethylbenzene	U		0.00133	0.00573	1	05/01/2019 13:17	WG1274486
1,2,3-Trimethylbenzene	U		0.00132	0.00573	1	05/01/2019 13:17	WG1274486
Vinyl chloride	U		0.000783	0.00286	1	05/01/2019 13:17	WG1274486
1,3,5-Trimethylbenzene	U		0.00124	0.00573	1	05/01/2019 13:17	WG1274486
Xylenes, Total	U		0.00548	0.00745	1	05/01/2019 13:17	WG1274486
(S) Toluene-d8	*108*			*75.0-131*		*05/01/2019 13:17*	WG1274486
(S) 4-Bromofluorobenzene	*92.7*			*67.0-138*		*05/01/2019 13:17*	WG1274486
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*05/01/2019 13:17*	WG1274486

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(a)anthracene	0.00225	J	0.000688	0.00688	1	05/03/2019 14:55	WG1275238
Benzo(a)pyrene	0.00248	J	0.000688	0.00688	1	05/03/2019 14:55	WG1275238
Benzo(b)fluoranthene	0.00335	J	0.000688	0.00688	1	05/03/2019 14:55	WG1275238
Benzo(k)fluoranthene	0.00106	J	0.000688	0.00688	1	05/03/2019 14:55	WG1275238
Chrysene	0.00223	J	0.000688	0.00688	1	05/03/2019 14:55	WG1275238
Dibenz(a,h)anthracene	U		0.000688	0.00688	1	05/03/2019 14:55	WG1275238
Indeno(1,2,3-cd)pyrene	0.00150	J	0.000688	0.00688	1	05/03/2019 14:55	WG1275238
(S) Nitrobenzene-d5	*75.9*			*14.0-149*		*05/03/2019 14:55*	WG1275238
(S) 2-Fluorobiphenyl	*74.0*			*34.0-125*		*05/03/2019 14:55*	WG1275238
(S) p-Terphenyl-d14	*76.7*			*23.0-120*		*05/03/2019 14:55*	WG1275238

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.0		1	05/03/2019 14:31	WG1275562

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	U		0.0365	0.190	5	05/04/2019 17:07	WG1275198
Acenaphthylene	U		0.0381	0.190	5	05/04/2019 17:07	WG1275198
Anthracene	U		0.0359	0.190	5	05/04/2019 17:07	WG1275198
Benzo(a)anthracene	U		0.0243	0.190	5	05/04/2019 17:07	WG1275198
Benzo(b)fluoranthene	U		0.0394	0.190	5	05/04/2019 17:07	WG1275198
Benzo(k)fluoranthene	U		0.0331	0.190	5	05/04/2019 17:07	WG1275198
Benzo(g,h,i)perylene	U		0.0410	0.190	5	05/04/2019 17:07	WG1275198
Benzo(a)pyrene	U		0.0311	0.190	5	05/04/2019 17:07	WG1275198
Bis(2-chlorethoxy)methane	U	J3	0.0438	1.90	5	05/04/2019 17:07	WG1275198
Bis(2-chloroethyl)ether	U	J3	0.0509	1.90	5	05/04/2019 17:07	WG1275198
Bis(2-chloroisopropyl)ether	U	J3	0.0432	1.90	5	05/04/2019 17:07	WG1275198
4-Bromophenyl-phenylether	U		0.0648	1.90	5	05/04/2019 17:07	WG1275198
2-Chloronaphthalene	U		0.0364	0.190	5	05/04/2019 17:07	WG1275198
4-Chlorophenyl-phenylether	U		0.0357	1.90	5	05/04/2019 17:07	WG1275198
Chrysene	U		0.0316	0.190	5	05/04/2019 17:07	WG1275198
Dibenz(a,h)anthracene	U		0.0467	0.190	5	05/04/2019 17:07	WG1275198
3,3-Dichlorobenzidine	U		0.451	1.90	5	05/04/2019 17:07	WG1275198
2,4-Dinitrotoluene	U		0.0345	1.90	5	05/04/2019 17:07	WG1275198
2,6-Dinitrotoluene	U		0.0419	1.90	5	05/04/2019 17:07	WG1275198
Fluoranthene	U		0.0282	0.190	5	05/04/2019 17:07	WG1275198
Fluorene	U		0.0388	0.190	5	05/04/2019 17:07	WG1275198
Hexachlorobenzene	U		0.0486	1.90	5	05/04/2019 17:07	WG1275198
Hexachloro-1,3-butadiene	U	J3	0.0568	1.90	5	05/04/2019 17:07	WG1275198
Hexachlorocyclopentadiene	U	J3	0.333	1.90	5	05/04/2019 17:07	WG1275198
Hexachloroethane	U	J3	0.0761	1.90	5	05/04/2019 17:07	WG1275198
Indeno(1,2,3-cd)pyrene	U		0.0439	0.190	5	05/04/2019 17:07	WG1275198
Isophorone	U		0.0297	1.90	5	05/04/2019 17:07	WG1275198
Naphthalene	U	J3	0.0506	0.190	5	05/04/2019 17:07	WG1275198
Nitrobenzene	U	J3	0.0394	1.90	5	05/04/2019 17:07	WG1275198
n-Nitrosodimethylamine	U		0.367	1.90	5	05/04/2019 17:07	WG1275198
n-Nitrosodiphenylamine	U		0.511	1.90	5	05/04/2019 17:07	WG1275198
n-Nitrosodi-n-propylamine	U	J3	0.0515	1.90	5	05/04/2019 17:07	WG1275198
Phenanthrene	U		0.0300	0.190	5	05/04/2019 17:07	WG1275198
Pyridine	U	J3	0.357	1.90	5	05/04/2019 17:07	WG1275198
Benzylbutyl phthalate	U		0.0585	1.90	5	05/04/2019 17:07	WG1275198
Bis(2-ethylhexyl)phthalate	U		0.0682	1.90	5	05/04/2019 17:07	WG1275198
Di-n-butyl phthalate	U		0.0619	1.90	5	05/04/2019 17:07	WG1275198
Diethyl phthalate	U		0.0393	1.90	5	05/04/2019 17:07	WG1275198
Dimethyl phthalate	U		0.0307	1.90	5	05/04/2019 17:07	WG1275198
Di-n-octyl phthalate	U		0.0516	1.90	5	05/04/2019 17:07	WG1275198
Pyrene	U		0.0699	0.190	5	05/04/2019 17:07	WG1275198
1,2,4-Trichlorobenzene	U	J3	0.0498	1.90	5	05/04/2019 17:07	WG1275198
4-Chloro-3-methylphenol	U		0.0272	1.90	5	05/04/2019 17:07	WG1275198
2-Chlorophenol	U	J3	0.0472	1.90	5	05/04/2019 17:07	WG1275198
2,4-Dichlorophenol	U		0.0424	1.90	5	05/04/2019 17:07	WG1275198
2,4-Dimethylphenol	U		0.268	1.90	5	05/04/2019 17:07	WG1275198
4,6-Dinitro-2-methylphenol	U		0.705	1.90	5	05/04/2019 17:07	WG1275198
2,4-Dinitrophenol	U	J3	0.557	1.90	5	05/04/2019 17:07	WG1275198
2-Methylphenol	U	J3	0.0560	1.90	5	05/04/2019 17:07	WG1275198
3&4-Methyl Phenol	U		0.0445	1.90	5	05/04/2019 17:07	WG1275198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Nitrophenol	U	J3	0.0739	1.90	5	05/04/2019 17:07	WG1275198
4-Nitrophenol	U		0.299	1.90	5	05/04/2019 17:07	WG1275198
Pentachlorophenol	U		0.273	1.90	5	05/04/2019 17:07	WG1275198
Phenol	U		0.0394	1.90	5	05/04/2019 17:07	WG1275198
2,4,6-Trichlorophenol	U		0.0442	1.90	5	05/04/2019 17:07	WG1275198
2,4,5-Trichlorophenol	U		0.0591	1.90	5	05/04/2019 17:07	WG1275198
(S) 2-Fluorophenol	*82.2*			*12.0-120*		*05/04/2019 17:07*	WG1275198
(S) Phenol-d5	*74.1*			*10.0-120*		*05/04/2019 17:07*	WG1275198
(S) Nitrobenzene-d5	*65.4*			*10.0-122*		*05/04/2019 17:07*	WG1275198
(S) 2-Fluorobiphenyl	*67.9*			*15.0-120*		*05/04/2019 17:07*	WG1275198
(S) 2,4,6-Tribromophenol	*65.1*			*10.0-127*		*05/04/2019 17:07*	WG1275198
(S) p-Terphenyl-d14	*82.9*			*10.0-120*		*05/04/2019 17:07*	WG1275198

Sample Narrative:

L1093844-04 WG1275198: Dilution due to viscosity.

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(a)anthracene	0.00227	J	0.000682	0.00682	1	05/03/2019 15:16	WG1275238
Benzo(a)pyrene	0.00216	J	0.000682	0.00682	1	05/03/2019 15:16	WG1275238
Benzo(b)fluoranthene	0.00230	J	0.000682	0.00682	1	05/03/2019 15:16	WG1275238
Benzo(k)fluoranthene	0.000788	J	0.000682	0.00682	1	05/03/2019 15:16	WG1275238
Chrysene	0.00206	J	0.000682	0.00682	1	05/03/2019 15:16	WG1275238
Dibenz(a,h)anthracene	U		0.000682	0.00682	1	05/03/2019 15:16	WG1275238
Indeno(1,2,3-cd)pyrene	0.00105	J	0.000682	0.00682	1	05/03/2019 15:16	WG1275238
(S) Nitrobenzene-d5	*83.1*			*14.0-149*		*05/03/2019 15:16*	WG1275238
(S) 2-Fluorobiphenyl	*79.7*			*34.0-125*		*05/03/2019 15:16*	WG1275238
(S) p-Terphenyl-d14	*82.2*			*23.0-120*		*05/03/2019 15:16*	WG1275238

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.5		1	05/03/2019 14:31	WG1275562

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	U		0.0371	0.193	5	05/04/2019 17:26	WG1275198
Acenaphthylene	U		0.0387	0.193	5	05/04/2019 17:26	WG1275198
Anthracene	0.0479	J	0.0365	0.193	5	05/04/2019 17:26	WG1275198
Benzo(a)anthracene	0.0992	J	0.0247	0.193	5	05/04/2019 17:26	WG1275198
Benzo(b)fluoranthene	0.0813	J	0.0401	0.193	5	05/04/2019 17:26	WG1275198
Benzo(k)fluoranthene	U		0.0336	0.193	5	05/04/2019 17:26	WG1275198
Benzo(g,h,i)perylene	0.0458	J	0.0417	0.193	5	05/04/2019 17:26	WG1275198
Benzo(a)pyrene	0.0810	J	0.0317	0.193	5	05/04/2019 17:26	WG1275198
Bis(2-chlorethoxy)methane	U	J3	0.0445	1.93	5	05/04/2019 17:26	WG1275198
Bis(2-chloroethyl)ether	U	J3	0.0518	1.93	5	05/04/2019 17:26	WG1275198
Bis(2-chloroisopropyl)ether	U	J3	0.0439	1.93	5	05/04/2019 17:26	WG1275198
4-Bromophenyl-phenylether	U		0.0659	1.93	5	05/04/2019 17:26	WG1275198
2-Chloronaphthalene	U		0.0370	0.193	5	05/04/2019 17:26	WG1275198
4-Chlorophenyl-phenylether	U		0.0363	1.93	5	05/04/2019 17:26	WG1275198
Chrysene	0.0891	J	0.0321	0.193	5	05/04/2019 17:26	WG1275198
Dibenz(a,h)anthracene	U		0.0475	0.193	5	05/04/2019 17:26	WG1275198
3,3-Dichlorobenzidine	U		0.459	1.93	5	05/04/2019 17:26	WG1275198
2,4-Dinitrotoluene	U		0.0351	1.93	5	05/04/2019 17:26	WG1275198
2,6-Dinitrotoluene	U		0.0427	1.93	5	05/04/2019 17:26	WG1275198
Fluoranthene	0.190	J	0.0287	0.193	5	05/04/2019 17:26	WG1275198
Fluorene	U		0.0394	0.193	5	05/04/2019 17:26	WG1275198
Hexachlorobenzene	U		0.0495	1.93	5	05/04/2019 17:26	WG1275198
Hexachloro-1,3-butadiene	U	J3	0.0578	1.93	5	05/04/2019 17:26	WG1275198
Hexachlorocyclopentadiene	U	J3	0.339	1.93	5	05/04/2019 17:26	WG1275198
Hexachloroethane	U	J3	0.0775	1.93	5	05/04/2019 17:26	WG1275198
Indeno(1,2,3-cd)pyrene	0.0495	J	0.0446	0.193	5	05/04/2019 17:26	WG1275198
Isophorone	U		0.0302	1.93	5	05/04/2019 17:26	WG1275198
Naphthalene	U	J3	0.0514	0.193	5	05/04/2019 17:26	WG1275198
Nitrobenzene	U	J3	0.0401	1.93	5	05/04/2019 17:26	WG1275198
n-Nitrosodimethylamine	U		0.373	1.93	5	05/04/2019 17:26	WG1275198
n-Nitrosodiphenylamine	U		0.520	1.93	5	05/04/2019 17:26	WG1275198
n-Nitrosodi-n-propylamine	U	J3	0.0524	1.93	5	05/04/2019 17:26	WG1275198
Phenanthrene	0.116	J	0.0305	0.193	5	05/04/2019 17:26	WG1275198
Pyridine	U	J3	0.363	1.93	5	05/04/2019 17:26	WG1275198
Benzylbutyl phthalate	U		0.0595	1.93	5	05/04/2019 17:26	WG1275198
Bis(2-ethylhexyl)phthalate	U		0.0694	1.93	5	05/04/2019 17:26	WG1275198
Di-n-butyl phthalate	U		0.0630	1.93	5	05/04/2019 17:26	WG1275198
Diethyl phthalate	U		0.0400	1.93	5	05/04/2019 17:26	WG1275198
Dimethyl phthalate	U		0.0312	1.93	5	05/04/2019 17:26	WG1275198
Di-n-octyl phthalate	U		0.0525	1.93	5	05/04/2019 17:26	WG1275198
Pyrene	0.187	J	0.0711	0.193	5	05/04/2019 17:26	WG1275198
1,2,4-Trichlorobenzene	U	J3	0.0506	1.93	5	05/04/2019 17:26	WG1275198
4-Chloro-3-methylphenol	U		0.0276	1.93	5	05/04/2019 17:26	WG1275198
2-Chlorophenol	U	J3	0.0480	1.93	5	05/04/2019 17:26	WG1275198
2,4-Dichlorophenol	U		0.0431	1.93	5	05/04/2019 17:26	WG1275198
2,4-Dimethylphenol	U		0.273	1.93	5	05/04/2019 17:26	WG1275198
4,6-Dinitro-2-methylphenol	U		0.717	1.93	5	05/04/2019 17:26	WG1275198
2,4-Dinitrophenol	U	J3	0.567	1.93	5	05/04/2019 17:26	WG1275198
2-Methylphenol	U	J3	0.0570	1.93	5	05/04/2019 17:26	WG1275198
3&4-Methyl Phenol	U		0.0453	1.93	5	05/04/2019 17:26	WG1275198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Nitrophenol	U	J3	0.0751	1.93	5	05/04/2019 17:26	WG1275198
4-Nitrophenol	U		0.304	1.93	5	05/04/2019 17:26	WG1275198
Pentachlorophenol	U		0.277	1.93	5	05/04/2019 17:26	WG1275198
Phenol	U		0.0401	1.93	5	05/04/2019 17:26	WG1275198
2,4,6-Trichlorophenol	U		0.0450	1.93	5	05/04/2019 17:26	WG1275198
2,4,5-Trichlorophenol	U		0.0601	1.93	5	05/04/2019 17:26	WG1275198
(S) 2-Fluorophenol	*60.2*			*12.0-120*		*05/04/2019 17:26*	WG1275198
(S) Phenol-d5	*58.0*			*10.0-120*		*05/04/2019 17:26*	WG1275198
(S) Nitrobenzene-d5	*50.6*			*10.0-122*		*05/04/2019 17:26*	WG1275198
(S) 2-Fluorobiphenyl	*50.3*			*15.0-120*		*05/04/2019 17:26*	WG1275198
(S) 2,4,6-Tribromophenol	*61.4*			*10.0-127*		*05/04/2019 17:26*	WG1275198
(S) p-Terphenyl-d14	*57.0*			*10.0-120*		*05/04/2019 17:26*	WG1275198

Sample Narrative:

L1093844-05 WG1275198: Dilution due to viscosity.

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(a)anthracene	0.00395	J	0.000694	0.00694	1	05/07/2019 12:19	WG1276612
Benzo(a)pyrene	0.00447	J	0.000694	0.00694	1	05/07/2019 12:19	WG1276612
Benzo(b)fluoranthene	0.00465	J	0.000694	0.00694	1	05/07/2019 12:19	WG1276612
Benzo(k)fluoranthene	0.00158	J	0.000694	0.00694	1	05/07/2019 12:19	WG1276612
Chrysene	0.00513	J	0.000694	0.00694	1	05/07/2019 12:19	WG1276612
Dibenz(a,h)anthracene	U		0.000694	0.00694	1	05/07/2019 12:19	WG1276612
Indeno(1,2,3-cd)pyrene	0.00185	J	0.000694	0.00694	1	05/07/2019 12:19	WG1276612
(S) Nitrobenzene-d5	*98.7*			*14.0-149*		*05/07/2019 12:19*	WG1276612
(S) 2-Fluorobiphenyl	*85.1*			*34.0-125*		*05/07/2019 12:19*	WG1276612
(S) p-Terphenyl-d14	*108*			*23.0-120*		*05/07/2019 12:19*	WG1276612

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	61.3		1	05/03/2019 14:31	WG1275562

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0223	0.0408	1	05/01/2019 13:37	WG1274486
Acrylonitrile	U		0.00310	0.0204	1	05/01/2019 13:37	WG1274486
Benzene	U		0.000652	0.00163	1	05/01/2019 13:37	WG1274486
Bromobenzene	U		0.00171	0.0204	1	05/01/2019 13:37	WG1274486
Bromodichloromethane	U		0.00129	0.00408	1	05/01/2019 13:37	WG1274486
Bromoform	U		0.00975	0.0408	1	05/01/2019 13:37	WG1274486
Bromomethane	U		0.00603	0.0204	1	05/01/2019 13:37	WG1274486
n-Butylbenzene	U		0.00626	0.0204	1	05/01/2019 13:37	WG1274486
sec-Butylbenzene	U		0.00413	0.0204	1	05/01/2019 13:37	WG1274486
tert-Butylbenzene	U		0.00253	0.00815	1	05/01/2019 13:37	WG1274486
Carbon tetrachloride	U		0.00176	0.00815	1	05/01/2019 13:37	WG1274486
Chlorobenzene	U		0.000934	0.00408	1	05/01/2019 13:37	WG1274486
Chlorodibromomethane	U		0.000734	0.00408	1	05/01/2019 13:37	WG1274486
Chloroethane	U		0.00176	0.00815	1	05/01/2019 13:37	WG1274486
Chloroform	U		0.000677	0.00408	1	05/01/2019 13:37	WG1274486
Chloromethane	U		0.00227	0.0204	1	05/01/2019 13:37	WG1274486
2-Chlorotoluene	U		0.00150	0.00408	1	05/01/2019 13:37	WG1274486
4-Chlorotoluene	U		0.00184	0.00815	1	05/01/2019 13:37	WG1274486
1,2-Dibromo-3-Chloropropane	U	J0	0.00832	0.0408	1	05/01/2019 13:37	WG1274486
1,2-Dibromoethane	U		0.000856	0.00408	1	05/01/2019 13:37	WG1274486
Dibromomethane	U		0.00163	0.00815	1	05/01/2019 13:37	WG1274486
1,2-Dichlorobenzene	U		0.00236	0.00815	1	05/01/2019 13:37	WG1274486
1,3-Dichlorobenzene	U		0.00277	0.00815	1	05/01/2019 13:37	WG1274486
1,4-Dichlorobenzene	U		0.00321	0.00815	1	05/01/2019 13:37	WG1274486
Dichlorodifluoromethane	U	J4	0.00133	0.00408	1	05/01/2019 13:37	WG1274486
1,1-Dichloroethane	U		0.000938	0.00408	1	05/01/2019 13:37	WG1274486
1,2-Dichloroethane	U		0.000775	0.00408	1	05/01/2019 13:37	WG1274486
1,1-Dichloroethene	U		0.000815	0.00408	1	05/01/2019 13:37	WG1274486
cis-1,2-Dichloroethene	U		0.00113	0.00408	1	05/01/2019 13:37	WG1274486
trans-1,2-Dichloroethene	U		0.00233	0.00815	1	05/01/2019 13:37	WG1274486
1,2-Dichloropropane	U		0.00207	0.00815	1	05/01/2019 13:37	WG1274486
1,1-Dichloropropene	U		0.00114	0.00408	1	05/01/2019 13:37	WG1274486
1,3-Dichloropropane	U		0.00285	0.00815	1	05/01/2019 13:37	WG1274486
cis-1,3-Dichloropropene	U		0.00111	0.00408	1	05/01/2019 13:37	WG1274486
trans-1,3-Dichloropropene	U		0.00250	0.00815	1	05/01/2019 13:37	WG1274486
2,2-Dichloropropane	U		0.00129	0.00408	1	05/01/2019 13:37	WG1274486
Di-isopropyl ether	U		0.000571	0.00163	1	05/01/2019 13:37	WG1274486
Ethylbenzene	U		0.000864	0.00408	1	05/01/2019 13:37	WG1274486
Hexachloro-1,3-butadiene	U	J0	0.0207	0.0408	1	05/01/2019 13:37	WG1274486
Isopropylbenzene	U		0.00141	0.00408	1	05/01/2019 13:37	WG1274486
p-Isopropyltoluene	U		0.00380	0.00815	1	05/01/2019 13:37	WG1274486
2-Butanone (MEK)	U		0.0204	0.0408	1	05/01/2019 13:37	WG1274486
Methylene Chloride	U		0.0108	0.0408	1	05/01/2019 13:37	WG1274486
4-Methyl-2-pentanone (MIBK)	U		0.0163	0.0408	1	05/01/2019 13:37	WG1274486
Methyl tert-butyl ether	U		0.000481	0.00163	1	05/01/2019 13:37	WG1274486
Naphthalene	0.00883	J	0.00509	0.0204	1	05/02/2019 14:30	WG1275175
n-Propylbenzene	U		0.00192	0.00815	1	05/01/2019 13:37	WG1274486
Styrene	U		0.00445	0.0204	1	05/01/2019 13:37	WG1274486
1,1,1,2-Tetrachloroethane	U		0.000815	0.00408	1	05/01/2019 13:37	WG1274486
1,1,2,2-Tetrachloroethane	U		0.000636	0.00408	1	05/01/2019 13:37	WG1274486

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.00110	0.00408	1	05/01/2019 13:37	WG1274486
Tetrachloroethene	0.00162	J	0.00114	0.00408	1	05/01/2019 13:37	WG1274486
Toluene	0.00268	J	0.00204	0.00815	1	05/01/2019 13:37	WG1274486
1,2,3-Trichlorobenzene	U	J0	0.00102	0.00408	1	05/01/2019 13:37	WG1274486
1,2,4-Trichlorobenzene	U	J0	0.00786	0.0204	1	05/01/2019 13:37	WG1274486
1,1,1-Trichloroethane	U		0.000448	0.00408	1	05/01/2019 13:37	WG1274486
1,1,2-Trichloroethane	U		0.00144	0.00408	1	05/01/2019 13:37	WG1274486
Trichloroethene	U		0.000652	0.00163	1	05/01/2019 13:37	WG1274486
Trichlorofluoromethane	U		0.000815	0.00408	1	05/01/2019 13:37	WG1274486
1,2,3-Trichloropropane	U		0.00832	0.0204	1	05/01/2019 13:37	WG1274486
1,2,4-Trimethylbenzene	U		0.00189	0.00815	1	05/01/2019 13:37	WG1274486
1,2,3-Trimethylbenzene	U		0.00188	0.00815	1	05/01/2019 13:37	WG1274486
Vinyl chloride	U		0.00111	0.00408	1	05/01/2019 13:37	WG1274486
1,3,5-Trimethylbenzene	U		0.00176	0.00815	1	05/01/2019 13:37	WG1274486
Xylenes, Total	U		0.00779	0.0106	1	05/01/2019 13:37	WG1274486
(S) Toluene-d8	*107*			*75.0-131*		*05/01/2019 13:37*	WG1274486
(S) Toluene-d8	*106*			*75.0-131*		*05/02/2019 14:30*	WG1275175
(S) 4-Bromofluorobenzene	*94.0*			*67.0-138*		*05/01/2019 13:37*	WG1274486
(S) 4-Bromofluorobenzene	*92.7*			*67.0-138*		*05/02/2019 14:30*	WG1275175
(S) 1,2-Dichloroethane-d4	*98.6*			*70.0-130*		*05/01/2019 13:37*	WG1274486
(S) 1,2-Dichloroethane-d4	*99.1*			*70.0-130*		*05/02/2019 14:30*	WG1275175

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.0		1	05/03/2019 14:31	WG1275562

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	62.7		15.7	47.1	10	05/02/2019 22:43	WG1274928
Residual Range Organics (RRO)	604		39.2	118	10	05/02/2019 22:43	WG1274928
(S) o-Terphenyl	*44.7*			*18.0-148*		*05/02/2019 22:43*	WG1274928

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	U		0.0756	0.392	10	05/06/2019 17:36	WG1275198
Acenaphthylene	U		0.0790	0.392	10	05/06/2019 17:36	WG1275198
Anthracene	U		0.0744	0.392	10	05/06/2019 17:36	WG1275198
Benzo(a)anthracene	U		0.0504	0.392	10	05/06/2019 17:36	WG1275198
Benzo(b)fluoranthene	U		0.0818	0.392	10	05/06/2019 17:36	WG1275198
Benzo(k)fluoranthene	U		0.0685	0.392	10	05/06/2019 17:36	WG1275198
Benzo(g,h,i)perylene	U		0.0849	0.392	10	05/06/2019 17:36	WG1275198
Benzo(a)pyrene	U		0.0645	0.392	10	05/06/2019 17:36	WG1275198
Bis(2-chlorethoxy)methane	U	J3	0.0906	3.92	10	05/06/2019 17:36	WG1275198
Bis(2-chloroethyl)ether	U	J3	0.105	3.92	10	05/06/2019 17:36	WG1275198
Bis(2-chloroisopropyl)ether	U	J3	0.0894	3.92	10	05/06/2019 17:36	WG1275198
4-Bromophenyl-phenylether	U		0.134	3.92	10	05/06/2019 17:36	WG1275198
2-Chloronaphthalene	U		0.0752	0.392	10	05/06/2019 17:36	WG1275198
4-Chlorophenyl-phenylether	U		0.0738	3.92	10	05/06/2019 17:36	WG1275198
Chrysene	U		0.0653	0.392	10	05/06/2019 17:36	WG1275198
Dibenz(a,h)anthracene	U		0.0966	0.392	10	05/06/2019 17:36	WG1275198
3,3-Dichlorobenzidine	U		0.935	3.92	10	05/06/2019 17:36	WG1275198
2,4-Dinitrotoluene	U		0.0714	3.92	10	05/06/2019 17:36	WG1275198
2,6-Dinitrotoluene	U		0.0867	3.92	10	05/06/2019 17:36	WG1275198
Fluoranthene	U		0.0584	0.392	10	05/06/2019 17:36	WG1275198
Fluorene	U		0.0803	0.392	10	05/06/2019 17:36	WG1275198
Hexachlorobenzene	U		0.101	3.92	10	05/06/2019 17:36	WG1275198
Hexachloro-1,3-butadiene	U	J3	0.118	3.92	10	05/06/2019 17:36	WG1275198
Hexachlorocyclopentadiene	U	J0 J3	0.691	3.92	10	05/06/2019 17:36	WG1275198
Hexachloroethane	U	J3	0.158	3.92	10	05/06/2019 17:36	WG1275198
Indeno(1,2,3-cd)pyrene	U		0.0909	0.392	10	05/06/2019 17:36	WG1275198
Isophorone	U		0.0614	3.92	10	05/06/2019 17:36	WG1275198
Naphthalene	U	J3	0.105	0.392	10	05/06/2019 17:36	WG1275198
Nitrobenzene	U	J3	0.0818	3.92	10	05/06/2019 17:36	WG1275198
n-Nitrosodimethylamine	U		0.761	3.92	10	05/06/2019 17:36	WG1275198
n-Nitrosodiphenylamine	U		1.06	3.92	10	05/06/2019 17:36	WG1275198
n-Nitrosodi-n-propylamine	U	J3	0.107	3.92	10	05/06/2019 17:36	WG1275198
Phenanthrene	U		0.0621	0.392	10	05/06/2019 17:36	WG1275198
Pyridine	U	J3	0.739	3.92	10	05/06/2019 17:36	WG1275198
Benzylbutyl phthalate	U		0.121	3.92	10	05/06/2019 17:36	WG1275198
Bis(2-ethylhexyl)phthalate	U		0.141	3.92	10	05/06/2019 17:36	WG1275198
Di-n-butyl phthalate	U		0.128	3.92	10	05/06/2019 17:36	WG1275198
Diethyl phthalate	U		0.0813	3.92	10	05/06/2019 17:36	WG1275198
Dimethyl phthalate	U		0.0636	3.92	10	05/06/2019 17:36	WG1275198
Di-n-octyl phthalate	U		0.107	3.92	10	05/06/2019 17:36	WG1275198
Pyrene	U		0.145	0.392	10	05/06/2019 17:36	WG1275198
1,2,4-Trichlorobenzene	U	J3	0.103	3.92	10	05/06/2019 17:36	WG1275198
4-Chloro-3-methylphenol	U		0.0561	3.92	10	05/06/2019 17:36	WG1275198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Chlorophenol	U	J3	0.0978	3.92	10	05/06/2019 17:36	WG1275198
2,4-Dichlorophenol	U		0.0878	3.92	10	05/06/2019 17:36	WG1275198
2,4-Dimethylphenol	U	J0	0.554	3.92	10	05/06/2019 17:36	WG1275198
4,6-Dinitro-2-methylphenol	U		1.46	3.92	10	05/06/2019 17:36	WG1275198
2,4-Dinitrophenol	U	J3	1.15	3.92	10	05/06/2019 17:36	WG1275198
2-Methylphenol	U	J3	0.116	3.92	10	05/06/2019 17:36	WG1275198
3&4-Methyl Phenol	U		0.0922	3.92	10	05/06/2019 17:36	WG1275198
2-Nitrophenol	U	J3	0.153	3.92	10	05/06/2019 17:36	WG1275198
4-Nitrophenol	U		0.618	3.92	10	05/06/2019 17:36	WG1275198
Pentachlorophenol	U		0.565	3.92	10	05/06/2019 17:36	WG1275198
Phenol	U		0.0818	3.92	10	05/06/2019 17:36	WG1275198
2,4,6-Trichlorophenol	U		0.0917	3.92	10	05/06/2019 17:36	WG1275198
2,4,5-Trichlorophenol	U		0.122	3.92	10	05/06/2019 17:36	WG1275198
(S) 2-Fluorophenol	*75.8*			*12.0-120*		*05/06/2019 17:36*	WG1275198
(S) Phenol-d5	*69.3*			*10.0-120*		*05/06/2019 17:36*	WG1275198
(S) Nitrobenzene-d5	*61.3*			*10.0-122*		*05/06/2019 17:36*	WG1275198
(S) 2-Fluorobiphenyl	*60.4*			*15.0-120*		*05/06/2019 17:36*	WG1275198
(S) 2,4,6-Tribromophenol	*62.4*			*10.0-127*		*05/06/2019 17:36*	WG1275198
(S) p-Terphenyl-d14	*64.7*			*10.0-120*		*05/06/2019 17:36*	WG1275198

Sample Narrative:

L1093844-07 WG1275198: Dilution due to matrix impact during extract concentration procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(a)anthracene	0.00551	J	0.000706	0.00706	1	05/07/2019 13:44	WG1276612
Benzo(a)pyrene	0.00630	J	0.000706	0.00706	1	05/07/2019 13:44	WG1276612
Benzo(b)fluoranthene	0.0109		0.000706	0.00706	1	05/07/2019 13:44	WG1276612
Benzo(k)fluoranthene	0.00271	J	0.000706	0.00706	1	05/07/2019 13:44	WG1276612
Chrysene	0.0214		0.000706	0.00706	1	05/07/2019 13:44	WG1276612
Dibenz(a,h)anthracene	U		0.000706	0.00706	1	05/07/2019 13:44	WG1276612
Indeno(1,2,3-cd)pyrene	0.00231	J	0.000706	0.00706	1	05/07/2019 13:44	WG1276612
(S) Nitrobenzene-d5	*89.7*			*14.0-149*		*05/07/2019 13:44*	WG1276612
(S) 2-Fluorobiphenyl	*76.4*			*34.0-125*		*05/07/2019 13:44*	WG1276612
(S) p-Terphenyl-d14	*79.7*			*23.0-120*		*05/07/2019 13:44*	WG1276612

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.5		1	05/03/2019 14:31	WG1275562

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0170	0.0311	1	05/01/2019 13:57	WG1274486
Acrylonitrile	U		0.00236	0.0155	1	05/01/2019 13:57	WG1274486
Benzene	U		0.000497	0.00124	1	05/01/2019 13:57	WG1274486
Bromobenzene	U		0.00130	0.0155	1	05/01/2019 13:57	WG1274486
Bromodichloromethane	U		0.000979	0.00311	1	05/01/2019 13:57	WG1274486
Bromoform	U		0.00743	0.0311	1	05/01/2019 13:57	WG1274486
Bromomethane	U		0.00460	0.0155	1	05/01/2019 13:57	WG1274486
n-Butylbenzene	U		0.00477	0.0155	1	05/01/2019 13:57	WG1274486
sec-Butylbenzene	U		0.00314	0.0155	1	05/01/2019 13:57	WG1274486
tert-Butylbenzene	U		0.00193	0.00621	1	05/01/2019 13:57	WG1274486
Carbon tetrachloride	U		0.00134	0.00621	1	05/01/2019 13:57	WG1274486
Chlorobenzene	U		0.000712	0.00311	1	05/01/2019 13:57	WG1274486
Chlorodibromomethane	U		0.000559	0.00311	1	05/01/2019 13:57	WG1274486
Chloroethane	U		0.00134	0.00621	1	05/01/2019 13:57	WG1274486
Chloroform	U		0.000516	0.00311	1	05/01/2019 13:57	WG1274486
Chloromethane	U		0.00173	0.0155	1	05/01/2019 13:57	WG1274486
2-Chlorotoluene	U		0.00114	0.00311	1	05/01/2019 13:57	WG1274486
4-Chlorotoluene	U		0.00140	0.00621	1	05/01/2019 13:57	WG1274486
1,2-Dibromo-3-Chloropropane	U	J0	0.00634	0.0311	1	05/01/2019 13:57	WG1274486
1,2-Dibromoethane	U		0.000652	0.00311	1	05/01/2019 13:57	WG1274486
Dibromomethane	U		0.00124	0.00621	1	05/01/2019 13:57	WG1274486
1,2-Dichlorobenzene	U		0.00180	0.00621	1	05/01/2019 13:57	WG1274486
1,3-Dichlorobenzene	U		0.00211	0.00621	1	05/01/2019 13:57	WG1274486
1,4-Dichlorobenzene	U		0.00245	0.00621	1	05/01/2019 13:57	WG1274486
Dichlorodifluoromethane	U	J4	0.00102	0.00311	1	05/01/2019 13:57	WG1274486
1,1-Dichloroethane	U		0.000714	0.00311	1	05/01/2019 13:57	WG1274486
1,2-Dichloroethane	U		0.000590	0.00311	1	05/01/2019 13:57	WG1274486
1,1-Dichloroethene	U		0.000621	0.00311	1	05/01/2019 13:57	WG1274486
cis-1,2-Dichloroethene	U		0.000857	0.00311	1	05/01/2019 13:57	WG1274486
trans-1,2-Dichloroethene	U		0.00178	0.00621	1	05/01/2019 13:57	WG1274486
1,2-Dichloropropane	U		0.00158	0.00621	1	05/01/2019 13:57	WG1274486
1,1-Dichloropropene	U		0.000870	0.00311	1	05/01/2019 13:57	WG1274486
1,3-Dichloropropane	U		0.00217	0.00621	1	05/01/2019 13:57	WG1274486
cis-1,3-Dichloropropene	U		0.000842	0.00311	1	05/01/2019 13:57	WG1274486
trans-1,3-Dichloropropene	U		0.00190	0.00621	1	05/01/2019 13:57	WG1274486
2,2-Dichloropropane	U		0.000985	0.00311	1	05/01/2019 13:57	WG1274486
Di-isopropyl ether	U		0.000435	0.00124	1	05/01/2019 13:57	WG1274486
Ethylbenzene	U		0.000658	0.00311	1	05/01/2019 13:57	WG1274486
Hexachloro-1,3-butadiene	U	J0	0.0158	0.0311	1	05/01/2019 13:57	WG1274486
Isopropylbenzene	U		0.00107	0.00311	1	05/01/2019 13:57	WG1274486
p-Isopropyltoluene	U		0.00289	0.00621	1	05/01/2019 13:57	WG1274486
2-Butanone (MEK)	U		0.0155	0.0311	1	05/01/2019 13:57	WG1274486
Methylene Chloride	U		0.00825	0.0311	1	05/01/2019 13:57	WG1274486
4-Methyl-2-pentanone (MIBK)	U		0.0124	0.0311	1	05/01/2019 13:57	WG1274486
Methyl tert-butyl ether	U		0.000367	0.00124	1	05/01/2019 13:57	WG1274486
Naphthalene	U		0.00388	0.0155	1	05/01/2019 13:57	WG1274486
n-Propylbenzene	U		0.00147	0.00621	1	05/01/2019 13:57	WG1274486
Styrene	U		0.00339	0.0155	1	05/01/2019 13:57	WG1274486
1,1,1,2-Tetrachloroethane	U		0.000621	0.00311	1	05/01/2019 13:57	WG1274486
1,1,2,2-Tetrachloroethane	U		0.000485	0.00311	1	05/01/2019 13:57	WG1274486

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.000839	0.00311	1	05/01/2019 13:57	WG1274486
Tetrachloroethene	0.000919	J	0.000870	0.00311	1	05/01/2019 13:57	WG1274486
Toluene	U		0.00155	0.00621	1	05/01/2019 13:57	WG1274486
1,2,3-Trichlorobenzene	U	J0	0.000777	0.00311	1	05/01/2019 13:57	WG1274486
1,2,4-Trichlorobenzene	U	J0	0.00599	0.0155	1	05/01/2019 13:57	WG1274486
1,1,1-Trichloroethane	U		0.000342	0.00311	1	05/01/2019 13:57	WG1274486
1,1,2-Trichloroethane	U		0.00110	0.00311	1	05/01/2019 13:57	WG1274486
Trichloroethene	U		0.000497	0.00124	1	05/01/2019 13:57	WG1274486
Trichlorofluoromethane	U		0.000621	0.00311	1	05/01/2019 13:57	WG1274486
1,2,3-Trichloropropane	U		0.00634	0.0155	1	05/01/2019 13:57	WG1274486
1,2,4-Trimethylbenzene	U		0.00144	0.00621	1	05/01/2019 13:57	WG1274486
1,2,3-Trimethylbenzene	U		0.00143	0.00621	1	05/01/2019 13:57	WG1274486
Vinyl chloride	U		0.000849	0.00311	1	05/01/2019 13:57	WG1274486
1,3,5-Trimethylbenzene	U		0.00134	0.00621	1	05/01/2019 13:57	WG1274486
Xylenes, Total	U		0.00594	0.00808	1	05/01/2019 13:57	WG1274486
(S) Toluene-d8	*108*			*75.0-131*		*05/01/2019 13:57*	WG1274486
(S) 4-Bromofluorobenzene	*93.8*			*67.0-138*		*05/01/2019 13:57*	WG1274486
(S) 1,2-Dichloroethane-d4	*98.3*			*70.0-130*		*05/01/2019 13:57*	WG1274486

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3.81	J	1.65	4.97	1	05/02/2019 21:25	WG1274928
Residual Range Organics (RRO)	11.1	J	4.14	12.4	1	05/02/2019 21:25	WG1274928
(S) o-Terphenyl	*89.0*			*18.0-148*		*05/02/2019 21:25*	WG1274928

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0399	0.207	5	05/06/2019 19:32	WG1275198
Acenaphthylene	U		0.0416	0.207	5	05/06/2019 19:32	WG1275198
Anthracene	U		0.0393	0.207	5	05/06/2019 19:32	WG1275198
Benzo(a)anthracene	U		0.0266	0.207	5	05/06/2019 19:32	WG1275198
Benzo(b)fluoranthene	U		0.0431	0.207	5	05/06/2019 19:32	WG1275198
Benzo(k)fluoranthene	U		0.0362	0.207	5	05/06/2019 19:32	WG1275198
Benzo(g,h,i)perylene	U		0.0449	0.207	5	05/06/2019 19:32	WG1275198
Benzo(a)pyrene	U		0.0340	0.207	5	05/06/2019 19:32	WG1275198
Bis(2-chlorethoxy)methane	U	J3	0.00957	0.414	1	05/04/2019 16:47	WG1275198
Bis(2-chloroethyl)ether	U	J3	0.0111	0.414	1	05/04/2019 16:47	WG1275198
Bis(2-chloroisopropyl)ether	U	J3	0.00944	0.414	1	05/04/2019 16:47	WG1275198
4-Bromophenyl-phenylether	U		0.0708	2.07	5	05/06/2019 19:32	WG1275198
2-Chloronaphthalene	U		0.0398	0.207	5	05/06/2019 19:32	WG1275198
4-Chlorophenyl-phenylether	U		0.0390	2.07	5	05/06/2019 19:32	WG1275198
Chrysene	U		0.0345	0.207	5	05/06/2019 19:32	WG1275198
Dibenz(a,h)anthracene	U		0.0511	0.207	5	05/06/2019 19:32	WG1275198
3,3-Dichlorobenzidine	U		0.493	2.07	5	05/06/2019 19:32	WG1275198
2,4-Dinitrotoluene	U		0.0378	2.07	5	05/06/2019 19:32	WG1275198
2,6-Dinitrotoluene	U		0.0458	2.07	5	05/06/2019 19:32	WG1275198
Fluoranthene	U		0.0308	0.207	5	05/06/2019 19:32	WG1275198
Fluorene	U		0.0424	0.207	5	05/06/2019 19:32	WG1275198
Hexachlorobenzene	U		0.0532	2.07	5	05/06/2019 19:32	WG1275198
Hexachloro-1,3-butadiene	U	J3	0.0124	0.414	1	05/04/2019 16:47	WG1275198
Hexachlorocyclopentadiene	U	J0 J3	0.364	2.07	5	05/06/2019 19:32	WG1275198
Hexachloroethane	U	J3	0.0166	0.414	1	05/04/2019 16:47	WG1275198
Indeno(1,2,3-cd)pyrene	U		0.0480	0.207	5	05/06/2019 19:32	WG1275198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Isophorone	U		0.00649	0.414	1	05/04/2019 16:47	WG1275198
Naphthalene	U	J3	0.0110	0.0414	1	05/04/2019 16:47	WG1275198
Nitrobenzene	U	J3	0.00863	0.414	1	05/04/2019 16:47	WG1275198
n-Nitrosodimethylamine	U		0.0804	0.414	1	05/04/2019 16:47	WG1275198
n-Nitrosodiphenylamine	U		0.559	2.07	5	05/06/2019 19:32	WG1275198
n-Nitrosodi-n-propylamine	U	J3	0.0113	0.414	1	05/04/2019 16:47	WG1275198
Phenanthrene	U		0.0328	0.207	5	05/06/2019 19:32	WG1275198
Pyridine	U	J3	0.0780	0.414	1	05/04/2019 16:47	WG1275198
Benzylbutyl phthalate	U		0.0640	2.07	5	05/06/2019 19:32	WG1275198
Bis(2-ethylhexyl)phthalate	U		0.0745	2.07	5	05/06/2019 19:32	WG1275198
Di-n-butyl phthalate	U		0.0677	2.07	5	05/06/2019 19:32	WG1275198
Diethyl phthalate	U		0.0430	2.07	5	05/06/2019 19:32	WG1275198
Dimethyl phthalate	U		0.0335	2.07	5	05/06/2019 19:32	WG1275198
Di-n-octyl phthalate	U		0.0564	2.07	5	05/06/2019 19:32	WG1275198
Pyrene	U		0.0764	0.207	5	05/06/2019 19:32	WG1275198
1,2,4-Trichlorobenzene	U	J3	0.0109	0.414	1	05/04/2019 16:47	WG1275198
4-Chloro-3-methylphenol	U		0.00593	0.414	1	05/04/2019 16:47	WG1275198
2-Chlorophenol	U	J3	0.0103	0.414	1	05/04/2019 16:47	WG1275198
2,4-Dichlorophenol	U		0.00927	0.414	1	05/04/2019 16:47	WG1275198
2,4-Dimethylphenol	U		0.0585	0.414	1	05/04/2019 16:47	WG1275198
4,6-Dinitro-2-methylphenol	U		0.770	2.07	5	05/06/2019 19:32	WG1275198
2,4-Dinitrophenol	U	J3	0.609	2.07	5	05/06/2019 19:32	WG1275198
2-Methylphenol	U	J3	0.0123	0.414	1	05/04/2019 16:47	WG1275198
3&4-Methyl Phenol	U		0.00973	0.414	1	05/04/2019 16:47	WG1275198
2-Nitrophenol	U	J3	0.0162	0.414	1	05/04/2019 16:47	WG1275198
4-Nitrophenol	U		0.327	2.07	5	05/06/2019 19:32	WG1275198
Pentachlorophenol	U		0.298	2.07	5	05/06/2019 19:32	WG1275198
Phenol	U		0.00863	0.414	1	05/04/2019 16:47	WG1275198
2,4,6-Trichlorophenol	U		0.0483	2.07	5	05/06/2019 19:32	WG1275198
2,4,5-Trichlorophenol	U		0.0646	2.07	5	05/06/2019 19:32	WG1275198
(S) 2-Fluorophenol	*48.5*			*12.0-120*		*05/04/2019 16:47*	WG1275198
(S) 2-Fluorophenol	*66.8*			*12.0-120*		*05/06/2019 19:32*	WG1275198
(S) Phenol-d5	*48.5*			*10.0-120*		*05/04/2019 16:47*	WG1275198
(S) Phenol-d5	*65.2*			*10.0-120*		*05/06/2019 19:32*	WG1275198
(S) Nitrobenzene-d5	*54.3*			*10.0-122*		*05/06/2019 19:32*	WG1275198
(S) Nitrobenzene-d5	*38.1*			*10.0-122*		*05/04/2019 16:47*	WG1275198
(S) 2-Fluorobiphenyl	*40.5*			*15.0-120*		*05/04/2019 16:47*	WG1275198
(S) 2-Fluorobiphenyl	*51.8*			*15.0-120*		*05/06/2019 19:32*	WG1275198
(S) 2,4,6-Tribromophenol	*55.5*			*10.0-127*		*05/04/2019 16:47*	WG1275198
(S) 2,4,6-Tribromophenol	*73.5*			*10.0-127*		*05/06/2019 19:32*	WG1275198
(S) p-Terphenyl-d14	*76.2*			*10.0-120*		*05/06/2019 19:32*	WG1275198
(S) p-Terphenyl-d14	*52.4*			*10.0-120*		*05/04/2019 16:47*	WG1275198

Sample Narrative:

L1093844-08 WG1275198: IS/SURR failed on lower dilution.

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(a)anthracene	0.00486	J	0.000745	0.00745	1	05/07/2019 12:41	WG1276612
Benzo(a)pyrene	0.00609	J	0.000745	0.00745	1	05/07/2019 12:41	WG1276612
Benzo(b)fluoranthene	0.0118		0.000745	0.00745	1	05/07/2019 12:41	WG1276612
Benzo(k)fluoranthene	0.00358	J	0.000745	0.00745	1	05/07/2019 12:41	WG1276612
Chrysene	0.00968		0.000745	0.00745	1	05/07/2019 12:41	WG1276612
Dibenz(a,h)anthracene	0.00128	J	0.000745	0.00745	1	05/07/2019 12:41	WG1276612
Indeno(1,2,3-cd)pyrene	0.00434	J	0.000745	0.00745	1	05/07/2019 12:41	WG1276612

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) Nitrobenzene-d5	*105*			*14.0-149*		*05/07/2019 12:41*	WG1276612
(S) 2-Fluorobiphenyl	*85.0*			*34.0-125*		*05/07/2019 12:41*	WG1276612
(S) p-Terphenyl-d14	*113*			*23.0-120*		*05/07/2019 12:41*	WG1276612

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.0		1	05/03/2019 14:31	WG1275562

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0161	0.0294	1	05/01/2019 14:16	WG1274486
Acrylonitrile	U		0.00224	0.0147	1	05/01/2019 14:16	WG1274486
Benzene	0.000507	J	0.000471	0.00118	1	05/01/2019 14:16	WG1274486
Bromobenzene	U		0.00124	0.0147	1	05/01/2019 14:16	WG1274486
Bromodichloromethane	U		0.000928	0.00294	1	05/01/2019 14:16	WG1274486
Bromoform	U		0.00704	0.0294	1	05/01/2019 14:16	WG1274486
Bromomethane	U		0.00436	0.0147	1	05/01/2019 14:16	WG1274486
n-Butylbenzene	U		0.00452	0.0147	1	05/01/2019 14:16	WG1274486
sec-Butylbenzene	U		0.00298	0.0147	1	05/01/2019 14:16	WG1274486
tert-Butylbenzene	U		0.00182	0.00589	1	05/01/2019 14:16	WG1274486
Carbon tetrachloride	U		0.00127	0.00589	1	05/01/2019 14:16	WG1274486
Chlorobenzene	U		0.000674	0.00294	1	05/01/2019 14:16	WG1274486
Chlorodibromomethane	U		0.000530	0.00294	1	05/01/2019 14:16	WG1274486
Chloroethane	U		0.00127	0.00589	1	05/01/2019 14:16	WG1274486
Chloroform	U		0.000488	0.00294	1	05/01/2019 14:16	WG1274486
Chloromethane	U		0.00164	0.0147	1	05/01/2019 14:16	WG1274486
2-Chlorotoluene	U		0.00108	0.00294	1	05/01/2019 14:16	WG1274486
4-Chlorotoluene	U		0.00133	0.00589	1	05/01/2019 14:16	WG1274486
1,2-Dibromo-3-Chloropropane	U	J0	0.00600	0.0294	1	05/01/2019 14:16	WG1274486
1,2-Dibromoethane	U		0.000618	0.00294	1	05/01/2019 14:16	WG1274486
Dibromomethane	U		0.00118	0.00589	1	05/01/2019 14:16	WG1274486
1,2-Dichlorobenzene	U		0.00171	0.00589	1	05/01/2019 14:16	WG1274486
1,3-Dichlorobenzene	U		0.00200	0.00589	1	05/01/2019 14:16	WG1274486
1,4-Dichlorobenzene	U		0.00232	0.00589	1	05/01/2019 14:16	WG1274486
Dichlorodifluoromethane	U	J4	0.000963	0.00294	1	05/01/2019 14:16	WG1274486
1,1-Dichloroethane	U		0.000677	0.00294	1	05/01/2019 14:16	WG1274486
1,2-Dichloroethane	U		0.000559	0.00294	1	05/01/2019 14:16	WG1274486
1,1-Dichloroethene	U		0.000589	0.00294	1	05/01/2019 14:16	WG1274486
cis-1,2-Dichloroethene	U		0.000812	0.00294	1	05/01/2019 14:16	WG1274486
trans-1,2-Dichloroethene	U		0.00168	0.00589	1	05/01/2019 14:16	WG1274486
1,2-Dichloropropane	U		0.00149	0.00589	1	05/01/2019 14:16	WG1274486
1,1-Dichloropropene	U		0.000824	0.00294	1	05/01/2019 14:16	WG1274486
1,3-Dichloropropane	U		0.00206	0.00589	1	05/01/2019 14:16	WG1274486
cis-1,3-Dichloropropene	U		0.000798	0.00294	1	05/01/2019 14:16	WG1274486
trans-1,3-Dichloropropene	U		0.00180	0.00589	1	05/01/2019 14:16	WG1274486
2,2-Dichloropropane	U		0.000933	0.00294	1	05/01/2019 14:16	WG1274486
Di-isopropyl ether	U		0.000412	0.00118	1	05/01/2019 14:16	WG1274486
Ethylbenzene	U		0.000624	0.00294	1	05/01/2019 14:16	WG1274486
Hexachloro-1,3-butadiene	U	J0	0.0149	0.0294	1	05/01/2019 14:16	WG1274486
Isopropylbenzene	U		0.00102	0.00294	1	05/01/2019 14:16	WG1274486
p-Isopropyltoluene	U		0.00274	0.00589	1	05/01/2019 14:16	WG1274486
2-Butanone (MEK)	U		0.0147	0.0294	1	05/01/2019 14:16	WG1274486
Methylene Chloride	U		0.00782	0.0294	1	05/01/2019 14:16	WG1274486
4-Methyl-2-pentanone (MIBK)	U		0.0118	0.0294	1	05/01/2019 14:16	WG1274486
Methyl tert-butyl ether	U		0.000347	0.00118	1	05/01/2019 14:16	WG1274486
Naphthalene	U		0.00367	0.0147	1	05/01/2019 14:16	WG1274486
n-Propylbenzene	U		0.00139	0.00589	1	05/01/2019 14:16	WG1274486
Styrene	U		0.00321	0.0147	1	05/01/2019 14:16	WG1274486
1,1,1,2-Tetrachloroethane	U		0.000589	0.00294	1	05/01/2019 14:16	WG1274486
1,1,2,2-Tetrachloroethane	U		0.000459	0.00294	1	05/01/2019 14:16	WG1274486

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.000795	0.00294	1	05/01/2019 14:16	WG1274486
Tetrachloroethene	U		0.000824	0.00294	1	05/01/2019 14:16	WG1274486
Toluene	U		0.00147	0.00589	1	05/01/2019 14:16	WG1274486
1,2,3-Trichlorobenzene	U	J0	0.000736	0.00294	1	05/01/2019 14:16	WG1274486
1,2,4-Trichlorobenzene	U	J0	0.00567	0.0147	1	05/01/2019 14:16	WG1274486
1,1,1-Trichloroethane	U		0.000324	0.00294	1	05/01/2019 14:16	WG1274486
1,1,2-Trichloroethane	U		0.00104	0.00294	1	05/01/2019 14:16	WG1274486
Trichloroethene	U		0.000471	0.00118	1	05/01/2019 14:16	WG1274486
Trichlorofluoromethane	U		0.000589	0.00294	1	05/01/2019 14:16	WG1274486
1,2,3-Trichloropropane	U		0.00600	0.0147	1	05/01/2019 14:16	WG1274486
1,2,4-Trimethylbenzene	0.00167	J	0.00137	0.00589	1	05/01/2019 14:16	WG1274486
1,2,3-Trimethylbenzene	U		0.00135	0.00589	1	05/01/2019 14:16	WG1274486
Vinyl chloride	U		0.000804	0.00294	1	05/01/2019 14:16	WG1274486
1,3,5-Trimethylbenzene	U		0.00127	0.00589	1	05/01/2019 14:16	WG1274486
Xylenes, Total	U		0.00563	0.00765	1	05/01/2019 14:16	WG1274486
(S) Toluene-d8	*107*			*75.0-131*		*05/01/2019 14:16*	WG1274486
(S) 4-Bromofluorobenzene	*90.5*			*67.0-138*		*05/01/2019 14:16*	WG1274486
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*05/01/2019 14:16*	WG1274486

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		15.7	47.1	10	05/02/2019 23:09	WG1274928
Residual Range Organics (RRO)	75.0	J	39.2	118	10	05/02/2019 23:09	WG1274928
(S) o-Terphenyl	*83.2*			*18.0-148*		*05/02/2019 23:09*	WG1274928

Sample Narrative:

L1093844-09 WG1274928: Diluted due to viscosity

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0756	0.392	10	05/06/2019 18:15	WG1275198
Acenaphthylene	U		0.0790	0.392	10	05/06/2019 18:15	WG1275198
Anthracene	U		0.0744	0.392	10	05/06/2019 18:15	WG1275198
Benzo(a)anthracene	U		0.0504	0.392	10	05/06/2019 18:15	WG1275198
Benzo(b)fluoranthene	U		0.0818	0.392	10	05/06/2019 18:15	WG1275198
Benzo(k)fluoranthene	U		0.0685	0.392	10	05/06/2019 18:15	WG1275198
Benzo(g,h,i)perylene	U		0.0849	0.392	10	05/06/2019 18:15	WG1275198
Benzo(a)pyrene	U		0.0645	0.392	10	05/06/2019 18:15	WG1275198
Bis(2-chlorethoxy)methane	U	J3	0.0906	3.92	10	05/06/2019 18:15	WG1275198
Bis(2-chloroethyl)ether	U	J3	0.105	3.92	10	05/06/2019 18:15	WG1275198
Bis(2-chloroisopropyl)ether	U	J3	0.0895	3.92	10	05/06/2019 18:15	WG1275198
4-Bromophenyl-phenylether	U		0.134	3.92	10	05/06/2019 18:15	WG1275198
2-Chloronaphthalene	U		0.0752	0.392	10	05/06/2019 18:15	WG1275198
4-Chlorophenyl-phenylether	U		0.0738	3.92	10	05/06/2019 18:15	WG1275198
Chrysene	U		0.0653	0.392	10	05/06/2019 18:15	WG1275198
Dibenz(a,h)anthracene	U		0.0966	0.392	10	05/06/2019 18:15	WG1275198
3,3-Dichlorobenzidine	U		0.935	3.92	10	05/06/2019 18:15	WG1275198
2,4-Dinitrotoluene	U		0.0714	3.92	10	05/06/2019 18:15	WG1275198
2,6-Dinitrotoluene	U		0.0867	3.92	10	05/06/2019 18:15	WG1275198
Fluoranthene	U		0.0584	0.392	10	05/06/2019 18:15	WG1275198
Fluorene	U		0.0803	0.392	10	05/06/2019 18:15	WG1275198
Hexachlorobenzene	U		0.101	3.92	10	05/06/2019 18:15	WG1275198
Hexachloro-1,3-butadiene	U	J3	0.118	3.92	10	05/06/2019 18:15	WG1275198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Hexachlorocyclopentadiene	U	J0 J3	0.691	3.92	10	05/06/2019 18:15	WG1275198
Hexachloroethane	U	J3	0.158	3.92	10	05/06/2019 18:15	WG1275198
Indeno(1,2,3-cd)pyrene	U		0.0909	0.392	10	05/06/2019 18:15	WG1275198
Isophorone	U		0.0614	3.92	10	05/06/2019 18:15	WG1275198
Naphthalene	U	J3	0.105	0.392	10	05/06/2019 18:15	WG1275198
Nitrobenzene	U	J3	0.0818	3.92	10	05/06/2019 18:15	WG1275198
n-Nitrosodimethylamine	U		0.762	3.92	10	05/06/2019 18:15	WG1275198
n-Nitrosodiphenylamine	U		1.06	3.92	10	05/06/2019 18:15	WG1275198
n-Nitrosodi-n-propylamine	U	J3	0.107	3.92	10	05/06/2019 18:15	WG1275198
Phenanthrene	U		0.0621	0.392	10	05/06/2019 18:15	WG1275198
Pyridine	U	J3	0.739	3.92	10	05/06/2019 18:15	WG1275198
Benzylbutyl phthalate	U		0.121	3.92	10	05/06/2019 18:15	WG1275198
Bis(2-ethylhexyl)phthalate	U		0.141	3.92	10	05/06/2019 18:15	WG1275198
Di-n-butyl phthalate	U		0.128	3.92	10	05/06/2019 18:15	WG1275198
Diethyl phthalate	U		0.0813	3.92	10	05/06/2019 18:15	WG1275198
Dimethyl phthalate	U		0.0636	3.92	10	05/06/2019 18:15	WG1275198
Di-n-octyl phthalate	U		0.107	3.92	10	05/06/2019 18:15	WG1275198
Pyrene	U		0.145	0.392	10	05/06/2019 18:15	WG1275198
1,2,4-Trichlorobenzene	U	J3	0.103	3.92	10	05/06/2019 18:15	WG1275198
4-Chloro-3-methylphenol	U		0.0561	3.92	10	05/06/2019 18:15	WG1275198
2-Chlorophenol	U	J3	0.0978	3.92	10	05/06/2019 18:15	WG1275198
2,4-Dichlorophenol	U		0.0878	3.92	10	05/06/2019 18:15	WG1275198
2,4-Dimethylphenol	U	J0	0.554	3.92	10	05/06/2019 18:15	WG1275198
4,6-Dinitro-2-methylphenol	U		1.46	3.92	10	05/06/2019 18:15	WG1275198
2,4-Dinitrophenol	U	J3	1.15	3.92	10	05/06/2019 18:15	WG1275198
2-Methylphenol	U	J3	0.116	3.92	10	05/06/2019 18:15	WG1275198
3&4-Methyl Phenol	U		0.0922	3.92	10	05/06/2019 18:15	WG1275198
2-Nitrophenol	U	J3	0.153	3.92	10	05/06/2019 18:15	WG1275198
4-Nitrophenol	U		0.618	3.92	10	05/06/2019 18:15	WG1275198
Pentachlorophenol	U		0.565	3.92	10	05/06/2019 18:15	WG1275198
Phenol	U		0.0818	3.92	10	05/06/2019 18:15	WG1275198
2,4,6-Trichlorophenol	U		0.0917	3.92	10	05/06/2019 18:15	WG1275198
2,4,5-Trichlorophenol	U		0.122	3.92	10	05/06/2019 18:15	WG1275198
(S) 2-Fluorophenol	*49.1*			*12.0-120*		*05/06/2019 18:15*	WG1275198
(S) Phenol-d5	*49.2*			*10.0-120*		*05/06/2019 18:15*	WG1275198
(S) Nitrobenzene-d5	*37.1*			*10.0-122*		*05/06/2019 18:15*	WG1275198
(S) 2-Fluorobiphenyl	*38.9*			*15.0-120*		*05/06/2019 18:15*	WG1275198
(S) 2,4,6-Tribromophenol	*54.5*			*10.0-127*		*05/06/2019 18:15*	WG1275198
(S) p-Terphenyl-d14	*53.9*			*10.0-120*		*05/06/2019 18:15*	WG1275198

Sample Narrative:

L1093844-09 WG1275198: Dilution due to matrix impact during extract concentration procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(a)anthracene	0.0120		0.000706	0.00706	1	05/07/2019 13:02	WG1276612
Benzo(a)pyrene	0.0184		0.000706	0.00706	1	05/07/2019 13:02	WG1276612
Benzo(b)fluoranthene	0.0232		0.000706	0.00706	1	05/07/2019 13:02	WG1276612
Benzo(k)fluoranthene	0.00824		0.000706	0.00706	1	05/07/2019 13:02	WG1276612
Chrysene	0.0228		0.000706	0.00706	1	05/07/2019 13:02	WG1276612
Dibenz(a,h)anthracene	0.00297	J	0.000706	0.00706	1	05/07/2019 13:02	WG1276612
Indeno(1,2,3-cd)pyrene	0.0112		0.000706	0.00706	1	05/07/2019 13:02	WG1276612
(S) Nitrobenzene-d5	*91.7*			*14.0-149*		*05/07/2019 13:02*	WG1276612
(S) 2-Fluorobiphenyl	*83.0*			*34.0-125*		*05/07/2019 13:02*	WG1276612
(S) p-Terphenyl-d14	*89.8*			*23.0-120*		*05/07/2019 13:02*	WG1276612

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.3		1	05/03/2019 14:10	WG1275563

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0153	0.0280	1	05/01/2019 14:36	WG1274486
Acrylonitrile	U		0.00213	0.0140	1	05/01/2019 14:36	WG1274486
Benzene	U		0.000448	0.00112	1	05/01/2019 14:36	WG1274486
Bromobenzene	U		0.00118	0.0140	1	05/01/2019 14:36	WG1274486
Bromodichloromethane	U		0.000883	0.00280	1	05/01/2019 14:36	WG1274486
Bromoform	U		0.00670	0.0280	1	05/01/2019 14:36	WG1274486
Bromomethane	U		0.00414	0.0140	1	05/01/2019 14:36	WG1274486
n-Butylbenzene	U		0.00430	0.0140	1	05/01/2019 14:36	WG1274486
sec-Butylbenzene	U		0.00283	0.0140	1	05/01/2019 14:36	WG1274486
tert-Butylbenzene	U		0.00174	0.00560	1	05/01/2019 14:36	WG1274486
Carbon tetrachloride	U		0.00121	0.00560	1	05/01/2019 14:36	WG1274486
Chlorobenzene	U		0.000642	0.00280	1	05/01/2019 14:36	WG1274486
Chlorodibromomethane	U		0.000504	0.00280	1	05/01/2019 14:36	WG1274486
Chloroethane	U		0.00121	0.00560	1	05/01/2019 14:36	WG1274486
Chloroform	U		0.000465	0.00280	1	05/01/2019 14:36	WG1274486
Chloromethane	U		0.00156	0.0140	1	05/01/2019 14:36	WG1274486
2-Chlorotoluene	U		0.00103	0.00280	1	05/01/2019 14:36	WG1274486
4-Chlorotoluene	U		0.00127	0.00560	1	05/01/2019 14:36	WG1274486
1,2-Dibromo-3-Chloropropane	U	J0	0.00571	0.0280	1	05/01/2019 14:36	WG1274486
1,2-Dibromoethane	U		0.000588	0.00280	1	05/01/2019 14:36	WG1274486
Dibromomethane	U		0.00112	0.00560	1	05/01/2019 14:36	WG1274486
1,2-Dichlorobenzene	U		0.00162	0.00560	1	05/01/2019 14:36	WG1274486
1,3-Dichlorobenzene	U		0.00190	0.00560	1	05/01/2019 14:36	WG1274486
1,4-Dichlorobenzene	U		0.00221	0.00560	1	05/01/2019 14:36	WG1274486
Dichlorodifluoromethane	U	J4	0.000916	0.00280	1	05/01/2019 14:36	WG1274486
1,1-Dichloroethane	U		0.000644	0.00280	1	05/01/2019 14:36	WG1274486
1,2-Dichloroethane	U		0.000532	0.00280	1	05/01/2019 14:36	WG1274486
1,1-Dichloroethene	U		0.000560	0.00280	1	05/01/2019 14:36	WG1274486
cis-1,2-Dichloroethene	U		0.000773	0.00280	1	05/01/2019 14:36	WG1274486
trans-1,2-Dichloroethene	U		0.00160	0.00560	1	05/01/2019 14:36	WG1274486
1,2-Dichloropropane	U		0.00142	0.00560	1	05/01/2019 14:36	WG1274486
1,1-Dichloropropene	U		0.000784	0.00280	1	05/01/2019 14:36	WG1274486
1,3-Dichloropropane	U		0.00196	0.00560	1	05/01/2019 14:36	WG1274486
cis-1,3-Dichloropropene	U		0.000759	0.00280	1	05/01/2019 14:36	WG1274486
trans-1,3-Dichloropropene	U		0.00171	0.00560	1	05/01/2019 14:36	WG1274486
2,2-Dichloropropane	U		0.000888	0.00280	1	05/01/2019 14:36	WG1274486
Di-isopropyl ether	U		0.000392	0.00112	1	05/01/2019 14:36	WG1274486
Ethylbenzene	U		0.000594	0.00280	1	05/01/2019 14:36	WG1274486
Hexachloro-1,3-butadiene	U	J0	0.0142	0.0280	1	05/01/2019 14:36	WG1274486
Isopropylbenzene	U		0.000967	0.00280	1	05/01/2019 14:36	WG1274486
p-Isopropyltoluene	U		0.00261	0.00560	1	05/01/2019 14:36	WG1274486
2-Butanone (MEK)	U		0.0140	0.0280	1	05/01/2019 14:36	WG1274486
Methylene Chloride	U		0.00744	0.0280	1	05/01/2019 14:36	WG1274486
4-Methyl-2-pentanone (MIBK)	U		0.0112	0.0280	1	05/01/2019 14:36	WG1274486
Methyl tert-butyl ether	U		0.000330	0.00112	1	05/01/2019 14:36	WG1274486
Naphthalene	U		0.00350	0.0140	1	05/01/2019 14:36	WG1274486
n-Propylbenzene	U		0.00132	0.00560	1	05/01/2019 14:36	WG1274486
Styrene	U		0.00306	0.0140	1	05/01/2019 14:36	WG1274486
1,1,1,2-Tetrachloroethane	U		0.000560	0.00280	1	05/01/2019 14:36	WG1274486
1,1,2,2-Tetrachloroethane	U		0.000437	0.00280	1	05/01/2019 14:36	WG1274486

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.000756	0.00280	1	05/01/2019 14:36	WG1274486
Tetrachloroethene	U		0.000784	0.00280	1	05/01/2019 14:36	WG1274486
Toluene	U		0.00140	0.00560	1	05/01/2019 14:36	WG1274486
1,2,3-Trichlorobenzene	U	J0	0.000700	0.00280	1	05/01/2019 14:36	WG1274486
1,2,4-Trichlorobenzene	U	J0	0.00540	0.0140	1	05/01/2019 14:36	WG1274486
1,1,1-Trichloroethane	U		0.000308	0.00280	1	05/01/2019 14:36	WG1274486
1,1,2-Trichloroethane	U		0.000989	0.00280	1	05/01/2019 14:36	WG1274486
Trichloroethene	U		0.000448	0.00112	1	05/01/2019 14:36	WG1274486
Trichlorofluoromethane	U		0.000560	0.00280	1	05/01/2019 14:36	WG1274486
1,2,3-Trichloropropane	U		0.00571	0.0140	1	05/01/2019 14:36	WG1274486
1,2,4-Trimethylbenzene	U		0.00130	0.00560	1	05/01/2019 14:36	WG1274486
1,2,3-Trimethylbenzene	U		0.00129	0.00560	1	05/01/2019 14:36	WG1274486
Vinyl chloride	U		0.000765	0.00280	1	05/01/2019 14:36	WG1274486
1,3,5-Trimethylbenzene	U		0.00121	0.00560	1	05/01/2019 14:36	WG1274486
Xylenes, Total	U		0.00535	0.00728	1	05/01/2019 14:36	WG1274486
(S) Toluene-d8	*107*			*75.0-131*		*05/01/2019 14:36*	WG1274486
(S) 4-Bromofluorobenzene	*92.3*			*67.0-138*		*05/01/2019 14:36*	WG1274486
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*05/01/2019 14:36*	WG1274486

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2.40	J	1.49	4.48	1	05/02/2019 22:04	WG1274928
Residual Range Organics (RRO)	13.1		3.73	11.2	1	05/02/2019 22:04	WG1274928
(S) o-Terphenyl	*109*			*18.0-148*		*05/02/2019 22:04*	WG1274928

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0719	0.373	10	05/06/2019 17:56	WG1275198
Acenaphthylene	U		0.0752	0.373	10	05/06/2019 17:56	WG1275198
Anthracene	U		0.0708	0.373	10	05/06/2019 17:56	WG1275198
Benzo(a)anthracene	U		0.0479	0.373	10	05/06/2019 17:56	WG1275198
Benzo(b)fluoranthene	U		0.0779	0.373	10	05/06/2019 17:56	WG1275198
Benzo(k)fluoranthene	U		0.0652	0.373	10	05/06/2019 17:56	WG1275198
Benzo(g,h,i)perylene	U		0.0808	0.373	10	05/06/2019 17:56	WG1275198
Benzo(a)pyrene	U		0.0614	0.373	10	05/06/2019 17:56	WG1275198
Bis(2-chlorethoxy)methane	U	J3	0.0863	3.73	10	05/06/2019 17:56	WG1275198
Bis(2-chloroethyl)ether	U	J3	0.100	3.73	10	05/06/2019 17:56	WG1275198
Bis(2-chloroisopropyl)ether	U	J3	0.0851	3.73	10	05/06/2019 17:56	WG1275198
4-Bromophenyl-phenylether	U		0.128	3.73	10	05/06/2019 17:56	WG1275198
2-Chloronaphthalene	U		0.0716	0.373	10	05/06/2019 17:56	WG1275198
4-Chlorophenyl-phenylether	U		0.0702	3.73	10	05/06/2019 17:56	WG1275198
Chrysene	U		0.0622	0.373	10	05/06/2019 17:56	WG1275198
Dibenz(a,h)anthracene	U		0.0920	0.373	10	05/06/2019 17:56	WG1275198
3,3-Dichlorobenzidine	U		0.889	3.73	10	05/06/2019 17:56	WG1275198
2,4-Dinitrotoluene	U		0.0680	3.73	10	05/06/2019 17:56	WG1275198
2,6-Dinitrotoluene	U		0.0826	3.73	10	05/06/2019 17:56	WG1275198
Fluoranthene	U		0.0556	0.373	10	05/06/2019 17:56	WG1275198
Fluorene	U		0.0764	0.373	10	05/06/2019 17:56	WG1275198
Hexachlorobenzene	U		0.0959	3.73	10	05/06/2019 17:56	WG1275198
Hexachloro-1,3-butadiene	U	J3	0.112	3.73	10	05/06/2019 17:56	WG1275198
Hexachlorocyclopentadiene	U	J0 J3	0.658	3.73	10	05/06/2019 17:56	WG1275198
Hexachloroethane	U	J3	0.150	3.73	10	05/06/2019 17:56	WG1275198
Indeno(1,2,3-cd)pyrene	U		0.0865	0.373	10	05/06/2019 17:56	WG1275198

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Isophorone	U		0.0585	3.73	10	05/06/2019 17:56	WG1275198
Naphthalene	U	J3	0.0996	0.373	10	05/06/2019 17:56	WG1275198
Nitrobenzene	U	J3	0.0779	3.73	10	05/06/2019 17:56	WG1275198
n-Nitrosodimethylamine	U		0.725	3.73	10	05/06/2019 17:56	WG1275198
n-Nitrosodiphenylamine	U		1.01	3.73	10	05/06/2019 17:56	WG1275198
n-Nitrosodi-n-propylamine	U	J3	0.101	3.73	10	05/06/2019 17:56	WG1275198
Phenanthrene	U		0.0591	0.373	10	05/06/2019 17:56	WG1275198
Pyridine	U	J3	0.703	3.73	10	05/06/2019 17:56	WG1275198
Benzylbutyl phthalate	U		0.115	3.73	10	05/06/2019 17:56	WG1275198
Bis(2-ethylhexyl)phthalate	U		0.134	3.73	10	05/06/2019 17:56	WG1275198
Di-n-butyl phthalate	U		0.122	3.73	10	05/06/2019 17:56	WG1275198
Diethyl phthalate	U		0.0774	3.73	10	05/06/2019 17:56	WG1275198
Dimethyl phthalate	U		0.0605	3.73	10	05/06/2019 17:56	WG1275198
Di-n-octyl phthalate	U		0.102	3.73	10	05/06/2019 17:56	WG1275198
Pyrene	U		0.138	0.373	10	05/06/2019 17:56	WG1275198
1,2,4-Trichlorobenzene	U	J3	0.0981	3.73	10	05/06/2019 17:56	WG1275198
4-Chloro-3-methylphenol	U		0.0534	3.73	10	05/06/2019 17:56	WG1275198
2-Chlorophenol	U	J3	0.0931	3.73	10	05/06/2019 17:56	WG1275198
2,4-Dichlorophenol	U		0.0836	3.73	10	05/06/2019 17:56	WG1275198
2,4-Dimethylphenol	U	J0	0.528	3.73	10	05/06/2019 17:56	WG1275198
4,6-Dinitro-2-methylphenol	U		1.39	3.73	10	05/06/2019 17:56	WG1275198
2,4-Dinitrophenol	U	J3	1.10	3.73	10	05/06/2019 17:56	WG1275198
2-Methylphenol	U	J3	0.110	3.73	10	05/06/2019 17:56	WG1275198
3&4-Methyl Phenol	U		0.0877	3.73	10	05/06/2019 17:56	WG1275198
2-Nitrophenol	U	J3	0.146	3.73	10	05/06/2019 17:56	WG1275198
4-Nitrophenol	U		0.588	3.73	10	05/06/2019 17:56	WG1275198
Pentachlorophenol	U		0.538	3.73	10	05/06/2019 17:56	WG1275198
Phenol	U		0.0779	3.73	10	05/06/2019 17:56	WG1275198
2,4,6-Trichlorophenol	U		0.0873	3.73	10	05/06/2019 17:56	WG1275198
2,4,5-Trichlorophenol	U		0.117	3.73	10	05/06/2019 17:56	WG1275198
(S) 2-Fluorophenol	*73.8*			*12.0-120*		*05/06/2019 17:56*	WG1275198
(S) Phenol-d5	*71.0*			*10.0-120*		*05/06/2019 17:56*	WG1275198
(S) Nitrobenzene-d5	*59.6*			*10.0-122*		*05/06/2019 17:56*	WG1275198
(S) 2-Fluorobiphenyl	*53.4*			*15.0-120*		*05/06/2019 17:56*	WG1275198
(S) 2,4,6-Tribromophenol	*85.4*			*10.0-127*		*05/06/2019 17:56*	WG1275198
(S) p-Terphenyl-d14	*88.2*			*10.0-120*		*05/06/2019 17:56*	WG1275198

Sample Narrative:

L1093844-10 WG1275198: Dilution due to matrix impact during extract concentration procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(a)anthracene	0.000989	J	0.000672	0.00672	1	05/07/2019 13:23	WG1276612
Benzo(a)pyrene	0.00257	J	0.000672	0.00672	1	05/07/2019 13:23	WG1276612
Benzo(b)fluoranthene	0.00441	J	0.000672	0.00672	1	05/07/2019 13:23	WG1276612
Benzo(k)fluoranthene	0.00151	J	0.000672	0.00672	1	05/07/2019 13:23	WG1276612
Chrysene	0.00120	J	0.000672	0.00672	1	05/07/2019 13:23	WG1276612
Dibenz(a,h)anthracene	U		0.000672	0.00672	1	05/07/2019 13:23	WG1276612
Indeno(1,2,3-cd)pyrene	0.00204	J	0.000672	0.00672	1	05/07/2019 13:23	WG1276612
(S) Nitrobenzene-d5	*117*			*14.0-149*		*05/07/2019 13:23*	WG1276612
(S) 2-Fluorobiphenyl	*86.7*			*34.0-125*		*05/07/2019 13:23*	WG1276612
(S) p-Terphenyl-d14	*105*			*23.0-120*		*05/07/2019 13:23*	WG1276612

Method Blank (MB)

(MB) R3408164-1 05/03/19 14:31

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1093844-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1093844-04 05/03/19 14:31 • (DUP) R3408164-3 05/03/19 14:31

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	88.0	87.8	1	0.166		10

Laboratory Control Sample (LCS)

(LCS) R3408164-2 05/03/19 14:31

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3408163-1 05/03/19 14:10

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1093848-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1093848-01 05/03/19 14:10 • (DUP) R3408163-3 05/03/19 14:10

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	95.3	96.4	1	1.14		10

Laboratory Control Sample (LCS)

(LCS) R3408163-2 05/03/19 14:10

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3407247-2 05/01/19 11:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
Bromodichloromethane	U		0.000788	0.00250
Bromoform	U		0.00598	0.0250
Bromomethane	U		0.00370	0.0125
n-Butylbenzene	U		0.00384	0.0125
sec-Butylbenzene	U		0.00253	0.0125
tert-Butylbenzene	U		0.00155	0.00500
Carbon tetrachloride	U		0.00108	0.00500
Chlorobenzene	U		0.000573	0.00250
Chlorodibromomethane	U		0.000450	0.00250
Chloroethane	U		0.00108	0.00500
Chloroform	U		0.000415	0.00250
Chloromethane	U		0.00139	0.0125
2-Chlorotoluene	U		0.000920	0.00250
4-Chlorotoluene	U		0.00113	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00510	0.0250
1,2-Dibromoethane	U		0.000525	0.00250
Dibromomethane	U		0.00100	0.00500
1,2-Dichlorobenzene	U		0.00145	0.00500
1,3-Dichlorobenzene	U		0.00170	0.00500
1,4-Dichlorobenzene	U		0.00197	0.00500
Dichlorodifluoromethane	U		0.000818	0.00250
1,1-Dichloroethane	U		0.000575	0.00250
1,2-Dichloroethane	U		0.000475	0.00250
1,1-Dichloroethene	U		0.000500	0.00250
cis-1,2-Dichloroethene	U		0.000690	0.00250
trans-1,2-Dichloroethene	U		0.00143	0.00500
1,2-Dichloropropane	U		0.00127	0.00500
1,1-Dichloropropene	U		0.000700	0.00250
1,3-Dichloropropane	U		0.00175	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
2,2-Dichloropropane	U		0.000793	0.00250
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250

Method Blank (MB)

(MB) R3407247-2 05/01/19 11:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00233	0.00500
2-Butanone (MEK)	U		0.0125	0.0250
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.0100	0.0250
Methyl tert-butyl ether	U		0.000295	0.00100
Naphthalene	U		0.00312	0.0125
n-Propylbenzene	U		0.00118	0.00500
Styrene	U		0.00273	0.0125
1,1,1,2-Tetrachloroethane	U		0.000500	0.00250
1,1,2,2-Tetrachloroethane	U		0.000390	0.00250
Tetrachloroethene	U		0.000700	0.00250
Toluene	U		0.00125	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000675	0.00250
1,2,3-Trichlorobenzene	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichloroethene	U		0.000400	0.00100
Trichlorofluoromethane	U		0.000500	0.00250
1,2,3-Trichloropropane	U		0.00510	0.0125
1,2,3-Trimethylbenzene	U		0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
1,3,5-Trimethylbenzene	U		0.00108	0.00500
Vinyl chloride	U		0.000683	0.00250
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	*109*			*75.0-131*
(S) 4-Bromofluorobenzene	*90.7*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*97.0*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3407247-1 05/01/19 10:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.571	91.4	10.0-160	
Acrylonitrile	0.625	0.782	125	45.0-153	
Benzene	0.125	0.119	95.4	70.0-123	
Bromobenzene	0.125	0.114	91.0	73.0-121	
Bromodichloromethane	0.125	0.130	104	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R3407247-1 05/01/19 10:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromoform	0.125	0.123	98.8	64.0-132	
Bromomethane	0.125	0.152	121	56.0-147	
n-Butylbenzene	0.125	0.111	89.2	68.0-135	
sec-Butylbenzene	0.125	0.114	90.9	74.0-130	
tert-Butylbenzene	0.125	0.102	81.4	75.0-127	
Carbon tetrachloride	0.125	0.135	108	66.0-128	
Chlorobenzene	0.125	0.126	100	76.0-128	
Chlorodibromomethane	0.125	0.121	96.9	74.0-127	
Chloroethane	0.125	0.132	105	61.0-134	
Chloroform	0.125	0.120	96.2	72.0-123	
Chloromethane	0.125	0.148	119	51.0-138	
2-Chlorotoluene	0.125	0.116	92.8	75.0-124	
4-Chlorotoluene	0.125	0.127	102	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.0973	77.9	59.0-130	
1,2-Dibromoethane	0.125	0.118	94.8	74.0-128	
Dibromomethane	0.125	0.124	99.0	75.0-122	
1,2-Dichlorobenzene	0.125	0.128	103	76.0-124	
1,3-Dichlorobenzene	0.125	0.122	98.0	76.0-125	
1,4-Dichlorobenzene	0.125	0.124	99.0	77.0-121	
Dichlorodifluoromethane	0.125	0.204	164	43.0-156	J4
1,1-Dichloroethane	0.125	0.114	91.5	70.0-127	
1,2-Dichloroethane	0.125	0.122	97.3	65.0-131	
1,1-Dichloroethene	0.125	0.129	104	65.0-131	
cis-1,2-Dichloroethene	0.125	0.120	96.3	73.0-125	
trans-1,2-Dichloroethene	0.125	0.125	99.8	71.0-125	
1,2-Dichloropropane	0.125	0.120	95.6	74.0-125	
1,1-Dichloropropene	0.125	0.119	94.9	73.0-125	
1,3-Dichloropropane	0.125	0.121	96.5	80.0-125	
cis-1,3-Dichloropropene	0.125	0.115	91.9	76.0-127	
trans-1,3-Dichloropropene	0.125	0.127	101	73.0-127	
2,2-Dichloropropane	0.125	0.139	111	59.0-135	
Di-isopropyl ether	0.125	0.110	87.7	60.0-136	
Ethylbenzene	0.125	0.117	93.9	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.109	87.2	57.0-150	
Isopropylbenzene	0.125	0.120	96.0	72.0-127	
p-Isopropyltoluene	0.125	0.114	91.6	72.0-133	
2-Butanone (MEK)	0.625	0.572	91.6	30.0-160	
Methylene Chloride	0.125	0.113	90.1	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.695	111	56.0-143	
Methyl tert-butyl ether	0.125	0.0876	70.1	66.0-132	

Laboratory Control Sample (LCS)

(LCS) R3407247-1 05/01/19 10:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.0842	67.3	59.0-130	
n-Propylbenzene	0.125	0.115	92.1	74.0-126	
Styrene	0.125	0.0977	78.2	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.121	96.7	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.120	96.0	68.0-128	
Tetrachloroethene	0.125	0.131	105	70.0-136	
Toluene	0.125	0.127	102	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.139	111	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.0900	72.0	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.0956	76.4	62.0-137	
1,1,1-Trichloroethane	0.125	0.122	97.2	69.0-126	
1,1,2-Trichloroethane	0.125	0.123	98.8	78.0-123	
Trichloroethene	0.125	0.118	94.6	76.0-126	
Trichlorofluoromethane	0.125	0.131	105	61.0-142	
1,2,3-Trichloropropane	0.125	0.114	90.9	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.123	98.5	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.116	92.6	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.124	99.1	73.0-127	
Vinyl chloride	0.125	0.152	122	63.0-134	
Xylenes, Total	0.375	0.377	101	72.0-127	
(S) Toluene-d8			*105*	*75.0-131*	
(S) 4-Bromofluorobenzene			*105*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*103*	*70.0-130*	

Method Blank (MB)

(MB) R3408281-2 05/02/19 13:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Naphthalene	U		0.00312	0.0125
(S) Toluene-d8	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*92.8*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*97.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3408281-1 05/02/19 11:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.128	103	59.0-130	
(S) Toluene-d8			*104*	*75.0-131*	
(S) 4-Bromofluorobenzene			*106*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*98.8*	*70.0-130*	

Method Blank (MB)

(MB) R3407728-1 05/02/19 15:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*98.5*			*18.0-148*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3407728-2 05/02/19 15:15 • (LCSD) R3407728-3 05/02/19 15:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	25.0	22.4	23.0	89.6	92.0	50.0-150			2.64	20
Residual Range Organics (RRO)	25.0	20.4	21.4	81.6	85.6	50.0-150			4.78	20
(S) o-Terphenyl				*78.8*	*76.3*	*18.0-148*				

Method Blank (MB)

(MB) R3408627-3 05/04/19 15:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00642	0.0333
Acenaphthylene	U		0.00671	0.0333
Anthracene	U		0.00632	0.0333
Benzo(a)anthracene	U		0.00428	0.0333
Benzo(b)fluoranthene	U		0.00695	0.0333
Benzo(k)fluoranthene	U		0.00582	0.0333
Benzo(g,h,i)perylene	U		0.00721	0.0333
Benzo(a)pyrene	U		0.00548	0.0333
Bis(2-chlorethoxy)methane	U		0.00770	0.333
Bis(2-chloroethyl)ether	U		0.00896	0.333
Bis(2-chloroisopropyl)ether	U		0.00760	0.333
4-Bromophenyl-phenylether	U		0.0114	0.333
2-Chloronaphthalene	U		0.00639	0.0333
4-Chlorophenyl-phenylether	U		0.00627	0.333
Chrysene	U		0.00555	0.0333
Dibenz(a,h)anthracene	U		0.00821	0.0333
3,3-Dichlorobenzidine	U		0.0794	0.333
2,4-Dinitrotoluene	U		0.00607	0.333
2,6-Dinitrotoluene	U		0.00737	0.333
Fluoranthene	U		0.00496	0.0333
Fluorene	U		0.00682	0.0333
Hexachlorobenzene	U		0.00856	0.333
Hexachloro-1,3-butadiene	U		0.0100	0.333
Hexachlorocyclopentadiene	U		0.0587	0.333
Hexachloroethane	U		0.0134	0.333
Indeno(1,2,3-cd)pyrene	U		0.00772	0.0333
Isophorone	U		0.00522	0.333
Naphthalene	U		0.00889	0.0333
Nitrobenzene	U		0.00695	0.333
n-Nitrosodimethylamine	U		0.0647	0.333
n-Nitrosodiphenylamine	U		0.0900	0.333
n-Nitrosodi-n-propylamine	U		0.00906	0.333
Phenanthrene	U		0.00528	0.0333
Benzylbutyl phthalate	U		0.0103	0.333
Bis(2-ethylhexyl)phthalate	U		0.0120	0.333
Di-n-butyl phthalate	U		0.0109	0.333
Diethyl phthalate	U		0.00691	0.333
Dimethyl phthalate	U		0.00540	0.333
Di-n-octyl phthalate	U		0.00907	0.333
Pyrene	U		0.0123	0.0333

Method Blank (MB)

(MB) R3408627-3 05/04/19 15:30

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyridine	U		0.0628	0.333
1,2,4-Trichlorobenzene	U		0.00876	0.333
4-Chloro-3-methylphenol	U		0.00477	0.333
2-Chlorophenol	U		0.00831	0.333
2-Methylphenol	U		0.00986	0.333
3&4-Methyl Phenol	U		0.00783	0.333
2,4-Dichlorophenol	U		0.00746	0.333
2,4-Dimethylphenol	U		0.0471	0.333
4,6-Dinitro-2-methylphenol	U		0.124	0.333
2,4-Dinitrophenol	U		0.0980	0.333
2-Nitrophenol	U		0.0130	0.333
4-Nitrophenol	U		0.0525	0.333
Pentachlorophenol	U		0.0480	0.333
Phenol	U		0.00695	0.333
2,4,5-Trichlorophenol	U		0.0104	0.333
2,4,6-Trichlorophenol	U		0.00779	0.333
(S) Nitrobenzene-d5	*21.7*			*10.0-122*
(S) 2-Fluorobiphenyl	*24.3*			*15.0-120*
(S) p-Terphenyl-d14	*35.1*			*10.0-120*
(S) Phenol-d5	*22.8*			*10.0-120*
(S) 2-Fluorophenol	*24.5*			*12.0-120*
(S) 2,4,6-Tribromophenol	*26.6*			*10.0-127*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3408627-1 05/04/19 14:52 • (LCSD) R3408627-2 05/04/19 15:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.666	0.318	0.335	47.7	50.3	38.0-120			5.21	22
Acenaphthylene	0.666	0.336	0.366	50.5	55.0	40.0-120			8.55	22
Anthracene	0.666	0.378	0.377	56.8	56.6	42.0-120			0.265	20
Benzo(a)anthracene	0.666	0.477	0.463	71.6	69.5	44.0-120			2.98	20
Benzo(b)fluoranthene	0.666	0.455	0.436	68.3	65.5	43.0-120			4.26	22
Benzo(k)fluoranthene	0.666	0.437	0.440	65.6	66.1	44.0-120			0.684	21
Benzo(g,h,i)perylene	0.666	0.436	0.422	65.5	63.4	43.0-120			3.26	22
Benzo(a)pyrene	0.666	0.447	0.428	67.1	64.3	45.0-120			4.34	20
Bis(2-chlorethoxy)methane	0.666	0.198	0.265	29.7	39.8	20.0-120		J3	28.9	23
Bis(2-chloroethyl)ether	0.666	0.195	0.289	29.3	43.4	16.0-120		J3	38.8	31
Bis(2-chloroisopropyl)ether	0.666	0.178	0.258	26.7	38.7	23.0-120		J3	36.7	30

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3408627-1 05/04/19 14:52 • (LCSD) R3408627-2 05/04/19 15:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Bromophenyl-phenylether	0.666	0.394	0.388	59.2	58.3	40.0-120			1.53	21
2-Chloronaphthalene	0.666	0.270	0.315	40.5	47.3	35.0-120			15.4	24
4-Chlorophenyl-phenylether	0.666	0.410	0.394	61.6	59.2	40.0-120			3.98	22
Chrysene	0.666	0.428	0.406	64.3	61.0	43.0-120			5.28	20
Dibenz(a,h)anthracene	0.666	0.441	0.416	66.2	62.5	44.0-120			5.83	22
3,3-Dichlorobenzidine	1.33	0.879	0.821	66.1	61.7	28.0-120			6.82	23
2,4-Dinitrotoluene	0.666	0.425	0.426	63.8	64.0	45.0-120			0.235	21
2,6-Dinitrotoluene	0.666	0.378	0.381	56.8	57.2	42.0-120			0.791	21
Fluoranthene	0.666	0.431	0.420	64.7	63.1	44.0-120			2.59	21
Fluorene	0.666	0.378	0.379	56.8	56.9	41.0-120			0.264	22
Hexachlorobenzene	0.666	0.392	0.395	58.9	59.3	39.0-120			0.762	21
Hexachloro-1,3-butadiene	0.666	0.203	0.292	30.5	43.8	15.0-120		J3	36.0	28
Hexachlorocyclopentadiene	0.666	0.252	0.362	37.8	54.4	15.0-120		J3	35.8	31
Hexachloroethane	0.666	0.170	0.260	25.5	39.0	17.0-120		J3	41.9	31
Indeno(1,2,3-cd)pyrene	0.666	0.447	0.429	67.1	64.4	45.0-120			4.11	21
Isophorone	0.666	0.218	0.271	32.7	40.7	23.0-120			21.7	23
Naphthalene	0.666	0.192	0.259	28.8	38.9	18.0-120		J3	29.7	24
Nitrobenzene	0.666	0.198	0.274	29.7	41.1	17.0-120		J3	32.2	26
n-Nitrosodimethylamine	0.666	0.210	0.291	31.5	43.7	10.0-125			32.3	33
n-Nitrosodiphenylamine	0.666	0.373	0.372	56.0	55.9	40.0-120			0.268	21
n-Nitrosodi-n-propylamine	0.666	0.217	0.287	32.6	43.1	26.0-120		J3	27.8	27
Phenanthrene	0.666	0.377	0.373	56.6	56.0	42.0-120			1.07	20
Benzylbutyl phthalate	0.666	0.456	0.429	68.5	64.4	40.0-120			6.10	21
Bis(2-ethylhexyl)phthalate	0.666	0.449	0.432	67.4	64.9	41.0-120			3.86	21
Di-n-butyl phthalate	0.666	0.424	0.417	63.7	62.6	43.0-120			1.66	20
Diethyl phthalate	0.666	0.424	0.420	63.7	63.1	43.0-120			0.948	21
Dimethyl phthalate	0.666	0.373	0.377	56.0	56.6	43.0-120			1.07	22
Di-n-octyl phthalate	0.666	0.428	0.415	64.3	62.3	40.0-120			3.08	21
Pyrene	0.666	0.443	0.432	66.5	64.9	41.0-120			2.51	21
Pyridine	0.666	0.0905	0.159	13.6	23.9	10.0-120		J3	54.9	35
1,2,4-Trichlorobenzene	0.666	0.199	0.280	29.9	42.0	17.0-120		J3	33.8	26
4-Chloro-3-methylphenol	0.666	0.333	0.344	50.0	51.7	28.0-120			3.25	20
2-Chlorophenol	0.666	0.221	0.302	33.2	45.3	28.0-120		J3	31.0	28
2-Methylphenol	0.666	0.247	0.323	37.1	48.5	35.0-120		J3	26.7	24
3&4-Methyl Phenol	0.666	0.286	0.347	42.9	52.1	42.0-120			19.3	25
2,4-Dichlorophenol	0.666	0.264	0.316	39.6	47.4	25.0-120			17.9	21
2,4-Dimethylphenol	0.666	0.256	0.296	38.4	44.4	15.0-120			14.5	26
4,6-Dinitro-2-methylphenol	0.666	0.457	0.525	68.6	78.8	16.0-120			13.8	33
2,4-Dinitrophenol	0.666	0.214	0.475	32.1	71.3	10.0-120		J3	75.8	40
2-Nitrophenol	0.666	0.235	0.336	35.3	50.5	20.0-120		J3	35.4	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3408627-1 05/04/19 14:52 • (LCSD) R3408627-2 05/04/19 15:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Nitrophenol	0.666	0.443	0.422	66.5	63.4	27.0-120			4.86	24
Pentachlorophenol	0.666	0.468	0.465	70.3	69.8	29.0-120			0.643	25
Phenol	0.666	0.246	0.322	36.9	48.3	28.0-120			26.8	27
2,4,5-Trichlorophenol	0.666	0.438	0.446	65.8	67.0	38.0-120			1.81	24
2,4,6-Trichlorophenol	0.666	0.377	0.398	56.6	59.8	37.0-120			5.42	24
(S) Nitrobenzene-d5				*33.3*	*45.3*	*10.0-122*				
(S) 2-Fluorobiphenyl				*42.9*	*50.8*	*15.0-120*				
(S) p-Terphenyl-d14				*69.1*	*67.6*	*10.0-120*				
(S) Phenol-d5				*36.5*	*46.8*	*10.0-120*				
(S) 2-Fluorophenol				*36.3*	*50.6*	*12.0-120*				
(S) 2,4,6-Tribromophenol				*65.8*	*64.7*	*10.0-127*				

Method Blank (MB)

(MB) R3407838-3 05/03/19 08:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzo(a)anthracene	U		0.000600	0.00600
Benzo(a)pyrene	U		0.000600	0.00600
Benzo(b)fluoranthene	U		0.000600	0.00600
Benzo(k)fluoranthene	U		0.000600	0.00600
Chrysene	U		0.000600	0.00600
Dibenz(a,h)anthracene	U		0.000600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.000600	0.00600
(S) Nitrobenzene-d5	*83.3*			*14.0-149*
(S) 2-Fluorobiphenyl	*79.4*			*34.0-125*
(S) p-Terphenyl-d14	*79.3*			*23.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3407838-1 05/03/19 07:34 • (LCSD) R3407838-2 05/03/19 07:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzo(a)anthracene	0.0800	0.0600	0.0599	75.0	74.9	45.0-120			0.167	20
Benzo(a)pyrene	0.0800	0.0538	0.0525	67.3	65.6	42.0-120			2.45	20
Benzo(b)fluoranthene	0.0800	0.0533	0.0539	66.6	67.4	42.0-121			1.12	20
Benzo(k)fluoranthene	0.0800	0.0557	0.0537	69.6	67.1	49.0-125			3.66	20
Chrysene	0.0800	0.0538	0.0541	67.3	67.6	49.0-122			0.556	20
Dibenz(a,h)anthracene	0.0800	0.0565	0.0564	70.6	70.5	47.0-125			0.177	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0573	0.0570	71.6	71.3	46.0-125			0.525	20
(S) Nitrobenzene-d5				*82.5*	*83.6*	*14.0-149*				
(S) 2-Fluorobiphenyl				*76.6*	*77.5*	*34.0-125*				
(S) p-Terphenyl-d14				*78.1*	*78.5*	*23.0-120*				

L1093416-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1093416-01 05/03/19 13:31 • (MS) R3407838-4 05/03/19 13:52 • (MSD) R3407838-5 05/03/19 14:13

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzo(a)anthracene	0.0800	0.100	0.0696	0.0615	0.000	0.000	10	10.0-139	J6	J6	12.4	30
Benzo(a)pyrene	0.0800	0.118	0.0677	0.0607	0.000	0.000	10	10.0-141	J6	J6	10.9	31
Benzo(b)fluoranthene	0.0800	0.159	0.0850	0.0685	0.000	0.000	10	10.0-140	J6	J6	21.5	36
Benzo(k)fluoranthene	0.0800	ND	0.0601	0.0558	15.5	10.1	10	10.0-137			7.42	31
Chrysene	0.0800	0.105	0.0754	0.0667	0.000	0.000	10	10.0-145	J6	J6	12.2	30
Dibenz(a,h)anthracene	0.0800	ND	0.0625	0.0540	50.0	39.4	10	10.0-132			14.6	31
Indeno(1,2,3-cd)pyrene	0.0800	0.0730	0.0678	0.0595	0.000	0.000	10	10.0-137	J6	J6	13.0	32

L1093416-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1093416-01 05/03/19 13:31 • (MS) R3407838-4 05/03/19 13:52 • (MSD) R3407838-5 05/03/19 14:13

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) Nitrobenzene-d5					*84.3*	*126*		*14.0-149*				
(S) 2-Fluorobiphenyl					*122*	*120*		*34.0-125*				
(S) p-Terphenyl-d14					*84.5*	*76.9*		*23.0-120*				

Method Blank (MB)

(MB) R3408716-2 05/07/19 08:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzo(a)anthracene	U		0.000600	0.00600
Benzo(a)pyrene	U		0.000600	0.00600
Benzo(b)fluoranthene	U		0.000600	0.00600
Benzo(k)fluoranthene	U		0.000600	0.00600
Chrysene	U		0.000600	0.00600
Dibenz(a,h)anthracene	U		0.000600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.000600	0.00600
(S) Nitrobenzene-d5	*111*			*14.0-149*
(S) 2-Fluorobiphenyl	*106*			*34.0-125*
(S) p-Terphenyl-d14	*111*			*23.0-120*

Laboratory Control Sample (LCS)

(LCS) R3408716-1 05/07/19 08:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzo(a)anthracene	0.0800	0.0638	79.8	45.0-120	
Benzo(a)pyrene	0.0800	0.0674	84.3	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0628	78.5	42.0-121	
Benzo(k)fluoranthene	0.0800	0.0808	101	49.0-125	
Chrysene	0.0800	0.0739	92.4	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0649	81.1	47.0-125	
Indeno(1,2,3-cd)pyrene	0.0800	0.0653	81.6	46.0-125	
(S) Nitrobenzene-d5			*109*	*14.0-149*	
(S) 2-Fluorobiphenyl			*101*	*34.0-125*	
(S) p-Terphenyl-d14			*104*	*23.0-120*	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration met method criteria.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

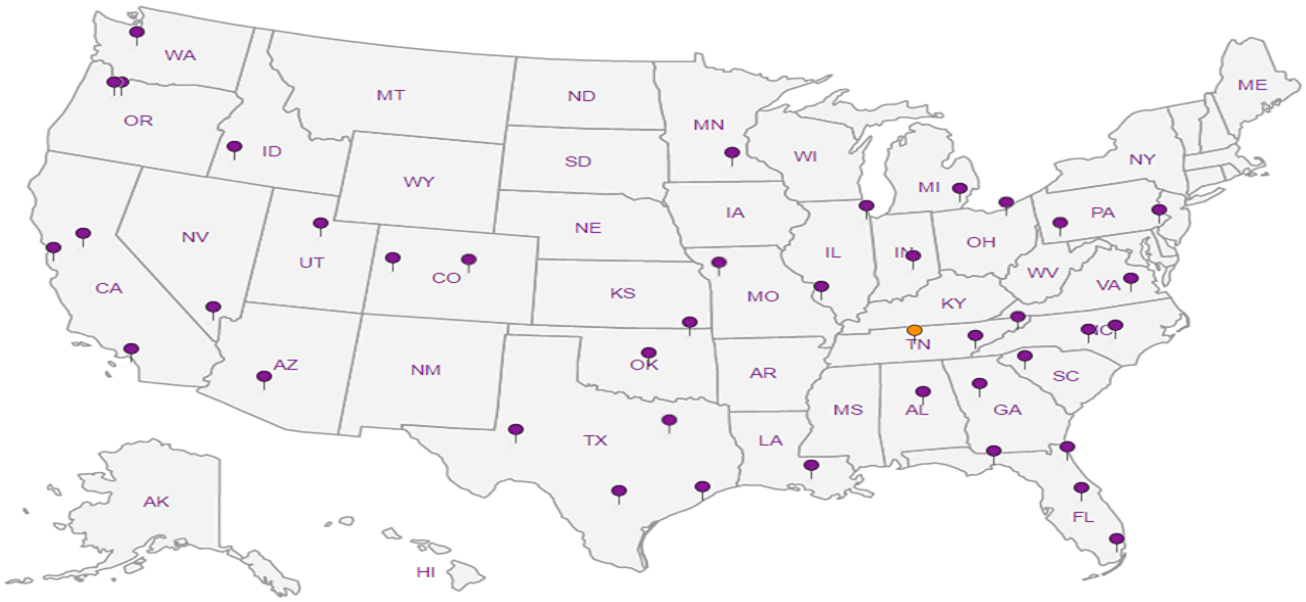
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



SLR International Corp. - West Linn, OR

1800 Blankenship Road, Suite 440

Billing Information:
Accounts Payable
1800 Blankenship Rd, Ste 440
West Linn, OR 97068

Report to: **Chris Kramer**

Email To: **ckramer@slrconsulting.com; smiller@slrconsulting.com;**

Project Description: **Nord Door Project - Everett, WA**

City/State Collected: Everett, WA

Phone: **503-723-4423** Fax: **503-723-4436**

Client Project # **108.00228.00059**

Lab Project # **SLRWLOR-NORDDOOR**

Collected by (print): Steven Loshbaugh

Site/Facility ID # **EVERETT, WA**

P.O. #

Collected by (signature):

Immediately Packed on Ice N___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Standard TAT

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX NOSGT 8ozClr-NoPres	SVOCs 8270D 8ozClr-NoPres	VOCs 8260C 40mlAmb/MeOH5ml/Syr	cPAHs SV8270PAHSIMD 8ozClr-NoPres	dry weight 2ozClr-NoPres	Remarks	Sample # (lab only)
GP-MW-11-SS	Comp	SS	0-12'	4/25/19	1510	3		X	X				-01
GP-MW-12-SS	Comp	SS	0-10'	4/25/19	1140	3			X	X			-02
GP-MW-12-SS-18-19	Grab	SS	18-19'	4/25/19	1118	0						Hold	
GP-MW-13-SS	Comp	SS	0-12'	4/25/19	0940	3		X		X			-04
GP-MW-14-SS	Comp	SS	0-12'	4/25/19	1415	1		X		X			-05
GP-MW-15-SS	Comp	SS	0-12'	4/26/19	1342	2			X				-06
GP-MW-16-SS	Comp	SS	0-12'	4/26/19	1315	2	X	X		X			-07
GP-MW-17-SS	Comp	SS	0-12'	4/26/19	1450	3	X	X	X	X			-08
GP-801-SS	Comp	SS	0-12'	4/26/19	0845	3	X	X	X	X			-09
GP-802-SS	Comp	SS	0-12'	4/26/19	1615	3	X	X	X	X			-10

RAD SCREEN: <0.5 mR/hr

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__UPS X FedEx __Courier _____

Tracking # 4686 6470 0206

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	4/29/19	1400	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: (Yes) / No
HCL / MeoH
TBR
1

Temp: 0.6 °C Bottles Received: 23

Date: 4/30/19 Time: 0845

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Chain of Custody Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1093844

B037

Acctnum: **SLRWLOR**
Template: **T148769**
Prelogin: **P703216**
TSR: **110 - Brian Ford**
PB:
Shipped Via:

Andy Vann

Login #:L1093844	Client: SLRWLOR	Date: 4/30/19	Evaluated by: ERIC STRUCK

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time	X	Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Couri
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments:

-Did not receive GP-MW-12-SS-18-19.

Client informed by:		Call		Email		Voice Mail		Date:	Time:
TSR Initials:bjf	Client Contact:								

Login Instructions:

Proceed without **GP-MW-12-SS-18-19**

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

May 15, 2019

SLR International Corp. - West Linn, OR

Sample Delivery Group:	L1096002
Samples Received:	05/07/2019
Project Number:	108.00228.00059
Description:	Nord Door
Site:	EVERETT, WA
Report To:	Chris Kramer
	1800 Blankenship Road, Suite 440
	West Linn, OR 97068

Entire Report Reviewed By:

Brian Ford

Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

MW-11A-0519 L1096002-01 GW

Collected by: Steven L. | Collected date/time: 05/03/19 15:37 | Received date/time: 05/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1277537	1	05/07/19 21:00	05/08/19 10:13	SD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 15:58	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/15/19 15:43	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279226	1	05/10/19 13:47	05/10/19 13:47	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1277353	1	05/09/19 07:50	05/10/19 05:05	AO	Mt. Juliet, TN

MW-11B-0519 L1096002-02 GW

Collected by: Steven L. | Collected date/time: 05/03/19 16:17 | Received date/time: 05/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279226	1	05/10/19 14:08	05/10/19 14:08	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278026	1	05/08/19 17:50	05/11/19 00:43	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1277353	1	05/09/19 07:50	05/10/19 05:26	AO	Mt. Juliet, TN

MW-12-0519 L1096002-03 GW

Collected by: Steven L. | Collected date/time: 05/03/19 11:20 | Received date/time: 05/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1277537	1	05/07/19 21:00	05/08/19 10:16	SD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 16:17	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/15/19 16:02	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279226	1	05/10/19 14:29	05/10/19 14:29	ACG	Mt. Juliet, TN

MW-13-0519 L1096002-04 GW

Collected by: Steven L. | Collected date/time: 05/03/19 10:25 | Received date/time: 05/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1277537	1	05/07/19 21:00	05/08/19 10:26	SD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 16:21	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/15/19 16:06	LD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1278048	1	05/09/19 07:30	05/10/19 00:37	AO	Mt. Juliet, TN

MW-14-0519 L1096002-05 GW

Collected by: Steven L. | Collected date/time: 05/03/19 12:07 | Received date/time: 05/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1277537	1	05/07/19 21:00	05/08/19 10:28	SD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 16:26	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/15/19 16:11	LD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1278048	1	05/09/19 07:30	05/10/19 00:58	AO	Mt. Juliet, TN

MW-16-0519 L1096002-06 GW

Collected by: Steven L. | Collected date/time: 05/03/19 13:57 | Received date/time: 05/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1277537	1	05/07/19 21:00	05/08/19 10:30	SD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 16:43	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/15/19 16:24	LD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1278048	1	05/09/19 07:30	05/10/19 01:19	AO	Mt. Juliet, TN

MW-17-0519 L1096002-07 GW

Collected by: Steven L.
Collected date/time: 05/03/19 14:44
Received date/time: 05/07/19 08:45

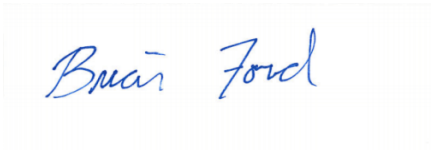
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1277537	1	05/07/19 21:00	05/08/19 10:33	SD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 16:48	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/15/19 16:29	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1279226	1	05/10/19 14:50	05/10/19 14:50	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1278026	1	05/08/19 17:50	05/11/19 01:05	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D	WG1278048	1	05/09/19 07:30	05/10/19 01:39	AO	Mt. Juliet, TN

MW-15-0519 L1096002-08 GW

Collected by: Steven L.
Collected date/time: 05/03/19 13:15
Received date/time: 05/07/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1278941	1	05/10/19 08:11	05/12/19 12:08	TCT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/14/19 16:52	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1279590	1	05/13/19 15:03	05/15/19 16:34	LD	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Sample Handling and Receiving

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

Lab Sample ID	Project Sample ID	Method
L1096002-08	MW-15-0519	6020B

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.0490	0.200	1	05/08/2019 10:13	WG1277537

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		0.754	2.00	1	05/15/2019 15:43	WG1279590
Arsenic	5.95	J6	0.250	2.00	1	05/14/2019 15:58	WG1279590
Beryllium	U		0.120	2.00	1	05/14/2019 15:58	WG1279590
Cadmium	U		0.160	1.00	1	05/14/2019 15:58	WG1279590
Chromium	20.5	J6 O1	0.540	2.00	1	05/14/2019 15:58	WG1279590
Copper	6.34	B O1	0.520	5.00	1	05/14/2019 15:58	WG1279590
Lead	1.01	J	0.240	2.00	1	05/14/2019 15:58	WG1279590
Nickel	4.17		0.350	2.00	1	05/14/2019 15:58	WG1279590
Selenium	0.490	B J	0.380	2.00	1	05/14/2019 15:58	WG1279590
Silver	U		0.310	2.00	1	05/14/2019 15:58	WG1279590
Thallium	U		0.190	2.00	1	05/14/2019 15:58	WG1279590
Zinc	6.85	B J O1	2.56	25.0	1	05/14/2019 15:58	WG1279590

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	1.97	J	1.05	25.0	1	05/10/2019 13:47	WG1279226
Acrylonitrile	U		0.873	5.00	1	05/10/2019 13:47	WG1279226
Benzene	U		0.0896	0.500	1	05/10/2019 13:47	WG1279226
Bromobenzene	U		0.133	0.500	1	05/10/2019 13:47	WG1279226
Bromodichloromethane	U		0.0800	0.500	1	05/10/2019 13:47	WG1279226
Bromochloromethane	U		0.145	0.500	1	05/10/2019 13:47	WG1279226
Bromoform	U		0.186	0.500	1	05/10/2019 13:47	WG1279226
Bromomethane	U		0.157	2.50	1	05/10/2019 13:47	WG1279226
n-Butylbenzene	U		0.143	0.500	1	05/10/2019 13:47	WG1279226
sec-Butylbenzene	U		0.134	0.500	1	05/10/2019 13:47	WG1279226
tert-Butylbenzene	U		0.183	0.500	1	05/10/2019 13:47	WG1279226
Carbon disulfide	U		0.101	0.500	1	05/10/2019 13:47	WG1279226
Carbon tetrachloride	U		0.159	0.500	1	05/10/2019 13:47	WG1279226
Chlorobenzene	U		0.140	0.500	1	05/10/2019 13:47	WG1279226
Chlorodibromomethane	U		0.128	0.500	1	05/10/2019 13:47	WG1279226
Chloroethane	U		0.141	2.50	1	05/10/2019 13:47	WG1279226
Chloroform	U		0.0860	0.500	1	05/10/2019 13:47	WG1279226
Chloromethane	U		0.153	1.25	1	05/10/2019 13:47	WG1279226
2-Chlorotoluene	U		0.111	0.500	1	05/10/2019 13:47	WG1279226
4-Chlorotoluene	U		0.0972	0.500	1	05/10/2019 13:47	WG1279226
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	05/10/2019 13:47	WG1279226
1,2-Dibromoethane	U		0.193	0.500	1	05/10/2019 13:47	WG1279226
Dibromomethane	U		0.117	0.500	1	05/10/2019 13:47	WG1279226
1,2-Dichlorobenzene	U		0.101	0.500	1	05/10/2019 13:47	WG1279226
1,3-Dichlorobenzene	U		0.130	0.500	1	05/10/2019 13:47	WG1279226
1,4-Dichlorobenzene	U		0.121	0.500	1	05/10/2019 13:47	WG1279226
Dichlorodifluoromethane	U		0.127	2.50	1	05/10/2019 13:47	WG1279226
1,1-Dichloroethane	U		0.114	0.500	1	05/10/2019 13:47	WG1279226
1,2-Dichloroethane	U		0.108	0.500	1	05/10/2019 13:47	WG1279226
1,1-Dichloroethene	U		0.188	0.500	1	05/10/2019 13:47	WG1279226
cis-1,2-Dichloroethene	U		0.0933	0.500	1	05/10/2019 13:47	WG1279226
trans-1,2-Dichloroethene	U		0.152	0.500	1	05/10/2019 13:47	WG1279226
1,2-Dichloropropane	U		0.190	0.500	1	05/10/2019 13:47	WG1279226
1,1-Dichloropropene	U		0.128	0.500	1	05/10/2019 13:47	WG1279226

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,3-Dichloropropane	U		0.147	1.00	1	05/10/2019 13:47	WG1279226
cis-1,3-Dichloropropene	U		0.0976	0.500	1	05/10/2019 13:47	WG1279226
trans-1,3-Dichloropropene	U		0.222	0.500	1	05/10/2019 13:47	WG1279226
trans-1,4-Dichloro-2-butene	U	J0	0.257	5.00	1	05/10/2019 13:47	WG1279226
2,2-Dichloropropane	U		0.0929	0.500	1	05/10/2019 13:47	WG1279226
Di-isopropyl ether	U		0.0924	0.500	1	05/10/2019 13:47	WG1279226
Ethylbenzene	U		0.158	0.500	1	05/10/2019 13:47	WG1279226
Hexachloro-1,3-butadiene	U		0.157	1.00	1	05/10/2019 13:47	WG1279226
2-Hexanone	U		0.757	5.00	1	05/10/2019 13:47	WG1279226
n-Hexane	U		0.305	5.00	1	05/10/2019 13:47	WG1279226
Iodomethane	U		0.377	10.0	1	05/10/2019 13:47	WG1279226
Isopropylbenzene	U		0.126	0.500	1	05/10/2019 13:47	WG1279226
p-Isopropyltoluene	U		0.138	0.500	1	05/10/2019 13:47	WG1279226
2-Butanone (MEK)	U		1.28	5.00	1	05/10/2019 13:47	WG1279226
Methylene Chloride	U		1.07	2.50	1	05/10/2019 13:47	WG1279226
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	05/10/2019 13:47	WG1279226
Methyl tert-butyl ether	U		0.102	0.500	1	05/10/2019 13:47	WG1279226
Naphthalene	0.188	B J	0.174	2.50	1	05/10/2019 13:47	WG1279226
n-Propylbenzene	U		0.162	0.500	1	05/10/2019 13:47	WG1279226
Styrene	U		0.117	0.500	1	05/10/2019 13:47	WG1279226
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	05/10/2019 13:47	WG1279226
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	05/10/2019 13:47	WG1279226
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	05/10/2019 13:47	WG1279226
Tetrachloroethene	U		0.199	0.500	1	05/10/2019 13:47	WG1279226
Toluene	U		0.412	0.500	1	05/10/2019 13:47	WG1279226
1,2,3-Trichlorobenzene	U		0.164	0.500	1	05/10/2019 13:47	WG1279226
1,2,4-Trichlorobenzene	U		0.355	0.500	1	05/10/2019 13:47	WG1279226
1,1,1-Trichloroethane	U		0.0940	0.500	1	05/10/2019 13:47	WG1279226
1,1,2-Trichloroethane	U		0.186	0.500	1	05/10/2019 13:47	WG1279226
Trichloroethene	U		0.153	0.500	1	05/10/2019 13:47	WG1279226
Trichlorofluoromethane	U		0.130	2.50	1	05/10/2019 13:47	WG1279226
1,2,3-Trichloropropane	U		0.247	2.50	1	05/10/2019 13:47	WG1279226
1,2,4-Trimethylbenzene	0.151	J	0.123	0.500	1	05/10/2019 13:47	WG1279226
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	05/10/2019 13:47	WG1279226
1,3,5-Trimethylbenzene	U		0.124	0.500	1	05/10/2019 13:47	WG1279226
Vinyl acetate	U	J0	0.645	5.00	1	05/10/2019 13:47	WG1279226
Vinyl chloride	U		0.118	0.500	1	05/10/2019 13:47	WG1279226
Xylenes, Total	U		0.316	1.50	1	05/10/2019 13:47	WG1279226
(S) Toluene-d8	*94.1*			*80.0-120*		*05/10/2019 13:47*	WG1279226
(S) 4-Bromofluorobenzene	*112*			*77.0-126*		*05/10/2019 13:47*	WG1279226
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*05/10/2019 13:47*	WG1279226

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	32.0		0.316	1.00	1	05/10/2019 05:05	WG1277353
Acenaphthylene	U		0.309	1.00	1	05/10/2019 05:05	WG1277353
Anthracene	U		0.291	1.00	1	05/10/2019 05:05	WG1277353
Benzo(a)anthracene	U		0.0975	1.00	1	05/10/2019 05:05	WG1277353
Benzo(b)fluoranthene	U		0.0896	1.00	1	05/10/2019 05:05	WG1277353
Benzo(k)fluoranthene	U		0.355	1.00	1	05/10/2019 05:05	WG1277353
Benzo(g,h,i)perylene	U		0.161	1.00	1	05/10/2019 05:05	WG1277353
Benzo(a)pyrene	U		0.340	1.00	1	05/10/2019 05:05	WG1277353
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	05/10/2019 05:05	WG1277353
Bis(2-chloroethyl)ether	U		1.62	10.0	1	05/10/2019 05:05	WG1277353
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	05/10/2019 05:05	WG1277353

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
4-Bromophenyl-phenylether	U		0.335	10.0	1	05/10/2019 05:05	WG1277353
2-Chloronaphthalene	U		0.330	1.00	1	05/10/2019 05:05	WG1277353
4-Chlorophenyl-phenylether	U		0.303	10.0	1	05/10/2019 05:05	WG1277353
Chrysene	U		0.332	1.00	1	05/10/2019 05:05	WG1277353
Dibenz(a,h)anthracene	U		0.279	1.00	1	05/10/2019 05:05	WG1277353
3,3-Dichlorobenzidine	U		2.02	10.0	1	05/10/2019 05:05	WG1277353
2,4-Dinitrotoluene	U		1.65	10.0	1	05/10/2019 05:05	WG1277353
2,6-Dinitrotoluene	U		0.279	10.0	1	05/10/2019 05:05	WG1277353
Fluoranthene	U		0.310	1.00	1	05/10/2019 05:05	WG1277353
Fluorene	19.1		0.323	1.00	1	05/10/2019 05:05	WG1277353
Hexachlorobenzene	U		0.341	1.00	1	05/10/2019 05:05	WG1277353
Hexachloro-1,3-butadiene	U	J4	0.329	10.0	1	05/10/2019 05:05	WG1277353
Hexachlorocyclopentadiene	U		2.33	10.0	1	05/10/2019 05:05	WG1277353
Hexachloroethane	U	J4	0.365	10.0	1	05/10/2019 05:05	WG1277353
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	05/10/2019 05:05	WG1277353
Isophorone	U		0.272	10.0	1	05/10/2019 05:05	WG1277353
Naphthalene	U		0.372	1.00	1	05/10/2019 05:05	WG1277353
Nitrobenzene	U		0.367	10.0	1	05/10/2019 05:05	WG1277353
n-Nitrosodimethylamine	U		1.26	10.0	1	05/10/2019 05:05	WG1277353
n-Nitrosodiphenylamine	U		1.19	10.0	1	05/10/2019 05:05	WG1277353
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	05/10/2019 05:05	WG1277353
Phenanthrene	14.1		0.366	1.00	1	05/10/2019 05:05	WG1277353
Pyridine	U		1.37	10.0	1	05/10/2019 05:05	WG1277353
Benzylbutyl phthalate	U		0.275	3.00	1	05/10/2019 05:05	WG1277353
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	05/10/2019 05:05	WG1277353
Di-n-butyl phthalate	U		0.266	3.00	1	05/10/2019 05:05	WG1277353
Diethyl phthalate	U		0.282	3.00	1	05/10/2019 05:05	WG1277353
Dimethyl phthalate	U		0.283	3.00	1	05/10/2019 05:05	WG1277353
Di-n-octyl phthalate	U		0.278	3.00	1	05/10/2019 05:05	WG1277353
Pyrene	U		0.330	1.00	1	05/10/2019 05:05	WG1277353
1,2,4-Trichlorobenzene	U		0.355	10.0	1	05/10/2019 05:05	WG1277353
4-Chloro-3-methylphenol	U		0.263	10.0	1	05/10/2019 05:05	WG1277353
2-Chlorophenol	U		0.283	10.0	1	05/10/2019 05:05	WG1277353
2,4-Dichlorophenol	U		0.284	10.0	1	05/10/2019 05:05	WG1277353
2,4-Dimethylphenol	U		0.264	10.0	1	05/10/2019 05:05	WG1277353
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	05/10/2019 05:05	WG1277353
2,4-Dinitrophenol	U		3.25	10.0	1	05/10/2019 05:05	WG1277353
2-Methylphenol	U		0.312	10.0	1	05/10/2019 05:05	WG1277353
3&4-Methyl Phenol	U		0.266	10.0	1	05/10/2019 05:05	WG1277353
2-Nitrophenol	U		0.320	10.0	1	05/10/2019 05:05	WG1277353
4-Nitrophenol	U		2.01	10.0	1	05/10/2019 05:05	WG1277353
Pentachlorophenol	U		0.313	10.0	1	05/10/2019 05:05	WG1277353
Phenol	1.29	J	0.334	10.0	1	05/10/2019 05:05	WG1277353
2,4,6-Trichlorophenol	U		0.297	10.0	1	05/10/2019 05:05	WG1277353
2,4,5-Trichlorophenol	U		0.236	10.0	1	05/10/2019 05:05	WG1277353
(S) 2-Fluorophenol	*16.9*			*10.0-120*		*05/10/2019 05:05*	WG1277353
(S) Phenol-d5	*13.7*			*10.0-120*		*05/10/2019 05:05*	WG1277353
(S) Nitrobenzene-d5	*22.8*			*10.0-127*		*05/10/2019 05:05*	WG1277353
(S) 2-Fluorobiphenyl	*34.1*			*10.0-130*		*05/10/2019 05:05*	WG1277353
(S) 2,4,6-Tribromophenol	*45.6*			*10.0-155*		*05/10/2019 05:05*	WG1277353
(S) p-Terphenyl-d14	*48.7*			*10.0-128*		*05/10/2019 05:05*	WG1277353

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	4.20	J	1.05	25.0	1	05/10/2019 14:08	WG1279226
Acrylonitrile	U		0.873	5.00	1	05/10/2019 14:08	WG1279226
Benzene	U		0.0896	0.500	1	05/10/2019 14:08	WG1279226
Bromobenzene	U		0.133	0.500	1	05/10/2019 14:08	WG1279226
Bromodichloromethane	U		0.0800	0.500	1	05/10/2019 14:08	WG1279226
Bromochloromethane	U		0.145	0.500	1	05/10/2019 14:08	WG1279226
Bromoform	U		0.186	0.500	1	05/10/2019 14:08	WG1279226
Bromomethane	U		0.157	2.50	1	05/10/2019 14:08	WG1279226
n-Butylbenzene	U		0.143	0.500	1	05/10/2019 14:08	WG1279226
sec-Butylbenzene	U		0.134	0.500	1	05/10/2019 14:08	WG1279226
tert-Butylbenzene	U		0.183	0.500	1	05/10/2019 14:08	WG1279226
Carbon disulfide	U		0.101	0.500	1	05/10/2019 14:08	WG1279226
Carbon tetrachloride	U		0.159	0.500	1	05/10/2019 14:08	WG1279226
Chlorobenzene	U		0.140	0.500	1	05/10/2019 14:08	WG1279226
Chlorodibromomethane	U		0.128	0.500	1	05/10/2019 14:08	WG1279226
Chloroethane	U		0.141	2.50	1	05/10/2019 14:08	WG1279226
Chloroform	1.32		0.0860	0.500	1	05/10/2019 14:08	WG1279226
Chloromethane	U		0.153	1.25	1	05/10/2019 14:08	WG1279226
2-Chlorotoluene	U		0.111	0.500	1	05/10/2019 14:08	WG1279226
4-Chlorotoluene	U		0.0972	0.500	1	05/10/2019 14:08	WG1279226
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	05/10/2019 14:08	WG1279226
1,2-Dibromoethane	U		0.193	0.500	1	05/10/2019 14:08	WG1279226
Dibromomethane	U		0.117	0.500	1	05/10/2019 14:08	WG1279226
1,2-Dichlorobenzene	U		0.101	0.500	1	05/10/2019 14:08	WG1279226
1,3-Dichlorobenzene	U		0.130	0.500	1	05/10/2019 14:08	WG1279226
1,4-Dichlorobenzene	U		0.121	0.500	1	05/10/2019 14:08	WG1279226
Dichlorodifluoromethane	U		0.127	2.50	1	05/10/2019 14:08	WG1279226
1,1-Dichloroethane	U		0.114	0.500	1	05/10/2019 14:08	WG1279226
1,2-Dichloroethane	U		0.108	0.500	1	05/10/2019 14:08	WG1279226
1,1-Dichloroethene	U		0.188	0.500	1	05/10/2019 14:08	WG1279226
cis-1,2-Dichloroethene	U		0.0933	0.500	1	05/10/2019 14:08	WG1279226
trans-1,2-Dichloroethene	U		0.152	0.500	1	05/10/2019 14:08	WG1279226
1,2-Dichloropropane	U		0.190	0.500	1	05/10/2019 14:08	WG1279226
1,1-Dichloropropene	U		0.128	0.500	1	05/10/2019 14:08	WG1279226
1,3-Dichloropropane	U		0.147	1.00	1	05/10/2019 14:08	WG1279226
cis-1,3-Dichloropropene	U		0.0976	0.500	1	05/10/2019 14:08	WG1279226
trans-1,3-Dichloropropene	U		0.222	0.500	1	05/10/2019 14:08	WG1279226
trans-1,4-Dichloro-2-butene	U	J0	0.257	5.00	1	05/10/2019 14:08	WG1279226
2,2-Dichloropropane	U		0.0929	0.500	1	05/10/2019 14:08	WG1279226
Di-isopropyl ether	U		0.0924	0.500	1	05/10/2019 14:08	WG1279226
Ethylbenzene	U		0.158	0.500	1	05/10/2019 14:08	WG1279226
Hexachloro-1,3-butadiene	U		0.157	1.00	1	05/10/2019 14:08	WG1279226
2-Hexanone	U		0.757	5.00	1	05/10/2019 14:08	WG1279226
n-Hexane	U		0.305	5.00	1	05/10/2019 14:08	WG1279226
Iodomethane	U		0.377	10.0	1	05/10/2019 14:08	WG1279226
Isopropylbenzene	U		0.126	0.500	1	05/10/2019 14:08	WG1279226
p-Isopropyltoluene	U		0.138	0.500	1	05/10/2019 14:08	WG1279226
2-Butanone (MEK)	U		1.28	5.00	1	05/10/2019 14:08	WG1279226
Methylene Chloride	U		1.07	2.50	1	05/10/2019 14:08	WG1279226
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	05/10/2019 14:08	WG1279226
Methyl tert-butyl ether	U		0.102	0.500	1	05/10/2019 14:08	WG1279226
Naphthalene	U		0.174	2.50	1	05/10/2019 14:08	WG1279226
n-Propylbenzene	U		0.162	0.500	1	05/10/2019 14:08	WG1279226
Styrene	U		0.117	0.500	1	05/10/2019 14:08	WG1279226
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	05/10/2019 14:08	WG1279226
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	05/10/2019 14:08	WG1279226

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	05/10/2019 14:08	WG1279226
Tetrachloroethene	U		0.199	0.500	1	05/10/2019 14:08	WG1279226
Toluene	U		0.412	0.500	1	05/10/2019 14:08	WG1279226
1,2,3-Trichlorobenzene	U		0.164	0.500	1	05/10/2019 14:08	WG1279226
1,2,4-Trichlorobenzene	U		0.355	0.500	1	05/10/2019 14:08	WG1279226
1,1,1-Trichloroethane	U		0.0940	0.500	1	05/10/2019 14:08	WG1279226
1,1,2-Trichloroethane	U		0.186	0.500	1	05/10/2019 14:08	WG1279226
Trichloroethene	U		0.153	0.500	1	05/10/2019 14:08	WG1279226
Trichlorofluoromethane	U		0.130	2.50	1	05/10/2019 14:08	WG1279226
1,2,3-Trichloropropane	U		0.247	2.50	1	05/10/2019 14:08	WG1279226
1,2,4-Trimethylbenzene	U		0.123	0.500	1	05/10/2019 14:08	WG1279226
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	05/10/2019 14:08	WG1279226
1,3,5-Trimethylbenzene	U		0.124	0.500	1	05/10/2019 14:08	WG1279226
Vinyl acetate	U	J0	0.645	5.00	1	05/10/2019 14:08	WG1279226
Vinyl chloride	U		0.118	0.500	1	05/10/2019 14:08	WG1279226
Xylenes, Total	U		0.316	1.50	1	05/10/2019 14:08	WG1279226
(S) Toluene-d8	*92.8*			*80.0-120*		*05/10/2019 14:08*	WG1279226
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*05/10/2019 14:08*	WG1279226
(S) 1,2-Dichloroethane-d4	*98.4*			*70.0-130*		*05/10/2019 14:08*	WG1279226

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		66.7	200	1	05/11/2019 00:43	WG1278026
Residual Range Organics (RRO)	U		83.3	250	1	05/11/2019 00:43	WG1278026
(S) o-Terphenyl	*91.1*			*52.0-156*		*05/11/2019 00:43*	WG1278026

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.316	1.00	1	05/10/2019 05:26	WG1277353
Acenaphthylene	U		0.309	1.00	1	05/10/2019 05:26	WG1277353
Anthracene	U		0.291	1.00	1	05/10/2019 05:26	WG1277353
Benzo(a)anthracene	U		0.0975	1.00	1	05/10/2019 05:26	WG1277353
Benzo(b)fluoranthene	U		0.0896	1.00	1	05/10/2019 05:26	WG1277353
Benzo(k)fluoranthene	U		0.355	1.00	1	05/10/2019 05:26	WG1277353
Benzo(g,h,i)perylene	U		0.161	1.00	1	05/10/2019 05:26	WG1277353
Benzo(a)pyrene	U		0.340	1.00	1	05/10/2019 05:26	WG1277353
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	05/10/2019 05:26	WG1277353
Bis(2-chloroethyl)ether	U		1.62	10.0	1	05/10/2019 05:26	WG1277353
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	05/10/2019 05:26	WG1277353
4-Bromophenyl-phenylether	U		0.335	10.0	1	05/10/2019 05:26	WG1277353
2-Chloronaphthalene	U		0.330	1.00	1	05/10/2019 05:26	WG1277353
4-Chlorophenyl-phenylether	U		0.303	10.0	1	05/10/2019 05:26	WG1277353
Chrysene	U		0.332	1.00	1	05/10/2019 05:26	WG1277353
Dibenz(a,h)anthracene	U		0.279	1.00	1	05/10/2019 05:26	WG1277353
3,3-Dichlorobenzidine	U		2.02	10.0	1	05/10/2019 05:26	WG1277353
2,4-Dinitrotoluene	U		1.65	10.0	1	05/10/2019 05:26	WG1277353
2,6-Dinitrotoluene	U		0.279	10.0	1	05/10/2019 05:26	WG1277353
Fluoranthene	U		0.310	1.00	1	05/10/2019 05:26	WG1277353
Fluorene	U		0.323	1.00	1	05/10/2019 05:26	WG1277353
Hexachlorobenzene	U		0.341	1.00	1	05/10/2019 05:26	WG1277353
Hexachloro-1,3-butadiene	U	J4	0.329	10.0	1	05/10/2019 05:26	WG1277353
Hexachlorocyclopentadiene	U		2.33	10.0	1	05/10/2019 05:26	WG1277353
Hexachloroethane	U	J4	0.365	10.0	1	05/10/2019 05:26	WG1277353

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	05/10/2019 05:26	WG1277353
Isophorone	U		0.272	10.0	1	05/10/2019 05:26	WG1277353
Naphthalene	U		0.372	1.00	1	05/10/2019 05:26	WG1277353
Nitrobenzene	U		0.367	10.0	1	05/10/2019 05:26	WG1277353
n-Nitrosodimethylamine	U		1.26	10.0	1	05/10/2019 05:26	WG1277353
n-Nitrosodiphenylamine	U		1.19	10.0	1	05/10/2019 05:26	WG1277353
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	05/10/2019 05:26	WG1277353
Phenanthrene	U		0.366	1.00	1	05/10/2019 05:26	WG1277353
Pyridine	U		1.37	10.0	1	05/10/2019 05:26	WG1277353
Benzylbutyl phthalate	U		0.275	3.00	1	05/10/2019 05:26	WG1277353
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	05/10/2019 05:26	WG1277353
Di-n-butyl phthalate	U		0.266	3.00	1	05/10/2019 05:26	WG1277353
Diethyl phthalate	U		0.282	3.00	1	05/10/2019 05:26	WG1277353
Dimethyl phthalate	U		0.283	3.00	1	05/10/2019 05:26	WG1277353
Di-n-octyl phthalate	U		0.278	3.00	1	05/10/2019 05:26	WG1277353
Pyrene	U		0.330	1.00	1	05/10/2019 05:26	WG1277353
1,2,4-Trichlorobenzene	U		0.355	10.0	1	05/10/2019 05:26	WG1277353
4-Chloro-3-methylphenol	U		0.263	10.0	1	05/10/2019 05:26	WG1277353
2-Chlorophenol	U		0.283	10.0	1	05/10/2019 05:26	WG1277353
2,4-Dichlorophenol	U		0.284	10.0	1	05/10/2019 05:26	WG1277353
2,4-Dimethylphenol	U		0.264	10.0	1	05/10/2019 05:26	WG1277353
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	05/10/2019 05:26	WG1277353
2,4-Dinitrophenol	U		3.25	10.0	1	05/10/2019 05:26	WG1277353
2-Methylphenol	U		0.312	10.0	1	05/10/2019 05:26	WG1277353
3&4-Methyl Phenol	U		0.266	10.0	1	05/10/2019 05:26	WG1277353
2-Nitrophenol	U		0.320	10.0	1	05/10/2019 05:26	WG1277353
4-Nitrophenol	U		2.01	10.0	1	05/10/2019 05:26	WG1277353
Pentachlorophenol	U		0.313	10.0	1	05/10/2019 05:26	WG1277353
Phenol	2.89	J	0.334	10.0	1	05/10/2019 05:26	WG1277353
2,4,6-Trichlorophenol	U		0.297	10.0	1	05/10/2019 05:26	WG1277353
2,4,5-Trichlorophenol	U		0.236	10.0	1	05/10/2019 05:26	WG1277353
(S) 2-Fluorophenol	*34.1*			*10.0-120*		*05/10/2019 05:26*	WG1277353
(S) Phenol-d5	*22.8*			*10.0-120*		*05/10/2019 05:26*	WG1277353
(S) Nitrobenzene-d5	*43.5*			*10.0-127*		*05/10/2019 05:26*	WG1277353
(S) 2-Fluorobiphenyl	*53.1*			*10.0-130*		*05/10/2019 05:26*	WG1277353
(S) 2,4,6-Tribromophenol	*60.0*			*10.0-155*		*05/10/2019 05:26*	WG1277353
(S) p-Terphenyl-d14	*72.7*			*10.0-128*		*05/10/2019 05:26*	WG1277353

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.0490	0.200	1	05/08/2019 10:16	WG1277537

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	6.55		0.754	2.00	1	05/15/2019 16:02	WG1279590
Arsenic	18.7		0.250	2.00	1	05/14/2019 16:17	WG1279590
Beryllium	U		0.120	2.00	1	05/14/2019 16:17	WG1279590
Cadmium	U		0.160	1.00	1	05/14/2019 16:17	WG1279590
Chromium	4.82		0.540	2.00	1	05/14/2019 16:17	WG1279590
Copper	7.26	B	0.520	5.00	1	05/14/2019 16:17	WG1279590
Lead	11.2		0.240	2.00	1	05/14/2019 16:17	WG1279590
Nickel	7.67		0.350	2.00	1	05/14/2019 16:17	WG1279590
Selenium	U		0.380	2.00	1	05/14/2019 16:17	WG1279590
Silver	U		0.310	2.00	1	05/14/2019 16:17	WG1279590
Thallium	U		0.190	2.00	1	05/14/2019 16:17	WG1279590
Zinc	27.7	B	2.56	25.0	1	05/14/2019 16:17	WG1279590

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	46.1		1.05	25.0	1	05/10/2019 14:29	WG1279226
Acrylonitrile	U		0.873	5.00	1	05/10/2019 14:29	WG1279226
Benzene	0.207	J	0.0896	0.500	1	05/10/2019 14:29	WG1279226
Bromobenzene	U		0.133	0.500	1	05/10/2019 14:29	WG1279226
Bromodichloromethane	U		0.0800	0.500	1	05/10/2019 14:29	WG1279226
Bromochloromethane	U		0.145	0.500	1	05/10/2019 14:29	WG1279226
Bromoform	U		0.186	0.500	1	05/10/2019 14:29	WG1279226
Bromomethane	U		0.157	2.50	1	05/10/2019 14:29	WG1279226
n-Butylbenzene	U		0.143	0.500	1	05/10/2019 14:29	WG1279226
sec-Butylbenzene	U		0.134	0.500	1	05/10/2019 14:29	WG1279226
tert-Butylbenzene	U		0.183	0.500	1	05/10/2019 14:29	WG1279226
Carbon disulfide	2.87		0.101	0.500	1	05/10/2019 14:29	WG1279226
Carbon tetrachloride	U		0.159	0.500	1	05/10/2019 14:29	WG1279226
Chlorobenzene	U		0.140	0.500	1	05/10/2019 14:29	WG1279226
Chlorodibromomethane	U		0.128	0.500	1	05/10/2019 14:29	WG1279226
Chloroethane	U		0.141	2.50	1	05/10/2019 14:29	WG1279226
Chloroform	U		0.0860	0.500	1	05/10/2019 14:29	WG1279226
Chloromethane	U		0.153	1.25	1	05/10/2019 14:29	WG1279226
2-Chlorotoluene	U		0.111	0.500	1	05/10/2019 14:29	WG1279226
4-Chlorotoluene	U		0.0972	0.500	1	05/10/2019 14:29	WG1279226
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	05/10/2019 14:29	WG1279226
1,2-Dibromoethane	U		0.193	0.500	1	05/10/2019 14:29	WG1279226
Dibromomethane	U		0.117	0.500	1	05/10/2019 14:29	WG1279226
1,2-Dichlorobenzene	U		0.101	0.500	1	05/10/2019 14:29	WG1279226
1,3-Dichlorobenzene	U		0.130	0.500	1	05/10/2019 14:29	WG1279226
1,4-Dichlorobenzene	U		0.121	0.500	1	05/10/2019 14:29	WG1279226
Dichlorodifluoromethane	U		0.127	2.50	1	05/10/2019 14:29	WG1279226
1,1-Dichloroethane	U		0.114	0.500	1	05/10/2019 14:29	WG1279226
1,2-Dichloroethane	U		0.108	0.500	1	05/10/2019 14:29	WG1279226
1,1-Dichloroethene	U		0.188	0.500	1	05/10/2019 14:29	WG1279226
cis-1,2-Dichloroethene	U		0.0933	0.500	1	05/10/2019 14:29	WG1279226
trans-1,2-Dichloroethene	U		0.152	0.500	1	05/10/2019 14:29	WG1279226
1,2-Dichloropropane	U		0.190	0.500	1	05/10/2019 14:29	WG1279226
1,1-Dichloropropene	U		0.128	0.500	1	05/10/2019 14:29	WG1279226

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,3-Dichloropropane	U		0.147	1.00	1	05/10/2019 14:29	WG1279226
cis-1,3-Dichloropropene	U		0.0976	0.500	1	05/10/2019 14:29	WG1279226
trans-1,3-Dichloropropene	U		0.222	0.500	1	05/10/2019 14:29	WG1279226
trans-1,4-Dichloro-2-butene	U	J0	0.257	5.00	1	05/10/2019 14:29	WG1279226
2,2-Dichloropropane	U		0.0929	0.500	1	05/10/2019 14:29	WG1279226
Di-isopropyl ether	U		0.0924	0.500	1	05/10/2019 14:29	WG1279226
Ethylbenzene	U		0.158	0.500	1	05/10/2019 14:29	WG1279226
Hexachloro-1,3-butadiene	U		0.157	1.00	1	05/10/2019 14:29	WG1279226
2-Hexanone	U		0.757	5.00	1	05/10/2019 14:29	WG1279226
n-Hexane	4.74	J	0.305	5.00	1	05/10/2019 14:29	WG1279226
Iodomethane	U		0.377	10.0	1	05/10/2019 14:29	WG1279226
Isopropylbenzene	U		0.126	0.500	1	05/10/2019 14:29	WG1279226
p-Isopropyltoluene	3.81		0.138	0.500	1	05/10/2019 14:29	WG1279226
2-Butanone (MEK)	4.21	J	1.28	5.00	1	05/10/2019 14:29	WG1279226
Methylene Chloride	U		1.07	2.50	1	05/10/2019 14:29	WG1279226
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	05/10/2019 14:29	WG1279226
Methyl tert-butyl ether	U		0.102	0.500	1	05/10/2019 14:29	WG1279226
Naphthalene	U		0.174	2.50	1	05/10/2019 14:29	WG1279226
n-Propylbenzene	U		0.162	0.500	1	05/10/2019 14:29	WG1279226
Styrene	U		0.117	0.500	1	05/10/2019 14:29	WG1279226
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	05/10/2019 14:29	WG1279226
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	05/10/2019 14:29	WG1279226
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	05/10/2019 14:29	WG1279226
Tetrachloroethene	U		0.199	0.500	1	05/10/2019 14:29	WG1279226
Toluene	U		0.412	0.500	1	05/10/2019 14:29	WG1279226
1,2,3-Trichlorobenzene	U		0.164	0.500	1	05/10/2019 14:29	WG1279226
1,2,4-Trichlorobenzene	U		0.355	0.500	1	05/10/2019 14:29	WG1279226
1,1,1-Trichloroethane	U		0.0940	0.500	1	05/10/2019 14:29	WG1279226
1,1,2-Trichloroethane	U		0.186	0.500	1	05/10/2019 14:29	WG1279226
Trichloroethene	U		0.153	0.500	1	05/10/2019 14:29	WG1279226
Trichlorofluoromethane	U		0.130	2.50	1	05/10/2019 14:29	WG1279226
1,2,3-Trichloropropane	U		0.247	2.50	1	05/10/2019 14:29	WG1279226
1,2,4-Trimethylbenzene	U		0.123	0.500	1	05/10/2019 14:29	WG1279226
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	05/10/2019 14:29	WG1279226
1,3,5-Trimethylbenzene	U		0.124	0.500	1	05/10/2019 14:29	WG1279226
Vinyl acetate	U	J0	0.645	5.00	1	05/10/2019 14:29	WG1279226
Vinyl chloride	U		0.118	0.500	1	05/10/2019 14:29	WG1279226
Xylenes, Total	U		0.316	1.50	1	05/10/2019 14:29	WG1279226
(S) Toluene-d8	*92.7*			*80.0-120*		*05/10/2019 14:29*	WG1279226
(S) 4-Bromofluorobenzene	*111*			*77.0-126*		*05/10/2019 14:29*	WG1279226
(S) 1,2-Dichloroethane-d4	*99.7*			*70.0-130*		*05/10/2019 14:29*	WG1279226

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	0.0664	J	0.0490	0.200	1	05/08/2019 10:26	WG1277537

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	2.05		0.754	2.00	1	05/15/2019 16:06	WG1279590
Arsenic	4.38		0.250	2.00	1	05/14/2019 16:21	WG1279590
Beryllium	U		0.120	2.00	1	05/14/2019 16:21	WG1279590
Cadmium	U		0.160	1.00	1	05/14/2019 16:21	WG1279590
Chromium	2.45		0.540	2.00	1	05/14/2019 16:21	WG1279590
Copper	45.9		0.520	5.00	1	05/14/2019 16:21	WG1279590
Lead	23.6		0.240	2.00	1	05/14/2019 16:21	WG1279590
Nickel	2.96		0.350	2.00	1	05/14/2019 16:21	WG1279590
Selenium	0.683	B J	0.380	2.00	1	05/14/2019 16:21	WG1279590
Silver	U		0.310	2.00	1	05/14/2019 16:21	WG1279590
Thallium	U		0.190	2.00	1	05/14/2019 16:21	WG1279590
Zinc	20.0	B J	2.56	25.0	1	05/14/2019 16:21	WG1279590

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.316	1.00	1	05/10/2019 00:37	WG1278048
Acenaphthylene	U		0.309	1.00	1	05/10/2019 00:37	WG1278048
Anthracene	U		0.291	1.00	1	05/10/2019 00:37	WG1278048
Benzo(a)anthracene	U		0.0975	1.00	1	05/10/2019 00:37	WG1278048
Benzo(b)fluoranthene	U		0.0896	1.00	1	05/10/2019 00:37	WG1278048
Benzo(k)fluoranthene	U		0.355	1.00	1	05/10/2019 00:37	WG1278048
Benzo(g,h,i)perylene	U		0.161	1.00	1	05/10/2019 00:37	WG1278048
Benzo(a)pyrene	U		0.340	1.00	1	05/10/2019 00:37	WG1278048
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	05/10/2019 00:37	WG1278048
Bis(2-chloroethyl)ether	U		1.62	10.0	1	05/10/2019 00:37	WG1278048
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	05/10/2019 00:37	WG1278048
4-Bromophenyl-phenylether	U		0.335	10.0	1	05/10/2019 00:37	WG1278048
2-Chloronaphthalene	U		0.330	1.00	1	05/10/2019 00:37	WG1278048
4-Chlorophenyl-phenylether	U		0.303	10.0	1	05/10/2019 00:37	WG1278048
Chrysene	U		0.332	1.00	1	05/10/2019 00:37	WG1278048
Dibenz(a,h)anthracene	U		0.279	1.00	1	05/10/2019 00:37	WG1278048
3,3-Dichlorobenzidine	U		2.02	10.0	1	05/10/2019 00:37	WG1278048
2,4-Dinitrotoluene	U		1.65	10.0	1	05/10/2019 00:37	WG1278048
2,6-Dinitrotoluene	U		0.279	10.0	1	05/10/2019 00:37	WG1278048
Fluoranthene	U		0.310	1.00	1	05/10/2019 00:37	WG1278048
Fluorene	U		0.323	1.00	1	05/10/2019 00:37	WG1278048
Hexachlorobenzene	U		0.341	1.00	1	05/10/2019 00:37	WG1278048
Hexachloro-1,3-butadiene	U		0.329	10.0	1	05/10/2019 00:37	WG1278048
Hexachlorocyclopentadiene	U		2.33	10.0	1	05/10/2019 00:37	WG1278048
Hexachloroethane	U		0.365	10.0	1	05/10/2019 00:37	WG1278048
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	05/10/2019 00:37	WG1278048
Isophorone	U		0.272	10.0	1	05/10/2019 00:37	WG1278048
Naphthalene	U		0.372	1.00	1	05/10/2019 00:37	WG1278048
Nitrobenzene	U		0.367	10.0	1	05/10/2019 00:37	WG1278048
n-Nitrosodimethylamine	U		1.26	10.0	1	05/10/2019 00:37	WG1278048
n-Nitrosodiphenylamine	U		1.19	10.0	1	05/10/2019 00:37	WG1278048
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	05/10/2019 00:37	WG1278048
Phenanthrene	U		0.366	1.00	1	05/10/2019 00:37	WG1278048
Pyridine	U		1.37	10.0	1	05/10/2019 00:37	WG1278048

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzylbutyl phthalate	U		0.275	3.00	1	05/10/2019 00:37	WG1278048
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	05/10/2019 00:37	WG1278048
Di-n-butyl phthalate	U		0.266	3.00	1	05/10/2019 00:37	WG1278048
Diethyl phthalate	U		0.282	3.00	1	05/10/2019 00:37	WG1278048
Dimethyl phthalate	U		0.283	3.00	1	05/10/2019 00:37	WG1278048
Di-n-octyl phthalate	U		0.278	3.00	1	05/10/2019 00:37	WG1278048
Pyrene	U		0.330	1.00	1	05/10/2019 00:37	WG1278048
1,2,4-Trichlorobenzene	U		0.355	10.0	1	05/10/2019 00:37	WG1278048
4-Chloro-3-methylphenol	U		0.263	10.0	1	05/10/2019 00:37	WG1278048
2-Chlorophenol	U		0.283	10.0	1	05/10/2019 00:37	WG1278048
2,4-Dichlorophenol	U		0.284	10.0	1	05/10/2019 00:37	WG1278048
2,4-Dimethylphenol	U		0.264	10.0	1	05/10/2019 00:37	WG1278048
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	05/10/2019 00:37	WG1278048
2,4-Dinitrophenol	U		3.25	10.0	1	05/10/2019 00:37	WG1278048
2-Methylphenol	U		0.312	10.0	1	05/10/2019 00:37	WG1278048
3&4-Methyl Phenol	U		0.266	10.0	1	05/10/2019 00:37	WG1278048
2-Nitrophenol	U		0.320	10.0	1	05/10/2019 00:37	WG1278048
4-Nitrophenol	U		2.01	10.0	1	05/10/2019 00:37	WG1278048
Pentachlorophenol	U		0.313	10.0	1	05/10/2019 00:37	WG1278048
Phenol	1.40	J	0.334	10.0	1	05/10/2019 00:37	WG1278048
2,4,6-Trichlorophenol	U		0.297	10.0	1	05/10/2019 00:37	WG1278048
2,4,5-Trichlorophenol	U		0.236	10.0	1	05/10/2019 00:37	WG1278048
(S) 2-Fluorophenol	*34.2*			*10.0-120*		*05/10/2019 00:37*	WG1278048
(S) Phenol-d5	*22.5*			*10.0-120*		*05/10/2019 00:37*	WG1278048
(S) Nitrobenzene-d5	*54.0*			*10.0-127*		*05/10/2019 00:37*	WG1278048
(S) 2-Fluorobiphenyl	*56.6*			*10.0-130*		*05/10/2019 00:37*	WG1278048
(S) 2,4,6-Tribromophenol	*55.5*			*10.0-155*		*05/10/2019 00:37*	WG1278048
(S) p-Terphenyl-d14	*60.5*			*10.0-128*		*05/10/2019 00:37*	WG1278048

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.0490	0.200	1	05/08/2019 10:28	WG1277537

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		0.754	2.00	1	05/15/2019 16:11	WG1279590
Arsenic	16.6		0.250	2.00	1	05/14/2019 16:26	WG1279590
Beryllium	U		0.120	2.00	1	05/14/2019 16:26	WG1279590
Cadmium	U		0.160	1.00	1	05/14/2019 16:26	WG1279590
Chromium	3.55		0.540	2.00	1	05/14/2019 16:26	WG1279590
Copper	7.35	B	0.520	5.00	1	05/14/2019 16:26	WG1279590
Lead	2.10		0.240	2.00	1	05/14/2019 16:26	WG1279590
Nickel	2.85		0.350	2.00	1	05/14/2019 16:26	WG1279590
Selenium	0.413	B J	0.380	2.00	1	05/14/2019 16:26	WG1279590
Silver	U		0.310	2.00	1	05/14/2019 16:26	WG1279590
Thallium	U		0.190	2.00	1	05/14/2019 16:26	WG1279590
Zinc	9.27	B J	2.56	25.0	1	05/14/2019 16:26	WG1279590

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.316	1.00	1	05/10/2019 00:58	WG1278048
Acenaphthylene	U		0.309	1.00	1	05/10/2019 00:58	WG1278048
Anthracene	0.361	J	0.291	1.00	1	05/10/2019 00:58	WG1278048
Benzo(a)anthracene	U		0.0975	1.00	1	05/10/2019 00:58	WG1278048
Benzo(b)fluoranthene	U		0.0896	1.00	1	05/10/2019 00:58	WG1278048
Benzo(k)fluoranthene	U		0.355	1.00	1	05/10/2019 00:58	WG1278048
Benzo(g,h,i)perylene	U		0.161	1.00	1	05/10/2019 00:58	WG1278048
Benzo(a)pyrene	U		0.340	1.00	1	05/10/2019 00:58	WG1278048
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	05/10/2019 00:58	WG1278048
Bis(2-chloroethyl)ether	U		1.62	10.0	1	05/10/2019 00:58	WG1278048
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	05/10/2019 00:58	WG1278048
4-Bromophenyl-phenylether	U		0.335	10.0	1	05/10/2019 00:58	WG1278048
2-Chloronaphthalene	U		0.330	1.00	1	05/10/2019 00:58	WG1278048
4-Chlorophenyl-phenylether	U		0.303	10.0	1	05/10/2019 00:58	WG1278048
Chrysene	U		0.332	1.00	1	05/10/2019 00:58	WG1278048
Dibenz(a,h)anthracene	U		0.279	1.00	1	05/10/2019 00:58	WG1278048
3,3-Dichlorobenzidine	U		2.02	10.0	1	05/10/2019 00:58	WG1278048
2,4-Dinitrotoluene	U		1.65	10.0	1	05/10/2019 00:58	WG1278048
2,6-Dinitrotoluene	U		0.279	10.0	1	05/10/2019 00:58	WG1278048
Fluoranthene	U		0.310	1.00	1	05/10/2019 00:58	WG1278048
Fluorene	U		0.323	1.00	1	05/10/2019 00:58	WG1278048
Hexachlorobenzene	U		0.341	1.00	1	05/10/2019 00:58	WG1278048
Hexachloro-1,3-butadiene	U		0.329	10.0	1	05/10/2019 00:58	WG1278048
Hexachlorocyclopentadiene	U		2.33	10.0	1	05/10/2019 00:58	WG1278048
Hexachloroethane	U		0.365	10.0	1	05/10/2019 00:58	WG1278048
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	05/10/2019 00:58	WG1278048
Isophorone	U		0.272	10.0	1	05/10/2019 00:58	WG1278048
Naphthalene	U		0.372	1.00	1	05/10/2019 00:58	WG1278048
Nitrobenzene	U		0.367	10.0	1	05/10/2019 00:58	WG1278048
n-Nitrosodimethylamine	U		1.26	10.0	1	05/10/2019 00:58	WG1278048
n-Nitrosodiphenylamine	U		1.19	10.0	1	05/10/2019 00:58	WG1278048
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	05/10/2019 00:58	WG1278048
Phenanthrene	U		0.366	1.00	1	05/10/2019 00:58	WG1278048
Pyridine	U		1.37	10.0	1	05/10/2019 00:58	WG1278048

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzylbutyl phthalate	U		0.275	3.00	1	05/10/2019 00:58	WG1278048
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	05/10/2019 00:58	WG1278048
Di-n-butyl phthalate	U		0.266	3.00	1	05/10/2019 00:58	WG1278048
Diethyl phthalate	U		0.282	3.00	1	05/10/2019 00:58	WG1278048
Dimethyl phthalate	U		0.283	3.00	1	05/10/2019 00:58	WG1278048
Di-n-octyl phthalate	U		0.278	3.00	1	05/10/2019 00:58	WG1278048
Pyrene	U		0.330	1.00	1	05/10/2019 00:58	WG1278048
1,2,4-Trichlorobenzene	U		0.355	10.0	1	05/10/2019 00:58	WG1278048
4-Chloro-3-methylphenol	U		0.263	10.0	1	05/10/2019 00:58	WG1278048
2-Chlorophenol	U		0.283	10.0	1	05/10/2019 00:58	WG1278048
2,4-Dichlorophenol	U		0.284	10.0	1	05/10/2019 00:58	WG1278048
2,4-Dimethylphenol	U		0.264	10.0	1	05/10/2019 00:58	WG1278048
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	05/10/2019 00:58	WG1278048
2,4-Dinitrophenol	U		3.25	10.0	1	05/10/2019 00:58	WG1278048
2-Methylphenol	U		0.312	10.0	1	05/10/2019 00:58	WG1278048
3&4-Methyl Phenol	U		0.266	10.0	1	05/10/2019 00:58	WG1278048
2-Nitrophenol	U		0.320	10.0	1	05/10/2019 00:58	WG1278048
4-Nitrophenol	U		2.01	10.0	1	05/10/2019 00:58	WG1278048
Pentachlorophenol	U		0.313	10.0	1	05/10/2019 00:58	WG1278048
Phenol	9.50	J	0.334	10.0	1	05/10/2019 00:58	WG1278048
2,4,6-Trichlorophenol	U		0.297	10.0	1	05/10/2019 00:58	WG1278048
2,4,5-Trichlorophenol	U		0.236	10.0	1	05/10/2019 00:58	WG1278048
(S) 2-Fluorophenol	*41.7*			*10.0-120*		*05/10/2019 00:58*	WG1278048
(S) Phenol-d5	*27.0*			*10.0-120*		*05/10/2019 00:58*	WG1278048
(S) Nitrobenzene-d5	*62.2*			*10.0-127*		*05/10/2019 00:58*	WG1278048
(S) 2-Fluorobiphenyl	*62.7*			*10.0-130*		*05/10/2019 00:58*	WG1278048
(S) 2,4,6-Tribromophenol	*63.7*			*10.0-155*		*05/10/2019 00:58*	WG1278048
(S) p-Terphenyl-d14	*70.5*			*10.0-128*		*05/10/2019 00:58*	WG1278048

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.0490	0.200	1	05/08/2019 10:30	WG1277537

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		0.754	2.00	1	05/15/2019 16:24	WG1279590
Arsenic	3.03		0.250	2.00	1	05/14/2019 16:43	WG1279590
Beryllium	U		0.120	2.00	1	05/14/2019 16:43	WG1279590
Cadmium	U		0.160	1.00	1	05/14/2019 16:43	WG1279590
Chromium	1.24	J	0.540	2.00	1	05/14/2019 16:43	WG1279590
Copper	3.49	B J	0.520	5.00	1	05/14/2019 16:43	WG1279590
Lead	1.79	J	0.240	2.00	1	05/14/2019 16:43	WG1279590
Nickel	1.34	J	0.350	2.00	1	05/14/2019 16:43	WG1279590
Selenium	U		0.380	2.00	1	05/14/2019 16:43	WG1279590
Silver	U		0.310	2.00	1	05/14/2019 16:43	WG1279590
Thallium	U		0.190	2.00	1	05/14/2019 16:43	WG1279590
Zinc	3.95	B J	2.56	25.0	1	05/14/2019 16:43	WG1279590

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.316	1.00	1	05/10/2019 01:19	WG1278048
Acenaphthylene	U		0.309	1.00	1	05/10/2019 01:19	WG1278048
Anthracene	U		0.291	1.00	1	05/10/2019 01:19	WG1278048
Benzo(a)anthracene	U		0.0975	1.00	1	05/10/2019 01:19	WG1278048
Benzo(b)fluoranthene	U		0.0896	1.00	1	05/10/2019 01:19	WG1278048
Benzo(k)fluoranthene	U		0.355	1.00	1	05/10/2019 01:19	WG1278048
Benzo(g,h,i)perylene	U		0.161	1.00	1	05/10/2019 01:19	WG1278048
Benzo(a)pyrene	U		0.340	1.00	1	05/10/2019 01:19	WG1278048
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	05/10/2019 01:19	WG1278048
Bis(2-chloroethyl)ether	U		1.62	10.0	1	05/10/2019 01:19	WG1278048
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	05/10/2019 01:19	WG1278048
4-Bromophenyl-phenylether	U		0.335	10.0	1	05/10/2019 01:19	WG1278048
2-Chloronaphthalene	U		0.330	1.00	1	05/10/2019 01:19	WG1278048
4-Chlorophenyl-phenylether	U		0.303	10.0	1	05/10/2019 01:19	WG1278048
Chrysene	U		0.332	1.00	1	05/10/2019 01:19	WG1278048
Dibenz(a,h)anthracene	U		0.279	1.00	1	05/10/2019 01:19	WG1278048
3,3-Dichlorobenzidine	U		2.02	10.0	1	05/10/2019 01:19	WG1278048
2,4-Dinitrotoluene	U		1.65	10.0	1	05/10/2019 01:19	WG1278048
2,6-Dinitrotoluene	U		0.279	10.0	1	05/10/2019 01:19	WG1278048
Fluoranthene	U		0.310	1.00	1	05/10/2019 01:19	WG1278048
Fluorene	U		0.323	1.00	1	05/10/2019 01:19	WG1278048
Hexachlorobenzene	U		0.341	1.00	1	05/10/2019 01:19	WG1278048
Hexachloro-1,3-butadiene	U		0.329	10.0	1	05/10/2019 01:19	WG1278048
Hexachlorocyclopentadiene	U		2.33	10.0	1	05/10/2019 01:19	WG1278048
Hexachloroethane	U		0.365	10.0	1	05/10/2019 01:19	WG1278048
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	05/10/2019 01:19	WG1278048
Isophorone	U		0.272	10.0	1	05/10/2019 01:19	WG1278048
Naphthalene	U		0.372	1.00	1	05/10/2019 01:19	WG1278048
Nitrobenzene	U		0.367	10.0	1	05/10/2019 01:19	WG1278048
n-Nitrosodimethylamine	U		1.26	10.0	1	05/10/2019 01:19	WG1278048
n-Nitrosodiphenylamine	U		1.19	10.0	1	05/10/2019 01:19	WG1278048
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	05/10/2019 01:19	WG1278048
Phenanthrene	U		0.366	1.00	1	05/10/2019 01:19	WG1278048
Pyridine	U		1.37	10.0	1	05/10/2019 01:19	WG1278048

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Benzylbutyl phthalate	U		0.275	3.00	1	05/10/2019 01:19	WG1278048
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	05/10/2019 01:19	WG1278048
Di-n-butyl phthalate	U		0.266	3.00	1	05/10/2019 01:19	WG1278048
Diethyl phthalate	U		0.282	3.00	1	05/10/2019 01:19	WG1278048
Dimethyl phthalate	U		0.283	3.00	1	05/10/2019 01:19	WG1278048
Di-n-octyl phthalate	U		0.278	3.00	1	05/10/2019 01:19	WG1278048
Pyrene	U		0.330	1.00	1	05/10/2019 01:19	WG1278048
1,2,4-Trichlorobenzene	U		0.355	10.0	1	05/10/2019 01:19	WG1278048
4-Chloro-3-methylphenol	U		0.263	10.0	1	05/10/2019 01:19	WG1278048
2-Chlorophenol	U		0.283	10.0	1	05/10/2019 01:19	WG1278048
2,4-Dichlorophenol	U		0.284	10.0	1	05/10/2019 01:19	WG1278048
2,4-Dimethylphenol	U		0.264	10.0	1	05/10/2019 01:19	WG1278048
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	05/10/2019 01:19	WG1278048
2,4-Dinitrophenol	U		3.25	10.0	1	05/10/2019 01:19	WG1278048
2-Methylphenol	U		0.312	10.0	1	05/10/2019 01:19	WG1278048
3&4-Methyl Phenol	U		0.266	10.0	1	05/10/2019 01:19	WG1278048
2-Nitrophenol	U		0.320	10.0	1	05/10/2019 01:19	WG1278048
4-Nitrophenol	U		2.01	10.0	1	05/10/2019 01:19	WG1278048
Pentachlorophenol	U		0.313	10.0	1	05/10/2019 01:19	WG1278048
Phenol	1.34	J	0.334	10.0	1	05/10/2019 01:19	WG1278048
2,4,6-Trichlorophenol	U		0.297	10.0	1	05/10/2019 01:19	WG1278048
2,4,5-Trichlorophenol	U		0.236	10.0	1	05/10/2019 01:19	WG1278048
(S) 2-Fluorophenol	*37.6*			*10.0-120*		*05/10/2019 01:19*	WG1278048
(S) Phenol-d5	*22.8*			*10.0-120*		*05/10/2019 01:19*	WG1278048
(S) Nitrobenzene-d5	*59.0*			*10.0-127*		*05/10/2019 01:19*	WG1278048
(S) 2-Fluorobiphenyl	*60.1*			*10.0-130*		*05/10/2019 01:19*	WG1278048
(S) 2,4,6-Tribromophenol	*58.8*			*10.0-155*		*05/10/2019 01:19*	WG1278048
(S) p-Terphenyl-d14	*67.8*			*10.0-128*		*05/10/2019 01:19*	WG1278048

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.0490	0.200	1	05/08/2019 10:33	WG1277537

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Antimony	U		0.754	2.00	1	05/15/2019 16:29	WG1279590
Arsenic	43.9		0.250	2.00	1	05/14/2019 16:48	WG1279590
Beryllium	U		0.120	2.00	1	05/14/2019 16:48	WG1279590
Cadmium	U		0.160	1.00	1	05/14/2019 16:48	WG1279590
Chromium	6.43		0.540	2.00	1	05/14/2019 16:48	WG1279590
Copper	2.27	B J	0.520	5.00	1	05/14/2019 16:48	WG1279590
Lead	0.911	J	0.240	2.00	1	05/14/2019 16:48	WG1279590
Nickel	2.10		0.350	2.00	1	05/14/2019 16:48	WG1279590
Selenium	0.391	B J	0.380	2.00	1	05/14/2019 16:48	WG1279590
Silver	U		0.310	2.00	1	05/14/2019 16:48	WG1279590
Thallium	U		0.190	2.00	1	05/14/2019 16:48	WG1279590
Zinc	3.76	B J	2.56	25.0	1	05/14/2019 16:48	WG1279590

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	3.22	J	1.05	25.0	1	05/10/2019 14:50	WG1279226
Acrylonitrile	U		0.873	5.00	1	05/10/2019 14:50	WG1279226
Benzene	U		0.0896	0.500	1	05/10/2019 14:50	WG1279226
Bromobenzene	U		0.133	0.500	1	05/10/2019 14:50	WG1279226
Bromodichloromethane	U		0.0800	0.500	1	05/10/2019 14:50	WG1279226
Bromochloromethane	U		0.145	0.500	1	05/10/2019 14:50	WG1279226
Bromoform	U		0.186	0.500	1	05/10/2019 14:50	WG1279226
Bromomethane	U		0.157	2.50	1	05/10/2019 14:50	WG1279226
n-Butylbenzene	U		0.143	0.500	1	05/10/2019 14:50	WG1279226
sec-Butylbenzene	U		0.134	0.500	1	05/10/2019 14:50	WG1279226
tert-Butylbenzene	U		0.183	0.500	1	05/10/2019 14:50	WG1279226
Carbon disulfide	U		0.101	0.500	1	05/10/2019 14:50	WG1279226
Carbon tetrachloride	U		0.159	0.500	1	05/10/2019 14:50	WG1279226
Chlorobenzene	U		0.140	0.500	1	05/10/2019 14:50	WG1279226
Chlorodibromomethane	U		0.128	0.500	1	05/10/2019 14:50	WG1279226
Chloroethane	U		0.141	2.50	1	05/10/2019 14:50	WG1279226
Chloroform	U		0.0860	0.500	1	05/10/2019 14:50	WG1279226
Chloromethane	U		0.153	1.25	1	05/10/2019 14:50	WG1279226
2-Chlorotoluene	U		0.111	0.500	1	05/10/2019 14:50	WG1279226
4-Chlorotoluene	U		0.0972	0.500	1	05/10/2019 14:50	WG1279226
1,2-Dibromo-3-Chloropropane	U		0.325	2.50	1	05/10/2019 14:50	WG1279226
1,2-Dibromoethane	U		0.193	0.500	1	05/10/2019 14:50	WG1279226
Dibromomethane	U		0.117	0.500	1	05/10/2019 14:50	WG1279226
1,2-Dichlorobenzene	U		0.101	0.500	1	05/10/2019 14:50	WG1279226
1,3-Dichlorobenzene	U		0.130	0.500	1	05/10/2019 14:50	WG1279226
1,4-Dichlorobenzene	U		0.121	0.500	1	05/10/2019 14:50	WG1279226
Dichlorodifluoromethane	U		0.127	2.50	1	05/10/2019 14:50	WG1279226
1,1-Dichloroethane	U		0.114	0.500	1	05/10/2019 14:50	WG1279226
1,2-Dichloroethane	U		0.108	0.500	1	05/10/2019 14:50	WG1279226
1,1-Dichloroethene	U		0.188	0.500	1	05/10/2019 14:50	WG1279226
cis-1,2-Dichloroethene	U		0.0933	0.500	1	05/10/2019 14:50	WG1279226
trans-1,2-Dichloroethene	U		0.152	0.500	1	05/10/2019 14:50	WG1279226
1,2-Dichloropropane	U		0.190	0.500	1	05/10/2019 14:50	WG1279226
1,1-Dichloropropene	U		0.128	0.500	1	05/10/2019 14:50	WG1279226

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,3-Dichloropropane	U		0.147	1.00	1	05/10/2019 14:50	WG1279226
cis-1,3-Dichloropropene	U		0.0976	0.500	1	05/10/2019 14:50	WG1279226
trans-1,3-Dichloropropene	U		0.222	0.500	1	05/10/2019 14:50	WG1279226
trans-1,4-Dichloro-2-butene	U	J0	0.257	5.00	1	05/10/2019 14:50	WG1279226
2,2-Dichloropropane	U		0.0929	0.500	1	05/10/2019 14:50	WG1279226
Di-isopropyl ether	U		0.0924	0.500	1	05/10/2019 14:50	WG1279226
Ethylbenzene	U		0.158	0.500	1	05/10/2019 14:50	WG1279226
Hexachloro-1,3-butadiene	U		0.157	1.00	1	05/10/2019 14:50	WG1279226
2-Hexanone	U		0.757	5.00	1	05/10/2019 14:50	WG1279226
n-Hexane	U		0.305	5.00	1	05/10/2019 14:50	WG1279226
Iodomethane	U		0.377	10.0	1	05/10/2019 14:50	WG1279226
Isopropylbenzene	U		0.126	0.500	1	05/10/2019 14:50	WG1279226
p-Isopropyltoluene	U		0.138	0.500	1	05/10/2019 14:50	WG1279226
2-Butanone (MEK)	U		1.28	5.00	1	05/10/2019 14:50	WG1279226
Methylene Chloride	U		1.07	2.50	1	05/10/2019 14:50	WG1279226
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00	1	05/10/2019 14:50	WG1279226
Methyl tert-butyl ether	U		0.102	0.500	1	05/10/2019 14:50	WG1279226
Naphthalene	U		0.174	2.50	1	05/10/2019 14:50	WG1279226
n-Propylbenzene	U		0.162	0.500	1	05/10/2019 14:50	WG1279226
Styrene	U		0.117	0.500	1	05/10/2019 14:50	WG1279226
1,1,1,2-Tetrachloroethane	U		0.120	0.500	1	05/10/2019 14:50	WG1279226
1,1,2,2-Tetrachloroethane	U		0.130	0.500	1	05/10/2019 14:50	WG1279226
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500	1	05/10/2019 14:50	WG1279226
Tetrachloroethene	U		0.199	0.500	1	05/10/2019 14:50	WG1279226
Toluene	U		0.412	0.500	1	05/10/2019 14:50	WG1279226
1,2,3-Trichlorobenzene	U		0.164	0.500	1	05/10/2019 14:50	WG1279226
1,2,4-Trichlorobenzene	U		0.355	0.500	1	05/10/2019 14:50	WG1279226
1,1,1-Trichloroethane	U		0.0940	0.500	1	05/10/2019 14:50	WG1279226
1,1,2-Trichloroethane	U		0.186	0.500	1	05/10/2019 14:50	WG1279226
Trichloroethene	U		0.153	0.500	1	05/10/2019 14:50	WG1279226
Trichlorofluoromethane	U		0.130	2.50	1	05/10/2019 14:50	WG1279226
1,2,3-Trichloropropane	U		0.247	2.50	1	05/10/2019 14:50	WG1279226
1,2,4-Trimethylbenzene	U		0.123	0.500	1	05/10/2019 14:50	WG1279226
1,2,3-Trimethylbenzene	U		0.0739	0.500	1	05/10/2019 14:50	WG1279226
1,3,5-Trimethylbenzene	U		0.124	0.500	1	05/10/2019 14:50	WG1279226
Vinyl acetate	U	J0	0.645	5.00	1	05/10/2019 14:50	WG1279226
Vinyl chloride	U		0.118	0.500	1	05/10/2019 14:50	WG1279226
Xylenes, Total	U		0.316	1.50	1	05/10/2019 14:50	WG1279226
(S) Toluene-d8	*98.0*			*80.0-120*		*05/10/2019 14:50*	WG1279226
(S) 4-Bromofluorobenzene	*111*			*77.0-126*		*05/10/2019 14:50*	WG1279226
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*05/10/2019 14:50*	WG1279226

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	130	J	66.7	200	1	05/11/2019 01:05	WG1278026
Residual Range Organics (RRO)	U		83.3	250	1	05/11/2019 01:05	WG1278026
(S) o-Terphenyl	*88.4*			*52.0-156*		*05/11/2019 01:05*	WG1278026

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	15.9		0.316	1.00	1	05/10/2019 01:39	WG1278048
Acenaphthylene	U		0.309	1.00	1	05/10/2019 01:39	WG1278048
Anthracene	U		0.291	1.00	1	05/10/2019 01:39	WG1278048
Benzo(a)anthracene	U		0.0975	1.00	1	05/10/2019 01:39	WG1278048
Benzo(b)fluoranthene	U		0.0896	1.00	1	05/10/2019 01:39	WG1278048
Benzo(k)fluoranthene	U		0.355	1.00	1	05/10/2019 01:39	WG1278048
Benzo(g,h,i)perylene	U		0.161	1.00	1	05/10/2019 01:39	WG1278048
Benzo(a)pyrene	U		0.340	1.00	1	05/10/2019 01:39	WG1278048
Bis(2-chlorethoxy)methane	U		0.329	10.0	1	05/10/2019 01:39	WG1278048
Bis(2-chloroethyl)ether	U		1.62	10.0	1	05/10/2019 01:39	WG1278048
Bis(2-chloroisopropyl)ether	U		0.445	10.0	1	05/10/2019 01:39	WG1278048
4-Bromophenyl-phenylether	U		0.335	10.0	1	05/10/2019 01:39	WG1278048
2-Chloronaphthalene	U		0.330	1.00	1	05/10/2019 01:39	WG1278048
4-Chlorophenyl-phenylether	U		0.303	10.0	1	05/10/2019 01:39	WG1278048
Chrysene	U		0.332	1.00	1	05/10/2019 01:39	WG1278048
Dibenz(a,h)anthracene	U		0.279	1.00	1	05/10/2019 01:39	WG1278048
3,3-Dichlorobenzidine	U		2.02	10.0	1	05/10/2019 01:39	WG1278048
2,4-Dinitrotoluene	U		1.65	10.0	1	05/10/2019 01:39	WG1278048
2,6-Dinitrotoluene	U		0.279	10.0	1	05/10/2019 01:39	WG1278048
Fluoranthene	U		0.310	1.00	1	05/10/2019 01:39	WG1278048
Fluorene	U		0.323	1.00	1	05/10/2019 01:39	WG1278048
Hexachlorobenzene	U		0.341	1.00	1	05/10/2019 01:39	WG1278048
Hexachloro-1,3-butadiene	U		0.329	10.0	1	05/10/2019 01:39	WG1278048
Hexachlorocyclopentadiene	U		2.33	10.0	1	05/10/2019 01:39	WG1278048
Hexachloroethane	U		0.365	10.0	1	05/10/2019 01:39	WG1278048
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	05/10/2019 01:39	WG1278048
Isophorone	U		0.272	10.0	1	05/10/2019 01:39	WG1278048
Naphthalene	U		0.372	1.00	1	05/10/2019 01:39	WG1278048
Nitrobenzene	U		0.367	10.0	1	05/10/2019 01:39	WG1278048
n-Nitrosodimethylamine	U		1.26	10.0	1	05/10/2019 01:39	WG1278048
n-Nitrosodiphenylamine	U		1.19	10.0	1	05/10/2019 01:39	WG1278048
n-Nitrosodi-n-propylamine	U		0.403	10.0	1	05/10/2019 01:39	WG1278048
Phenanthrene	U		0.366	1.00	1	05/10/2019 01:39	WG1278048
Pyridine	U		1.37	10.0	1	05/10/2019 01:39	WG1278048
Benzylbutyl phthalate	U		0.275	3.00	1	05/10/2019 01:39	WG1278048
Bis(2-ethylhexyl)phthalate	U		0.709	3.00	1	05/10/2019 01:39	WG1278048
Di-n-butyl phthalate	U		0.266	3.00	1	05/10/2019 01:39	WG1278048
Diethyl phthalate	U		0.282	3.00	1	05/10/2019 01:39	WG1278048
Dimethyl phthalate	U		0.283	3.00	1	05/10/2019 01:39	WG1278048
Di-n-octyl phthalate	U		0.278	3.00	1	05/10/2019 01:39	WG1278048
Pyrene	U		0.330	1.00	1	05/10/2019 01:39	WG1278048
1,2,4-Trichlorobenzene	U		0.355	10.0	1	05/10/2019 01:39	WG1278048
4-Chloro-3-methylphenol	U		0.263	10.0	1	05/10/2019 01:39	WG1278048
2-Chlorophenol	U		0.283	10.0	1	05/10/2019 01:39	WG1278048
2,4-Dichlorophenol	U		0.284	10.0	1	05/10/2019 01:39	WG1278048
2,4-Dimethylphenol	U		0.264	10.0	1	05/10/2019 01:39	WG1278048
4,6-Dinitro-2-methylphenol	U		2.62	10.0	1	05/10/2019 01:39	WG1278048
2,4-Dinitrophenol	U		3.25	10.0	1	05/10/2019 01:39	WG1278048
2-Methylphenol	U		0.312	10.0	1	05/10/2019 01:39	WG1278048
3&4-Methyl Phenol	U		0.266	10.0	1	05/10/2019 01:39	WG1278048
2-Nitrophenol	U		0.320	10.0	1	05/10/2019 01:39	WG1278048
4-Nitrophenol	U		2.01	10.0	1	05/10/2019 01:39	WG1278048
Pentachlorophenol	U		0.313	10.0	1	05/10/2019 01:39	WG1278048
Phenol	3.08	J	0.334	10.0	1	05/10/2019 01:39	WG1278048
2,4,6-Trichlorophenol	U		0.297	10.0	1	05/10/2019 01:39	WG1278048
2,4,5-Trichlorophenol	U		0.236	10.0	1	05/10/2019 01:39	WG1278048

Semi Volatile Organic Compounds (GC/MS) by Method 8270D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) 2-Fluorophenol	*38.4*			*10.0-120*		*05/10/2019 01:39*	WG1278048
(S) Phenol-d5	*23.5*			*10.0-120*		*05/10/2019 01:39*	WG1278048
(S) Nitrobenzene-d5	*59.7*			*10.0-127*		*05/10/2019 01:39*	WG1278048
(S) 2-Fluorobiphenyl	*60.8*			*10.0-130*		*05/10/2019 01:39*	WG1278048
(S) 2,4,6-Tribromophenol	*54.6*			*10.0-155*		*05/10/2019 01:39*	WG1278048
(S) p-Terphenyl-d14	*64.0*			*10.0-128*		*05/10/2019 01:39*	WG1278048

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.0490	0.200	1	05/12/2019 12:08	WG1278941

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Antimony	U		0.754	2.00	1	05/15/2019 16:34	WG1279590
Arsenic	0.587	J	0.250	2.00	1	05/14/2019 16:52	WG1279590
Beryllium	U		0.120	2.00	1	05/14/2019 16:52	WG1279590
Cadmium	U		0.160	1.00	1	05/14/2019 16:52	WG1279590
Chromium	1.29	J	0.540	2.00	1	05/14/2019 16:52	WG1279590
Copper	1.24	B J	0.520	5.00	1	05/14/2019 16:52	WG1279590
Lead	U		0.240	2.00	1	05/14/2019 16:52	WG1279590
Nickel	U		0.350	2.00	1	05/14/2019 16:52	WG1279590
Selenium	U		0.380	2.00	1	05/14/2019 16:52	WG1279590
Silver	U		0.310	2.00	1	05/14/2019 16:52	WG1279590
Thallium	U		0.190	2.00	1	05/14/2019 16:52	WG1279590
Zinc	U		2.56	25.0	1	05/14/2019 16:52	WG1279590

Method Blank (MB)

(MB) R3409247-1 05/08/19 09:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3409247-2 05/08/19 09:47 • (LCSD) R3409247-3 05/08/19 09:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Mercury	3.00	2.72	2.92	90.6	97.5	80.0-120			7.35	20

L1095453-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1095453-01 05/08/19 09:56 • (MS) R3409247-4 05/08/19 09:59 • (MSD) R3409247-5 05/08/19 10:01

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury	3.00	ND	2.90	3.17	96.8	106	1	75.0-125			8.80	20

Method Blank (MB)

(MB) R3410472-1 05/12/19 12:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3410472-2 05/12/19 12:03 • (LCSD) R3410472-3 05/12/19 12:05

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Mercury	3.00	2.60	2.78	86.7	92.8	80.0-120			6.84	20

L1096002-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1096002-08 05/12/19 12:08 • (MS) R3410472-4 05/12/19 12:10 • (MSD) R3410472-5 05/12/19 12:13

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury	3.00	U	3.25	3.25	108	108	1	75.0-125			0.0492	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3411195-1 05/14/19 15:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic	U		0.250	2.00
Beryllium	U		0.120	2.00
Cadmium	U		0.160	1.00
Chromium	U		0.540	2.00
Copper	3.09	J	0.520	5.00
Lead	U		0.240	2.00
Nickel	U		0.350	2.00
Selenium	0.448	J	0.380	2.00
Silver	U		0.310	2.00
Thallium	U		0.190	2.00
Zinc	2.97	J	2.56	25.0

Method Blank (MB)

(MB) R3411551-1 05/15/19 15:29

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Antimony	U		0.754	2.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3411195-2 05/14/19 15:49 • (LCSD) R3411195-3 05/14/19 15:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Arsenic	50.0	48.0	47.8	96.0	95.6	80.0-120			0.460	20
Beryllium	50.0	48.4	49.4	96.9	98.8	80.0-120			1.96	20
Cadmium	50.0	50.9	50.1	102	100	80.0-120			1.60	20
Chromium	50.0	48.9	48.7	97.9	97.3	80.0-120			0.528	20
Copper	50.0	47.7	47.5	95.3	95.0	80.0-120			0.335	20
Lead	50.0	49.6	49.4	99.2	98.8	80.0-120			0.365	20
Nickel	50.0	49.4	48.3	98.7	96.7	80.0-120			2.13	20
Selenium	50.0	52.8	52.0	106	104	80.0-120			1.64	20
Silver	50.0	49.5	49.7	99.0	99.4	80.0-120			0.406	20
Thallium	50.0	48.2	48.4	96.5	96.8	80.0-120			0.307	20
Zinc	50.0	49.2	50.3	98.3	101	80.0-120			2.24	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3411551-2 05/15/19 15:34 • (LCSD) R3411551-3 05/15/19 15:39

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	46.7	49.3	93.4	98.6	80.0-120			5.43	20

L1096002-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1096002-01 05/14/19 15:58 • (MS) R3411195-5 05/14/19 16:07 • (MSD) R3411195-6 05/14/19 16:12

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	50.0	5.95	42.9	50.3	73.9	88.7	1	75.0-125	J6		15.9	20
Beryllium	50.0	U	48.9	51.8	97.7	104	1	75.0-125			5.91	20
Cadmium	50.0	U	49.7	51.6	99.3	103	1	75.0-125			3.85	20
Chromium	50.0	20.5	54.8	66.0	68.5	91.0	1	75.0-125	J6		18.6	20
Copper	50.0	6.34	45.6	54.0	78.5	95.4	1	75.0-125			17.0	20
Lead	50.0	1.01	45.0	49.3	87.9	96.5	1	75.0-125			9.10	20
Nickel	50.0	4.17	42.0	50.0	75.7	91.7	1	75.0-125			17.4	20
Selenium	50.0	0.490	49.7	49.9	98.4	98.9	1	75.0-125			0.475	20
Silver	50.0	U	48.8	50.4	97.6	101	1	75.0-125			3.32	20
Thallium	50.0	U	43.7	47.2	87.3	94.5	1	75.0-125			7.84	20
Zinc	50.0	6.85	45.5	51.6	77.4	89.5	1	75.0-125			12.5	20

L1096002-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1096002-01 05/15/19 15:43 • (MS) R3411551-5 05/15/19 15:52 • (MSD) R3411551-6 05/15/19 15:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	U	46.9	49.8	93.9	99.5	1	75.0-125			5.80	20

Method Blank (MB)

(MB) R3410741-3 05/10/19 10:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

Method Blank (MB)

(MB) R3410741-3 05/10/19 10:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	0.260	J	0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*93.6*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*98.7*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3410741-1 05/10/19 09:26 • (LCSD) R3410741-2 05/10/19 09:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	123	123	98.1	98.2	19.0-160			0.147	27
Acrylonitrile	125	122	117	97.7	93.5	55.0-149			4.45	20
Benzene	25.0	27.0	25.7	108	103	70.0-123			4.95	20
Bromobenzene	25.0	26.2	25.1	105	100	73.0-121			4.34	20
Bromodichloromethane	25.0	24.6	23.4	98.4	93.7	75.0-120			4.89	20
Bromochloromethane	25.0	26.7	26.6	107	106	76.0-122			0.541	20
Bromoform	25.0	23.9	23.2	95.5	92.7	68.0-132			2.98	20
Bromomethane	25.0	26.7	25.3	107	101	10.0-160			5.39	25
n-Butylbenzene	25.0	25.1	24.6	100	98.2	73.0-125			2.21	20
sec-Butylbenzene	25.0	26.6	26.4	106	106	75.0-125			0.735	20
tert-Butylbenzene	25.0	27.3	27.4	109	110	76.0-124			0.309	20
Carbon disulfide	25.0	25.3	23.2	101	92.8	61.0-128			8.58	20
Carbon tetrachloride	25.0	25.8	24.9	103	99.8	68.0-126			3.42	20
Chlorobenzene	25.0	25.5	24.3	102	97.4	80.0-121			4.80	20
Chlorodibromomethane	25.0	23.6	23.1	94.5	92.4	77.0-125			2.26	20
Chloroethane	25.0	25.8	24.3	103	97.2	47.0-150			5.84	20
Chloroform	25.0	25.6	24.6	102	98.4	73.0-120			4.05	20
Chloromethane	25.0	27.3	25.8	109	103	41.0-142			5.39	20
2-Chlorotoluene	25.0	25.7	25.2	103	101	76.0-123			1.98	20
4-Chlorotoluene	25.0	25.4	24.5	102	97.8	75.0-122			3.83	20
1,2-Dibromo-3-Chloropropane	25.0	24.3	24.1	97.3	96.6	58.0-134			0.733	20
1,2-Dibromoethane	25.0	24.8	23.4	99.3	93.5	80.0-122			5.94	20
Dibromomethane	25.0	24.8	23.1	99.3	92.4	80.0-120			7.19	20
1,2-Dichlorobenzene	25.0	25.6	25.2	102	101	79.0-121			1.62	20
1,3-Dichlorobenzene	25.0	25.3	24.0	101	96.2	79.0-120			4.99	20
1,4-Dichlorobenzene	25.0	24.7	23.9	99.0	95.6	79.0-120			3.54	20
Dichlorodifluoromethane	25.0	27.5	27.7	110	111	51.0-149			0.504	20
1,1-Dichloroethane	25.0	26.1	25.0	104	100	70.0-126			4.36	20
1,2-Dichloroethane	25.0	25.8	24.9	103	99.8	70.0-128			3.29	20
1,1-Dichloroethene	25.0	29.3	27.4	117	110	71.0-124			6.72	20
cis-1,2-Dichloroethene	25.0	26.1	25.4	104	102	73.0-120			2.71	20
trans-1,2-Dichloroethene	25.0	25.6	25.5	102	102	73.0-120			0.508	20
1,2-Dichloropropane	25.0	24.9	23.6	99.4	94.5	77.0-125			5.10	20
1,1-Dichloropropene	25.0	25.7	25.1	103	100	74.0-126			2.65	20
1,3-Dichloropropane	25.0	23.7	22.8	94.8	91.3	80.0-120			3.86	20
cis-1,3-Dichloropropene	25.0	23.9	22.1	95.4	88.6	80.0-123			7.47	20
trans-1,3-Dichloropropene	25.0	23.9	22.3	95.5	89.2	78.0-124			6.76	20
trans-1,4-Dichloro-2-butene	25.0	19.6	17.8	78.4	71.4	33.0-144			9.39	20
2,2-Dichloropropane	25.0	21.7	21.2	86.9	84.7	58.0-130			2.61	20
Di-isopropyl ether	25.0	24.9	24.2	99.5	96.7	58.0-138			2.83	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3410741-1 05/10/19 09:26 • (LCSD) R3410741-2 05/10/19 09:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	25.8	25.1	103	100	79.0-123			2.77	20
Hexachloro-1,3-butadiene	25.0	26.4	26.3	105	105	54.0-138			0.0685	20
2-Hexanone	125	118	115	94.2	92.4	67.0-149			1.96	20
n-Hexane	25.0	25.8	24.8	103	99.1	57.0-133			3.92	20
Iodomethane	125	121	120	96.5	96.3	33.0-147			0.211	26
Isopropylbenzene	25.0	25.9	25.7	104	103	76.0-127			0.669	20
p-Isopropyltoluene	25.0	26.5	25.4	106	102	76.0-125			4.31	20
2-Butanone (MEK)	125	114	107	90.9	85.9	44.0-160			5.65	20
Methylene Chloride	25.0	26.5	25.5	106	102	67.0-120			3.79	20
4-Methyl-2-pentanone (MIBK)	125	115	111	91.8	89.0	68.0-142			3.03	20
Methyl tert-butyl ether	25.0	27.3	26.4	109	106	68.0-125			3.19	20
Naphthalene	25.0	24.9	24.6	99.4	98.3	54.0-135			1.11	20
n-Propylbenzene	25.0	27.4	26.3	110	105	77.0-124			4.20	20
Styrene	25.0	26.0	24.3	104	97.4	73.0-130			6.49	20
1,1,1,2-Tetrachloroethane	25.0	25.0	24.8	100	99.1	75.0-125			0.864	20
1,1,2,2-Tetrachloroethane	25.0	25.6	24.7	102	98.8	65.0-130			3.54	20
1,1,2-Trichlorotrifluoroethane	25.0	27.2	25.9	109	104	69.0-132			4.69	20
Tetrachloroethene	25.0	25.1	24.5	101	97.8	72.0-132			2.72	20
Toluene	25.0	24.8	23.7	99.0	94.9	79.0-120			4.30	20
1,2,3-Trichlorobenzene	25.0	26.4	26.0	106	104	50.0-138			1.79	20
1,2,4-Trichlorobenzene	25.0	26.1	26.0	104	104	57.0-137			0.366	20
1,1,1-Trichloroethane	25.0	26.3	25.4	105	101	73.0-124			3.80	20
1,1,2-Trichloroethane	25.0	24.7	22.8	98.8	91.3	80.0-120			7.84	20
Trichloroethene	25.0	25.3	24.0	101	96.1	78.0-124			5.11	20
Trichlorofluoromethane	25.0	28.3	27.2	113	109	59.0-147			4.03	20
1,2,3-Trichloropropane	25.0	24.7	24.4	98.9	97.7	73.0-130			1.22	20
1,2,4-Trimethylbenzene	25.0	24.8	24.7	99.1	98.8	76.0-121			0.326	20
1,2,3-Trimethylbenzene	25.0	25.0	24.8	100	99.0	77.0-120			0.948	20
1,3,5-Trimethylbenzene	25.0	28.2	27.5	113	110	76.0-122			2.67	20
Vinyl acetate	125	83.9	78.2	67.2	62.6	11.0-160			7.05	20
Vinyl chloride	25.0	27.9	27.0	112	108	67.0-131			3.35	20
Xylenes, Total	75.0	77.0	77.1	103	103	79.0-123			0.130	20
(S) Toluene-d8				*95.1*	*95.2*	*80.0-120*				
(S) 4-Bromofluorobenzene				*94.0*	*100*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*108*	*103*	*70.0-130*				

Method Blank (MB)

(MB) R3410339-1 05/10/19 22:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	*126*			*52.0-156*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3410339-2 05/10/19 23:14 • (LCSD) R3410339-3 05/10/19 23:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	1500	1510	1560	101	104	50.0-150			3.26	20
(S) o-Terphenyl				*109*	*112*	*52.0-156*				

Method Blank (MB)

(MB) R3410003-3 05/10/19 02:00

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acenaphthene	U		0.316	1.00
Acenaphthylene	U		0.309	1.00
Anthracene	U		0.291	1.00
Benzo(a)anthracene	U		0.0975	1.00
Benzo(b)fluoranthene	U		0.0896	1.00
Benzo(k)fluoranthene	U		0.355	1.00
Benzo(g,h,i)perylene	U		0.161	1.00
Benzo(a)pyrene	U		0.340	1.00
Bis(2-chlorethoxy)methane	U		0.329	10.0
Bis(2-chloroethyl)ether	U		1.62	10.0
Bis(2-chloroisopropyl)ether	U		0.445	10.0
4-Bromophenyl-phenylether	U		0.335	10.0
2-Chloronaphthalene	U		0.330	1.00
4-Chlorophenyl-phenylether	U		0.303	10.0
Chrysene	U		0.332	1.00
Dibenz(a,h)anthracene	U		0.279	1.00
3,3-Dichlorobenzidine	U		2.02	10.0
2,4-Dinitrotoluene	U		1.65	10.0
2,6-Dinitrotoluene	U		0.279	10.0
Fluoranthene	U		0.310	1.00
Fluorene	U		0.323	1.00
Hexachlorobenzene	U		0.341	1.00
Hexachloro-1,3-butadiene	U		0.329	10.0
Hexachlorocyclopentadiene	U		2.33	10.0
Hexachloroethane	U		0.365	10.0
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Isophorone	U		0.272	10.0
Naphthalene	U		0.372	1.00
Nitrobenzene	U		0.367	10.0
n-Nitrosodimethylamine	U		1.26	10.0
n-Nitrosodiphenylamine	U		1.19	10.0
n-Nitrosodi-n-propylamine	U		0.403	10.0
Phenanthrene	U		0.366	1.00
Benzylbutyl phthalate	U		0.275	3.00
Bis(2-ethylhexyl)phthalate	U		0.709	3.00
Di-n-butyl phthalate	U		0.266	3.00
Diethyl phthalate	U		0.282	3.00
Dimethyl phthalate	U		0.283	3.00
Di-n-octyl phthalate	U		0.278	3.00
Pyrene	U		0.330	1.00

Method Blank (MB)

(MB) R3410003-3 05/10/19 02:00

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Pyridine	U		1.37	10.0
1,2,4-Trichlorobenzene	U		0.355	10.0
4-Chloro-3-methylphenol	U		0.263	10.0
2-Chlorophenol	U		0.283	10.0
2-Methylphenol	U		0.312	10.0
3&4-Methyl Phenol	U		0.266	10.0
2,4-Dichlorophenol	U		0.284	10.0
2,4-Dimethylphenol	U		0.264	10.0
4,6-Dinitro-2-methylphenol	U		2.62	10.0
2,4-Dinitrophenol	U		3.25	10.0
2-Nitrophenol	U		0.320	10.0
4-Nitrophenol	U		2.01	10.0
Pentachlorophenol	U		0.313	10.0
Phenol	U		0.334	10.0
2,4,5-Trichlorophenol	U		0.236	10.0
2,4,6-Trichlorophenol	U		0.297	10.0
(S) Nitrobenzene-d5	*32.0*			*10.0-127*
(S) 2-Fluorobiphenyl	*39.1*			*10.0-130*
(S) p-Terphenyl-d14	*79.2*			*10.0-128*
(S) Phenol-d5	*17.9*			*10.0-120*
(S) 2-Fluorophenol	*28.0*			*10.0-120*
(S) 2,4,6-Tribromophenol	*43.7*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3410003-1 05/10/19 00:58 • (LCSD) R3410003-2 05/10/19 01:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	50.0	27.9	27.4	55.8	54.8	41.0-120			1.81	22
Acenaphthylene	50.0	29.5	28.9	59.0	57.8	43.0-120			2.05	22
Anthracene	50.0	33.1	35.3	66.2	70.6	45.0-120			6.43	20
Benzo(a)anthracene	50.0	35.6	39.8	71.2	79.6	47.0-120			11.1	20
Benzo(b)fluoranthene	50.0	36.2	40.3	72.4	80.6	46.0-120			10.7	20
Benzo(k)fluoranthene	50.0	35.1	39.5	70.2	79.0	46.0-120			11.8	21
Benzo(g,h,i)perylene	50.0	33.5	37.6	67.0	75.2	48.0-121			11.5	20
Benzo(a)pyrene	50.0	32.6	36.2	65.2	72.4	47.0-120			10.5	20
Bis(2-chlorethoxy)methane	50.0	25.8	25.2	51.6	50.4	33.0-120			2.35	24
Bis(2-chloroethyl)ether	50.0	26.9	24.0	53.8	48.0	23.0-120			11.4	33
Bis(2-chloroisopropyl)ether	50.0	24.3	22.5	48.6	45.0	28.0-120			7.69	31

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3410003-1 05/10/19 00:58 • (LCSD) R3410003-2 05/10/19 01:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Bromophenyl-phenylether	50.0	31.1	33.7	62.2	67.4	45.0-120			8.02	20
2-Chloronaphthalene	50.0	25.3	23.8	50.6	47.6	37.0-120			6.11	25
4-Chlorophenyl-phenylether	50.0	29.4	30.1	58.8	60.2	44.0-120			2.35	20
Chrysene	50.0	32.3	36.2	64.6	72.4	48.0-120			11.4	20
Dibenz(a,h)anthracene	50.0	34.3	38.6	68.6	77.2	47.0-120			11.8	20
3,3-Dichlorobenzidine	100	59.3	63.2	59.3	63.2	44.0-120			6.37	20
2,4-Dinitrotoluene	50.0	32.6	35.9	65.2	71.8	49.0-124			9.64	20
2,6-Dinitrotoluene	50.0	31.3	32.7	62.6	65.4	46.0-120			4.37	21
Fluoranthene	50.0	35.4	39.2	70.8	78.4	51.0-120			10.2	20
Fluorene	50.0	30.9	31.2	61.8	62.4	47.0-120			0.966	20
Hexachlorobenzene	50.0	30.8	32.4	61.6	64.8	44.0-120			5.06	20
Hexachloro-1,3-butadiene	50.0	8.62	7.10	17.2	14.2	19.0-120	J4	J4	19.3	32
Hexachlorocyclopentadiene	50.0	16.0	12.6	32.0	25.2	15.0-120			23.8	31
Hexachloroethane	50.0	7.74	7.25	15.5	14.5	15.0-120		J4	6.54	37
Indeno(1,2,3-cd)pyrene	50.0	33.8	38.4	67.6	76.8	49.0-122			12.7	20
Isophorone	50.0	27.4	26.6	54.8	53.2	36.0-120			2.96	23
Naphthalene	50.0	21.2	19.3	42.4	38.6	27.0-120			9.38	27
Nitrobenzene	50.0	24.6	22.7	49.2	45.4	27.0-120			8.03	29
n-Nitrosodimethylamine	50.0	13.3	11.5	26.6	23.0	10.0-120			14.5	40
n-Nitrosodiphenylamine	50.0	31.0	32.1	62.0	64.2	47.0-120			3.49	20
n-Nitrosodi-n-propylamine	50.0	28.2	27.4	56.4	54.8	31.0-120			2.88	28
Phenanthrene	50.0	31.8	34.0	63.6	68.0	46.0-120			6.69	20
Benzylbutyl phthalate	50.0	33.2	36.8	66.4	73.6	43.0-121			10.3	20
Bis(2-ethylhexyl)phthalate	50.0	33.3	36.9	66.6	73.8	43.0-122			10.3	20
Di-n-butyl phthalate	50.0	36.5	40.1	73.0	80.2	49.0-121			9.40	20
Diethyl phthalate	50.0	32.8	34.8	65.6	69.6	48.0-122			5.92	20
Dimethyl phthalate	50.0	31.1	32.6	62.2	65.2	48.0-120			4.71	20
Di-n-octyl phthalate	50.0	33.0	36.1	66.0	72.2	42.0-125			8.97	20
Pyrene	50.0	35.6	39.7	71.2	79.4	47.0-120			10.9	20
Pyridine	50.0	8.59	9.62	17.2	19.2	10.0-120			11.3	38
1,2,4-Trichlorobenzene	50.0	14.4	12.1	28.8	24.2	24.0-120			17.4	29
4-Chloro-3-methylphenol	50.0	30.1	29.8	60.2	59.6	40.0-120			1.00	21
2-Chlorophenol	50.0	25.6	23.1	51.2	46.2	25.0-120			10.3	35
2-Methylphenol	50.0	24.5	22.5	49.0	45.0	28.0-120			8.51	29
3&4-Methyl Phenol	50.0	26.1	24.3	52.2	48.6	31.0-120			7.14	30
2,4-Dichlorophenol	50.0	27.1	26.1	54.2	52.2	36.0-120			3.76	26
2,4-Dimethylphenol	50.0	27.1	26.3	54.2	52.6	33.0-120			3.00	26
4,6-Dinitro-2-methylphenol	50.0	37.3	41.1	74.6	82.2	38.0-138			9.69	25
2,4-Dinitrophenol	50.0	30.2	32.6	60.4	65.2	10.0-120			7.64	39
2-Nitrophenol	50.0	27.7	26.5	55.4	53.0	31.0-120			4.43	29

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3410003-1 05/10/19 00:58 • (LCSD) R3410003-2 05/10/19 01:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Nitrophenol	50.0	15.8	15.6	31.6	31.2	10.0-120			1.27	33
Pentachlorophenol	50.0	27.8	30.7	55.6	61.4	23.0-120			9.91	25
Phenol	50.0	12.6	10.4	25.2	20.8	10.0-120			19.1	36
2,4,5-Trichlorophenol	50.0	32.1	31.8	64.2	63.6	44.0-120			0.939	22
2,4,6-Trichlorophenol	50.0	32.2	33.0	64.4	66.0	42.0-120			2.45	23
(S) Nitrobenzene-d5				*51.5*	*47.7*	*10.0-127*				
(S) 2-Fluorobiphenyl				*54.6*	*53.0*	*10.0-130*				
(S) p-Terphenyl-d14				*66.8*	*76.0*	*10.0-128*				
(S) Phenol-d5				*23.0*	*19.0*	*10.0-120*				
(S) 2-Fluorophenol				*35.7*	*29.3*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*58.0*	*65.0*	*10.0-155*				

Method Blank (MB)

(MB) R3409911-2 05/09/19 22:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acenaphthene	U		0.316	1.00
Acenaphthylene	U		0.309	1.00
Anthracene	U		0.291	1.00
Benzo(a)anthracene	U		0.0975	1.00
Benzo(b)fluoranthene	U		0.0896	1.00
Benzo(k)fluoranthene	U		0.355	1.00
Benzo(g,h,i)perylene	U		0.161	1.00
Benzo(a)pyrene	U		0.340	1.00
Bis(2-chlorethoxy)methane	U		0.329	10.0
Bis(2-chloroethyl)ether	U		1.62	10.0
Bis(2-chloroisopropyl)ether	U		0.445	10.0
4-Bromophenyl-phenylether	U		0.335	10.0
2-Chloronaphthalene	U		0.330	1.00
4-Chlorophenyl-phenylether	U		0.303	10.0
Chrysene	U		0.332	1.00
Dibenz(a,h)anthracene	U		0.279	1.00
3,3-Dichlorobenzidine	U		2.02	10.0
2,4-Dinitrotoluene	U		1.65	10.0
2,6-Dinitrotoluene	U		0.279	10.0
Fluoranthene	U		0.310	1.00
Fluorene	U		0.323	1.00
Hexachlorobenzene	U		0.341	1.00
Hexachloro-1,3-butadiene	U		0.329	10.0
Hexachlorocyclopentadiene	U		2.33	10.0
Hexachloroethane	U		0.365	10.0
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Isophorone	U		0.272	10.0
Naphthalene	U		0.372	1.00
Nitrobenzene	U		0.367	10.0
n-Nitrosodimethylamine	U		1.26	10.0
n-Nitrosodiphenylamine	U		1.19	10.0
n-Nitrosodi-n-propylamine	U		0.403	10.0
Phenanthrene	U		0.366	1.00
Benzylbutyl phthalate	U		0.275	3.00
Bis(2-ethylhexyl)phthalate	U		0.709	3.00
Di-n-butyl phthalate	U		0.266	3.00
Diethyl phthalate	U		0.282	3.00
Dimethyl phthalate	U		0.283	3.00
Di-n-octyl phthalate	U		0.278	3.00
Pyrene	U		0.330	1.00

Method Blank (MB)

(MB) R3409911-2 05/09/19 22:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Pyridine	U		1.37	10.0
1,2,4-Trichlorobenzene	U		0.355	10.0
4-Chloro-3-methylphenol	U		0.263	10.0
2-Chlorophenol	U		0.283	10.0
2-Methylphenol	U		0.312	10.0
3&4-Methyl Phenol	U		0.266	10.0
2,4-Dichlorophenol	U		0.284	10.0
2,4-Dimethylphenol	U		0.264	10.0
4,6-Dinitro-2-methylphenol	U		2.62	10.0
2,4-Dinitrophenol	U		3.25	10.0
2-Nitrophenol	U		0.320	10.0
4-Nitrophenol	U		2.01	10.0
Pentachlorophenol	U		0.313	10.0
Phenol	U		0.334	10.0
2,4,5-Trichlorophenol	U		0.236	10.0
2,4,6-Trichlorophenol	U		0.297	10.0
(S) Nitrobenzene-d5	*71.5*			*10.0-127*
(S) 2-Fluorobiphenyl	*68.8*			*10.0-130*
(S) p-Terphenyl-d14	*69.1*			*10.0-128*
(S) Phenol-d5	*29.0*			*10.0-120*
(S) 2-Fluorophenol	*47.4*			*10.0-120*
(S) 2,4,6-Tribromophenol	*53.0*			*10.0-155*

Laboratory Control Sample (LCS)

(LCS) R3409911-1 05/09/19 21:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	50.0	38.0	76.0	41.0-120	
Acenaphthylene	50.0	42.1	84.2	43.0-120	
Anthracene	50.0	38.3	76.6	45.0-120	
Benzo(a)anthracene	50.0	40.2	80.4	47.0-120	
Benzo(b)fluoranthene	50.0	40.9	81.8	46.0-120	
Benzo(k)fluoranthene	50.0	39.5	79.0	46.0-120	
Benzo(g,h,i)perylene	50.0	43.1	86.2	48.0-121	
Benzo(a)pyrene	50.0	36.7	73.4	47.0-120	
Bis(2-chlorethoxy)methane	50.0	33.5	67.0	33.0-120	
Bis(2-chloroethyl)ether	50.0	37.3	74.6	23.0-120	
Bis(2-chloroisopropyl)ether	50.0	35.9	71.8	28.0-120	

Laboratory Control Sample (LCS)

(LCS) R3409911-1 05/09/19 21:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Bromophenyl-phenylether	50.0	39.3	78.6	45.0-120	
2-Chloronaphthalene	50.0	38.2	76.4	37.0-120	
4-Chlorophenyl-phenylether	50.0	40.2	80.4	44.0-120	
Chrysene	50.0	38.0	76.0	48.0-120	
Dibenz(a,h)anthracene	50.0	39.8	79.6	47.0-120	
3,3-Dichlorobenzidine	100	79.1	79.1	44.0-120	
2,4-Dinitrotoluene	50.0	40.2	80.4	49.0-124	
2,6-Dinitrotoluene	50.0	38.5	77.0	46.0-120	
Fluoranthene	50.0	41.2	82.4	51.0-120	
Fluorene	50.0	39.8	79.6	47.0-120	
Hexachlorobenzene	50.0	38.4	76.8	44.0-120	
Hexachloro-1,3-butadiene	50.0	36.0	72.0	19.0-120	
Hexachlorocyclopentadiene	50.0	34.2	68.4	15.0-120	
Hexachloroethane	50.0	36.5	73.0	15.0-120	
Indeno(1,2,3-cd)pyrene	50.0	37.2	74.4	49.0-122	
Isophorone	50.0	37.3	74.6	36.0-120	
Naphthalene	50.0	33.3	66.6	27.0-120	
Nitrobenzene	50.0	35.9	71.8	27.0-120	
n-Nitrosodimethylamine	50.0	29.2	58.4	10.0-120	
n-Nitrosodiphenylamine	50.0	38.6	77.2	47.0-120	
n-Nitrosodi-n-propylamine	50.0	39.6	79.2	31.0-120	
Phenanthrene	50.0	38.1	76.2	46.0-120	
Benzylbutyl phthalate	50.0	37.8	75.6	43.0-121	
Bis(2-ethylhexyl)phthalate	50.0	37.3	74.6	43.0-122	
Di-n-butyl phthalate	50.0	41.0	82.0	49.0-121	
Diethyl phthalate	50.0	39.1	78.2	48.0-122	
Dimethyl phthalate	50.0	40.4	80.8	48.0-120	
Di-n-octyl phthalate	50.0	37.2	74.4	42.0-125	
Pyrene	50.0	39.1	78.2	47.0-120	
Pyridine	50.0	21.2	42.4	10.0-120	
1,2,4-Trichlorobenzene	50.0	34.4	68.8	24.0-120	
4-Chloro-3-methylphenol	50.0	38.6	77.2	40.0-120	
2-Chlorophenol	50.0	37.4	74.8	25.0-120	
2-Methylphenol	50.0	35.5	71.0	28.0-120	
3&4-Methyl Phenol	50.0	37.1	74.2	31.0-120	
2,4-Dichlorophenol	50.0	38.0	76.0	36.0-120	
2,4-Dimethylphenol	50.0	37.6	75.2	33.0-120	
4,6-Dinitro-2-methylphenol	50.0	43.3	86.6	38.0-138	
2,4-Dinitrophenol	50.0	38.3	76.6	10.0-120	
2-Nitrophenol	50.0	38.0	76.0	31.0-120	

Laboratory Control Sample (LCS)

(LCS) R3409911-1 05/09/19 21:50

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Nitrophenol	50.0	17.2	34.4	10.0-120	
Pentachlorophenol	50.0	34.8	69.6	23.0-120	
Phenol	50.0	18.3	36.6	10.0-120	
2,4,5-Trichlorophenol	50.0	42.7	85.4	44.0-120	
2,4,6-Trichlorophenol	50.0	42.2	84.4	42.0-120	
(S) Nitrobenzene-d5			*64.6*	*10.0-127*	
(S) 2-Fluorobiphenyl			*75.9*	*10.0-130*	
(S) p-Terphenyl-d14			*72.5*	*10.0-128*	
(S) Phenol-d5			*33.5*	*10.0-120*	
(S) 2-Fluorophenol			*53.5*	*10.0-120*	
(S) 2,4,6-Tribromophenol			*69.0*	*10.0-155*	

L1096042-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1096042-01 05/10/19 02:21 • (MS) R3409911-3 05/10/19 02:42 • (MSD) R3409911-4 05/10/19 03:03

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	50.0	U	34.1	33.6	68.2	67.2	1	28.0-120			1.48	25
Acenaphthylene	50.0	U	36.5	36.4	73.0	72.8	1	31.0-121			0.274	25
Anthracene	50.0	U	35.9	35.6	71.8	71.2	1	36.0-120			0.839	23
Benzo(a)anthracene	50.0	U	35.5	32.2	71.0	64.4	1	39.0-120			9.75	23
Benzo(b)fluoranthene	50.0	U	32.4	29.4	64.8	58.8	1	37.0-120			9.71	23
Benzo(k)fluoranthene	50.0	U	31.2	26.7	62.4	53.4	1	37.0-120			15.5	26
Benzo(g,h,i)perylene	50.0	U	38.3	34.0	76.6	68.0	1	37.0-123			11.9	25
Benzo(a)pyrene	50.0	U	30.4	27.3	60.8	54.6	1	37.0-120			10.7	24
Bis(2-chlorethoxy)methane	50.0	U	29.7	30.5	59.4	61.0	1	17.0-120			2.66	31
Bis(2-chloroethyl)ether	50.0	U	39.2	40.2	78.4	80.4	1	14.0-120			2.52	33
Bis(2-chloroisopropyl)ether	50.0	U	52.8	53.4	106	107	1	18.0-120			1.13	34
4-Bromophenyl-phenylether	50.0	U	37.1	36.2	74.2	72.4	1	37.0-120			2.46	24
2-Chloronaphthalene	50.0	U	32.9	32.3	65.8	64.6	1	29.0-120			1.84	28
4-Chlorophenyl-phenylether	50.0	U	36.7	35.4	73.4	70.8	1	36.0-120			3.61	23
Chrysene	50.0	U	32.6	29.9	65.2	59.8	1	38.0-120			8.64	23
Dibenz(a,h)anthracene	50.0	U	35.0	30.0	70.0	60.0	1	36.0-121			15.4	24
3,3-Dichlorobenzidine	100	U	ND	ND	0.000	0.000	1	10.0-134	J6	J6	0.000	30
2,4-Dinitrotoluene	50.0	U	37.8	39.5	75.6	79.0	1	39.0-125			4.40	25
2,6-Dinitrotoluene	50.0	U	38.3	38.6	76.6	77.2	1	36.0-120			0.780	27
Fluoranthene	50.0	U	37.2	34.7	74.4	69.4	1	41.0-121			6.95	22
Fluorene	50.0	U	35.7	35.3	71.4	70.6	1	37.0-120			1.13	24
Hexachlorobenzene	50.0	U	36.6	34.1	73.2	68.2	1	35.0-122			7.07	24

L1096042-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1096042-01 05/10/19 02:21 • (MS) R3409911-3 05/10/19 02:42 • (MSD) R3409911-4 05/10/19 03:03

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	50.0	U	32.2	31.9	64.4	63.8	1	12.0-120			0.936	34
Hexachlorocyclopentadiene	50.0	U	21.6	17.4	43.2	34.8	1	10.0-120			21.5	33
Hexachloroethane	50.0	U	30.3	30.1	60.6	60.2	1	10.0-120			0.662	40
Indeno(1,2,3-cd)pyrene	50.0	U	35.4	30.8	70.8	61.6	1	38.0-125			13.9	24
Isophorone	50.0	U	32.9	33.0	65.8	66.0	1	21.0-120			0.303	27
Naphthalene	50.0	U	33.5	34.0	67.0	68.0	1	10.0-120			1.48	31
Nitrobenzene	50.0	U	36.1	36.6	72.2	73.2	1	12.0-120			1.38	30
n-Nitrosodimethylamine	50.0	953	46.7	44.9	0.000	0.000	1	10.0-120	V	V	3.93	40
n-Nitrosodiphenylamine	50.0	U	36.9	37.7	73.8	75.4	1	37.0-120			2.14	24
n-Nitrosodi-n-propylamine	50.0	U	92.6	94.4	185	189	1	16.0-120	J5	J5	1.93	30
Phenanthrene	50.0	U	35.2	34.8	70.4	69.6	1	33.0-120			1.14	22
Benzylbutyl phthalate	50.0	U	35.9	32.7	71.8	65.4	1	34.0-126			9.33	24
Bis(2-ethylhexyl)phthalate	50.0	1.57	33.1	28.6	63.1	54.1	1	33.0-126			14.6	25
Di-n-butyl phthalate	50.0	U	38.3	36.5	76.6	73.0	1	35.0-128			4.81	23
Diethyl phthalate	50.0	U	39.6	39.7	79.2	79.4	1	39.0-125			0.252	24
Dimethyl phthalate	50.0	U	36.4	36.6	72.8	73.2	1	37.0-120			0.548	24
Di-n-octyl phthalate	50.0	U	31.4	27.0	62.8	54.0	1	25.0-135			15.1	26
Pyrene	50.0	U	37.4	36.3	74.8	72.6	1	39.0-120			2.99	22
Pyridine	50.0	U	21.1	19.5	42.2	39.0	1	10.0-120			7.88	37
1,2,4-Trichlorobenzene	50.0	U	32.7	33.3	65.4	66.6	1	15.0-120			1.82	31
4-Chloro-3-methylphenol	50.0	U	44.9	45.6	89.8	91.2	1	26.0-120			1.55	27
2-Chlorophenol	50.0	U	32.1	32.5	64.2	65.0	1	18.0-120			1.24	34
2-Methylphenol	50.0	15.3	43.3	42.2	56.0	53.8	1	10.0-120			2.57	30
3&4-Methyl Phenol	50.0	53.3	93.6	92.7	80.6	78.8	1	10.0-120			0.966	36
2,4-Dichlorophenol	50.0	U	36.8	37.2	73.6	74.4	1	19.0-120			1.08	27
2,4-Dimethylphenol	50.0	U	49.2	49.7	98.4	99.4	1	15.0-120			1.01	28
4,6-Dinitro-2-methylphenol	50.0	U	38.6	37.1	77.2	74.2	1	10.0-144			3.96	39
2,4-Dinitrophenol	50.0	U	37.0	33.8	74.0	67.6	1	10.0-120			9.04	40
2-Nitrophenol	50.0	U	35.2	36.1	70.4	72.2	1	20.0-120			2.52	30
4-Nitrophenol	50.0	U	10.4	10.2	20.8	20.4	1	10.0-120			1.94	40
Pentachlorophenol	50.0	U	44.4	43.5	88.8	87.0	1	10.0-128			2.05	37
Phenol	50.0	34.5	54.9	56.1	40.8	43.2	1	10.0-120			2.16	40
2,4,5-Trichlorophenol	50.0	U	46.7	47.6	93.4	95.2	1	33.0-120			1.91	31
2,4,6-Trichlorophenol	50.0	U	42.2	43.0	84.4	86.0	1	26.0-120			1.88	31
(S) Nitrobenzene-d5					*65.7*	*65.2*		*10.0-127*				
(S) 2-Fluorobiphenyl					*239*	*235*		*10.0-130*	J1	J1		
(S) p-Terphenyl-d14					*68.4*	*60.8*		*10.0-128*				
(S) Phenol-d5					*48.7*	*47.3*		*10.0-120*				
(S) 2-Fluorophenol					*32.3*	*33.0*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*77.5*	*81.5*		*10.0-155*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration met method criteria.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

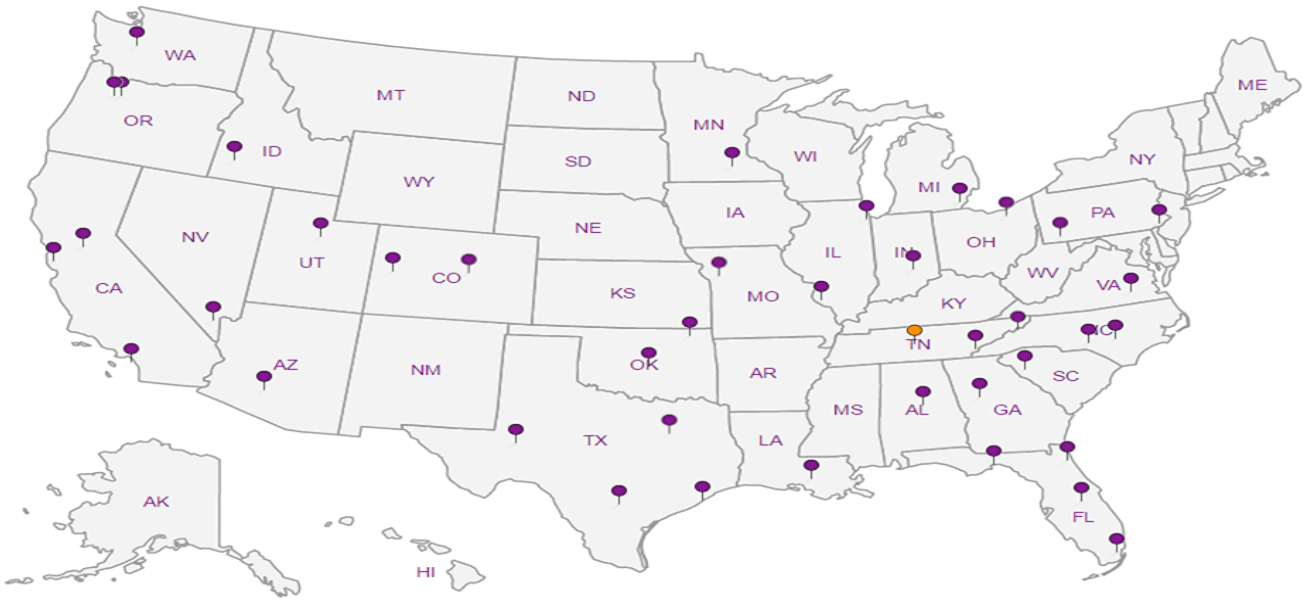
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Pace Analytical

~~APEX LABS~~

12065 Lebanon Rd, Mount Juliet, TN 37122

~~12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333~~

phone: (800) 767-5859

D214

L1096002

Lab # _____ COC 1 of 1

CHAIN OF CUSTODY

PO#

Company: SLR	Project Mgr: Chris Kramer	Project Name: Nord Door	Project # 108.00228.00059
Address: 1400 Blankenship Rd, ste 440, West Linn, OR	Phone: (503) 723-4423	Fax:	Email: ckramer@slrconsulting.com
Sampled by: Steven Losleben			

Site Location: OR WA

Other: _____

ANALYSIS REQUEST

	SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 VOCs Full List	8260 RBDM VOCs	8260 HVOCs	8260 BTEX VOCs	8270 SVOC	8270 SIM PAHs	8082 PCBs	600 TTO	RCRA Metals (8)	TCLP Metals (8)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn, (TOTAL) DISS TCLP	1200- COLS	1200-Z	Priority Pollutant 13 Metals					
1	MW-11A-0519		5/3/19	1537	water	6								X						X							-01
2	MW-11B-0519			1617		9		X		X				X													-02
3	MW-12-0519			1120		4 3m				X										X							-03
4	MW-13-0519			1025		to 3 Em								X						X							-04
5	MW-14-0519			1207		3								X						X							-05
6	MW-15-0519			1315		1														X							-08
7	MW-16-0519			1357		3								X						X							-06
8	MW-17-0519			1444		10		X		X				X						X							-07
9																											
10																											

Normal Turn Around Time (TAT) = 10 Business Days YES NO

TAT Requested (circle): 1 Day 2 Day 3 Day 4 DAY 5 DAY Other: Standard TAT

SAMPLES ARE HELD FOR 30 DAYS

SPECIAL INSTRUCTIONS:

BKG SCREEN: <0.5 mR/hr

NCF

RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
Signature:	Date:	Signature: CLW	Date: 5/7/19	Signature:	Date:	Signature:	Date:
Printed Name:	Time:	Printed Name: Colo Madley	Time: 8:45	Printed Name:	Time:	Printed Name:	Time:
Company:		Company: PACE		Company:		Company:	

4686 6470 0221 Total = 29 Trip Blanks = 1

0.5 to 0.5 PM NM (OCS)

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: SLRWLOR	SDG#:	L1096002
Cooler Received/Opened On: 5/7 /19	Temperature:	0.5
Received By: Cole Medley		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable		✓	
VOA Zero headspace?			
Preservation Correct / Checked?			✓

Pace Analytical®
National Center for Testing & Innovation

Login #: L1096002	Client: SLRWLOR	Date: 5/7/19	Evaluated by: Troy Dunlap

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
X	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courie
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Metals received unpreserved for MW-15.

Client informed by:		Call		Email X		Voice Mail		Date:05/07/19	Time:1615
TSR Initials:bjf	Client Contact: Chris Kramer								

Login Instructions:

Please preserve and note time/date of pH adjustment.

FINAL LAB REPORT

Nord Door

B3350

18-Jun-2019

Prepared by

SGS NORTH AMERICA

Prepared for

SLR International Corp

Chris Kramer

1800 Blankenship Rd, Ste 440
West Linn, OR 47068
Phone: 503-723-4423
Email: ckramer@slrconsulting.com

This report is approved by

Digitally signed by amy.boehm@sgs.com
DN: CN=amy.boehm@sgs.com
Reason: I am approving this document
Location:
Date: 2019-06-18 11:39:15

Amy Boehm

Senior Project Manager

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	Nord Door
SGS Project #	B3350
Analytical Protocol(s)	1613B
No. Samples Submitted	1
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	1
Date Received	07-May-19
Condition Received	Good
Temperature upon Receipt (ºC)	0.4
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska	17-012
Arkansas	18-042-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-17-00055
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2005, 2009 TNI, DoD ELAP QSM 5.1)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2018018
Massachusetts	M-NC919
Minnesota (Primary NELAP For Method 23)	1535636
Mississippi	Reciprocity
Montana	0106
New Hampshire	208318 & 208518
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	10101
Washington	C913
West Virginia	293

Rev. 06-Mar-2019

Sample ID: MW-16-0519

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Lab Project ID:	B3350	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	0.98 L	Lab Sample ID	B3350_16740_DF_001	Date Extracted:	11-Jun-2019
Date Collected:	03-May-2019	pH:	6	QC Batch No:	16740	Date Analyzed:	18-Jun-2019
		Split:	-	Dilution:	-	Time Analyzed:	2:57:40

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	1.54			ES 2378-TCDD	102	
12378-PeCDD	ND	1.14			ES 12378-PeCDD	93.4	
123478-HxCDD	ND	1.04			ES 123478-HxCDD	91.1	
123678-HxCDD	ND	1.11			ES 123678-HxCDD	85.9	
123789-HxCDD	ND	0.943			ES 123789-HxCDD	90	
1234678-HpCDD	ND	1.45			ES 1234678-HpCDD	95.7	
OCDD	7.21			J	ES OCDD	110	
2378-TCDF	ND	1.49			ES 2378-TCDF	94.6	
12378-PeCDF	ND	1.05			ES 12378-PeCDF	92.7	
23478-PeCDF	ND	1.12			ES 23478-PeCDF	92.3	
123478-HxCDF	ND	0.737			ES 123478-HxCDF	86.7	
123678-HxCDF	ND	0.709			ES 123678-HxCDF	88	
234678-HxCDF	ND	0.739			ES 234678-HxCDF	86.2	
123789-HxCDF	ND	0.767			ES 123789-HxCDF	88.1	
1234678-HpCDF	ND	0.809			ES 1234678-HpCDF	88.1	
1234789-HpCDF	ND	0.89			ES 1234789-HpCDF	91.7	
OCDF	ND	1.2			ES OCDF	108	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	103	
Total TCDD	ND	1.54	ND		CS 12347-PeCDD	102	
Total PeCDD	ND	1.14	ND		CS 12346-PeCDF	98.1	
Total HxCDD	ND	1.03	ND		CS 123469-HxCDF	92.1	
Total HpCDD	ND	1.45	ND		CS 1234689-HpCDF	90.5	
Total TCDF	ND	1.49	ND				
Total PeCDF	ND	1.08	ND				
Total HxCDF	ND	0.736	ND				
Total HpCDF	ND	0.848	ND				
Total PCDD/Fs	**7.21**		**7.21**				
WHO-2005 TEQs							
TEQ: ND=0	0.00216		0.00216				
TEQ: ND=DL/2	1.92	1.92	1.92				
TEQ: ND=DL	3.84	3.84	3.84				

SGS
5500 Business Drive
Wilmington, NC 28405, USA
www.us.sgs.com
Tel: +1 910 794-1613; Toll-Free 866 846-8290

Sample ID: Method Blank B3350_16740 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Lab Project ID:	B3350	Date Received:	n/a
Project ID:	Nord Door	Weight/Volume:	1.00 L	Lab Sample ID	MB1_16740_DF_TLX	Date Extracted:	11-Jun-2019
Date Collected:	n/a	pH:	n/a	QC Batch No:	16740	Date Analyzed:	18-Jun-2019
		Split:	-	Dilution:	-	Time Analyzed:	1:22:44

Analyte	Conc. (pg/L)	DL (pg/L)	EMPC (pg/L)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	1.87			ES 2378-TCDD	94.4	
12378-PeCDD	ND	1.66			ES 12378-PeCDD	89.4	
123478-HxCDD	ND	1.71			ES 123478-HxCDD	90.6	
123678-HxCDD	ND	1.83			ES 123678-HxCDD	86.4	
123789-HxCDD	ND	1.62			ES 123789-HxCDD	84.5	
1234678-HpCDD	ND	2.04			ES 1234678-HpCDD	94.1	
OCDD	ND	2.95			ES OCDD	113	
2378-TCDF	ND	1.88			ES 2378-TCDF	92.9	
12378-PeCDF	ND	1.36			ES 12378-PeCDF	91.9	
23478-PeCDF	ND	1.3			ES 23478-PeCDF	91.9	
123478-HxCDF	ND	0.782			ES 123478-HxCDF	88.1	
123678-HxCDF	ND	0.812			ES 123678-HxCDF	86.4	
234678-HxCDF	ND	0.894			ES 234678-HxCDF	87.8	
123789-HxCDF	ND	0.887			ES 123789-HxCDF	86.7	
1234678-HpCDF	ND	0.773			ES 1234678-HpCDF	88.8	
1234789-HpCDF	ND	0.844			ES 1234789-HpCDF	91.8	
OCDF	ND	1.33			ES OCDF	112	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	92.4	
Total TCDD	ND	1.87	ND		CS 12347-PeCDD	95.6	
Total PeCDD	ND	1.66	ND		CS 12346-PeCDF	90.9	
Total HxCDD	ND	1.72	ND		CS 123469-HxCDF	89	
Total HpCDD	ND	2.04	ND		CS 1234689-HpCDF	87.7	
Total TCDF	ND	1.88	ND				
Total PeCDF	ND	1.33	ND				
Total HxCDF	ND	0.841	ND				
Total HpCDF	ND	0.807	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	2.52	2.52	2.52				
TEQ: ND=DL	5.04	5.04	5.04				

SGS
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Tel: +1 910 794-1613; Toll-Free 866 846-8290

METHOD 1613B **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8A**

Lab Name:	SGS North America		
Initial Calibration:	ICAL: MM3_DF_10122018_29OCT2018		
Instrument ID:	MM3	GC Column ID:	ZB-5ms
VER Data Filename:	190617R17	Analysis Date:	17-JUN-2019 22:12:49
Lab ID:	OPR1_16740_DF		

NATIVE ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
2,3,7,8-TCDD	10	11.1	6.7	-	15.8	Y
1,2,3,7,8-PeCDD	50	50.6	35	-	71	Y
1,2,3,4,7,8-HxCDD	50	54.1	35	-	82	Y
1,2,3,6,7,8-HxCDD	50	56.6	38	-	67	Y
1,2,3,7,8,9-HxCDD	50	51.4	32	-	81	Y
1,2,3,4,6,7,8-HpCDD	50	52.9	35	-	70	Y
OCDD	100	111	78	-	144	Y
2,3,7,8-TCDF	10	10.2	7.5	-	15.8	Y
1,2,3,7,8-PeCDF	50	50.4	40	-	67	Y
2,3,4,7,8-PeCDF	50	58	34	-	80	Y
1,2,3,4,7,8-HxCDF	50	52.8	36	-	67	Y
1,2,3,6,7,8-HxCDF	50	53.1	42	-	65	Y
2,3,4,6,7,8-HxCDF	50	53.8	35	-	78	Y
1,2,3,7,8,9-HxCDF	50	50.6	39	-	65	Y
1,2,3,4,6,7,8-HpCDF	50	53.1	41	-	61	Y
1,2,3,4,7,8,9-HpCDF	50	52.1	39	-	69	Y
OCDF	100	106	63	-	170	Y

Contract-required concentration limits for OPR as specified in Table 6,
Method 1613. 10/94

Processed: 18 Jun 2019 09:56 Analyst: pw

METHOD 1613B **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8B**

Lab Name:	SGS North America		
Initial Calibration:	ICAL: MM3_DF_10122018_29OCT2018		
Instrument ID:	MM3	GC Column ID:	ZB-5ms
VER Data Filename:	190617R17	Analysis Date:	17-JUN-2019 22:12:49
Lab ID:	OPR1_16740_DF		

LABELED ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
13C-2,3,7,8-TCDD	100	95.5	20	-	175	Y
13C-1,2,3,7,8-PeCDD	100	92.6	21	-	227	Y
13C-1,2,3,4,7,8-HxCDD	100	90.1	21	-	193	Y
13C-1,2,3,6,7,8-HxCDD	100	85.4	25	-	163	Y
13C-1,2,3,7,8,9-HxCDD	100	89.3	26	-	166	Y
13C-1,2,3,4,6,7,8-HpCDD	100	97.3	26	-	166	Y
13C-OCDD	200	232	26	-	397	Y
13C-2,3,7,8-TCDF	100	94.9	22	-	152	Y
13C-1,2,3,7,8-PeCDF	100	94.6	21	-	192	Y
13C-2,3,4,7,8-PeCDF	100	97.6	13	-	328	Y
13C-1,2,3,4,7,8-HxCDF	100	86.6	19	-	202	Y
13C-1,2,3,6,7,8-HxCDF	100	85.4	21	-	159	Y
13C-2,3,4,6,7,8-HxCDF	100	86.7	22	-	176	Y
13C-1,2,3,7,8,9-HxCDF	100	88	17	-	205	Y
13C-1,2,3,4,6,7,8-HpCDF	100	90.2	21	-	158	Y
13C-1,2,3,4,7,8,9-HpCDF	100	92.6	20	-	186	Y
13C-OCDF	200	222	26	-	397	Y
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	40	38.5	12.4	-	76.4	Y

Contract-required concentration limits for OPR as specified in Table 6,
Method 1613. 10/94

Processed: 18 Jun 2019 09:56 Analyst: pw

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Amy Boehm*
Receipt Date & Time:	*07-May-19 at 09:44*
AP Project name:	*B3350*
Requested TAT:	*14 days*
Projected due date:	*18-Jun-19*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Amy.Boehm@sgs.com*

Company Contact:	*Chris Kramer*
Company:	*SLR International Corp*
Project Name & Site:	*Nord Door*
Project PO#:	*108.00228.00059*
QAAP/Contract #:	*n/a*
Requested Analysis:	*Method 1613B*
Phone#:	*503-723-4423*
Email Address:	*ckramer@slrconsulting.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp	Container #	Shipping #
MW-16-0519	B3350_001	Water	1	1-Liter Amber	03-May-19	13:57	0.4	1	7870 8039 7271

Preservation Type: **Sample Seals:** No

Notes/Comments:

Analyze sample MW-16-0519 for D/Fs per client email.

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Jay Burkamper *Logged in by: Ashley Owens* *QC'ed by:* AK 4 Jun 19

B3256
*B3350

SGS CHAIN OF CUSTODY

PROJECT INFO
PROJECT: Nord Door
P.O. #: 108.00228.00059
QUOTE #:
SITE REF:
TURN AROUND TIME: Standard TAT
REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV
SPECIAL DELIVERABLES:
☐ DoD ☐ EDD/Version:
☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

SEND DOCUMENTATION / RESULTS TO
COMPANY: SLR
CONTACT: Chris Kramer
ADDRESS: 1800 Blankenship Road, Ste 440
PHONE: 503-723-4423 EMAIL: ckramer@slrconsulting.com

INVOICE TO (☒ CHECK IF SAME)
COMPANY:
CONTACT:
ADDRESS:
PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	PRESERVATIVE	ANALYSIS & METHOD: Dioxins/Furans	ANALYSIS & METHOD: PCBs	MS MSD	MS/ DUP	REMARKS
001 MW-11A-0519	5/3/19	1537	2	water		X				
002 MW-11B-0519	↓	1617	2	↓						Hold
003 MW-12-0519		1120	2			X	X			
004 MW-13-0519			2			X	X			
005 MW-14-0519			2			X	X			
006 MW-15-0519			2				X			
007 MW-16-0519 *			2			X	X			
008 MW-17-0519	↓		2	↓		X	X			

Hold ALL dioxin/Furans analysis pending soil results submitted last week.

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
Steve Cole	5/6/19	1300	
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: DATE: 5/7/19 TIME: 9:44 #1 0.2 #2 0.4
COOLER SEAL: ☒ INTACT ☐ BROKEN ☐ ABSENT
CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT
CARRIER: TEMP: °C 0.3° +0.4°
TRACKING #:

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

FINAL LAB REPORT

Nord Door

B3256

28-May-2019

Prepared by

SGS NORTH AMERICA

Prepared for

SLR International Corp

Chris Kramer

1800 Blankenship Rd, Ste 440
West Linn, OR 47068
Phone: 503-723-4423
Email: ckramer@slrconsulting.com

This report is approved by

Digitally signed by amy.boehm@sgs.com
DN: CN=amy.boehm@sgs.com
Reason: I am approving this document
Location:
Date: 2019-05-28 13:28:17

Amy Boehm

Senior Project Manager

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	Nord Door
SGS Project #	B3256
Analytical Protocol(s)	1668C
No. Samples Submitted	8 (002 on hold)
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	1
Date Received	07-May-19
Condition Received	Good
Temperature upon Receipt (ºC)	0.3, 0.4
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska	17-012
Arkansas	18-042-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-17-00055
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2005, 2009 TNI, DoD ELAP QSM 5.1)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2018018
Massachusetts	M-NC919
Minnesota (Primary NELAP For Method 23)	1535636
Mississippi	Reciprocity
Montana	0106
New Hampshire	208318 & 208518
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	10101
Washington	C913
West Virginia	293

Rev. 06-Mar-2019

Sample ID: MW-12-0519

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	0.96 L	Sample ID:	B3256_16680_PCB_003	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	8	QC Batch No.:	16680	Date Analyzed:	22-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	EMPC		8.84	J	ES PCB-1	110
PCB-81 344'5-TeCB	ND	4.42			ES PCB-3	135
PCB-105 233'44'-PeCB	84.3				ES PCB-4	140
PCB-114 2344'5-PeCB	ND	2.34			ES PCB-15	161 V
PCB-118 23'44'5-PeCB	249				ES PCB-19	155 V
PCB-123 23'44'5'-PeCB	ND	2.32			ES PCB-37	90.2
PCB-126 33'44'5-PeCB	ND	2.08			ES PCB-54	84.5
PCB-156/157 233'44'5/233'44'5'-HxCB	EMPC		19	J C	ES PCB-77	91.8
PCB-167 23'44'55'-HxCB	6.71			J	ES PCB-81	91.5
PCB-169 33'44'55'-HxCB	ND	2.09			ES PCB-104	94
PCB-189 233'44'55'-HpCB	ND	1.92			ES PCB-105	103
					ES PCB-114	103
TEQs (WHO 2005 M/H)					ES PCB-118	101
					ES PCB-123	104
ND = 0	0.0102		0.0116		ES PCB-126	104
ND = 0.5 x DL	0.147		0.148		ES PCB-153	102
ND = DL	0.283		0.284		ES PCB-155	104
					ES PCB-156/157	119
Totals					ES PCB-167	110
Mono-CB	22.6				ES PCB-169	131
Di-CB	395		411		ES PCB-170	100
Tri-CB	1,960				ES PCB-180	96.1
Tetra-CB	2,480		2,560		ES PCB-188	98.7
Penta-CB	2,400		2,410		ES PCB-189	104
Hexa-CB	991		1,040		ES PCB-202	108
Hepta-CB	159		249		ES PCB-205	115
Octa-CB	100		108		ES PCB-206	128
Nona-CB	30.8				ES PCB-208	110
Deca-CB	ND	3.24			ES PCB-209	143
					CS PCB-28	96.3
Total PCB (Mono-Deca)	8,530		8,790		CS PCB-111	103
					CS PCB-178	102

Checkcode: 195-161-GPP/C SGS North America - PCB v0.83 Report Created: 24-May-2019 11:20 Analyst: ah

Sample ID: MW-12-0519

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	0.96 L	Sample ID:	B3256_16680_PCB_003	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	8	QC Batch No.:	16680	Date Analyzed:	22-May-2019
		Units	pg/L	Checkcode:	195-161-GPP/C	Time Analyzed:	16:15:33

Mono	Conc.	Qualifiers
PCB-1	22.6	
PCB-2	(3.81)	
PCB-3	(3.99)	
Conc.	22.6	
EMPC	22.6	

Di	Conc.	Qualifiers
PCB-4	176	
PCB-10	6.6	J
PCB-9	3.05	J
PCB-7	3.14	J
PCB-6	18.3	
PCB-5	(3.08)	
PCB-8	113	
PCB-14	(3)	
PCB-11	[15.8]	B EMPC
PCB-13/12	6.09	J C
PCB-15	68.6	
Conc.	395	
EMPC	411	

Tri	Conc.	Qualifiers
PCB-19	72.2	
PCB-30/18	397	C
PCB-17	232	
PCB-27	35.6	
PCB-24	(8.6)	
PCB-16	172	
PCB-32	161	
PCB-34	(8.28)	
PCB-23	(8.36)	
PCB-26/29	51	C
PCB-25	18.1	
PCB-31	245	
PCB-28/20	318	C
PCB-21/33	114	C
PCB-22	83.3	
PCB-36	(7.09)	
PCB-39	(7.8)	
PCB-38	(7.73)	
PCB-35	(8.07)	
PCB-37	58.7	
Conc.	1,960	
EMPC	1,960	

Tetra	Conc.	Qualifiers
PCB-54	(3.19)	
PCB-50/53	70.4	C
PCB-45	60.1	
PCB-51	66.3	
PCB-46	[23.4]	EMPC
PCB-52	531	
PCB-73	(3.27)	
PCB-43	9.51	J
PCB-69/49	262	C
PCB-48	58.1	
PCB-44/47/65	390	C
PCB-59/62/75	[26.6]	J EMPC C
PCB-42	96.7	
PCB-41	[10.8]	EMPC
PCB-71/40	141	C
PCB-64	127	
Conc.		
EMPC		

Tetra	Conc.	Qualifiers
PCB-72	(4.05)	
PCB-68	26.5	
PCB-57	(4.27)	
PCB-58	(3.83)	
PCB-67	6.04	J
PCB-63	[7.03]	J EMPC
PCB-61/70/74/76	337	C
PCB-66	187	
PCB-55	(3.89)	
PCB-56	82.5	
PCB-60	27.4	
PCB-80	(4.04)	
PCB-79	(3.73)	
PCB-78	(4.23)	
PCB-81	(4.42)	
PCB-77	[8.84]	J EMPC
Conc.	2,480	
EMPC	2,560	

5500 Business Drive
Wilmington, NC 28405, USA
Tel: +1 910 794-1613
www.us.sgs.com

Totals	Conc.	EMPC
Mono-Tri	2,380	2,390
Tetra-Hexa	5,870	6,010
Hepta-Deca	290	387
Mono-Deca	8,530	8,790

Sample ID: MW-12-0519 — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(1.75)		PCB-109/119/86/97/125/87	236	C	PCB-155	(1.44)		PCB-165	(1.85)	
PCB-96	[4.08]	J EMPC	PCB-117	6.07	J	PCB-152	(1.33)		PCB-146	30.7	
PCB-103	[5.19]	J EMPC	PCB-116/85	48.4	C	PCB-150	(1.51)		PCB-161	(1.61)	
PCB-94	(3.78)		PCB-110	435		PCB-136	40.6		PCB-153/168	182	C
PCB-95	391		PCB-115	(1.87)		PCB-145	(1.4)		PCB-141	39.8	
PCB-100/93	(3.37)	C	PCB-82	33.8		PCB-148	(2.22)		PCB-130	[17.4]	EMPC
PCB-102	13.5		PCB-111	(2.33)		PCB-151/135	77.7	C	PCB-137	10.2	J
PCB-98	(3.3)		PCB-120	(1.89)		PCB-154	(2.07)		PCB-164	17.3	
PCB-88	(3.64)		PCB-108/124	[6.6]	J EMPC C	PCB-144	(2.25)		PCB-163/138/129	241	C
PCB-91	73.9		PCB-107	17.5		PCB-147/149	199	C	PCB-160	(1.89)	
PCB-84	142		PCB-123	(2.32)		PCB-134	[13.5]	EMPC	PCB-158	24.6	
PCB-89	(3.16)		PCB-106	(2.18)		PCB-143	(2.36)		PCB-128/166	35.8	C
PCB-121	(2.11)		PCB-118	249		PCB-139/140	(2.1)	C	PCB-159	(1.56)	
PCB-92	77		PCB-122	(2.76)		PCB-131	(2.5)		PCB-162	(1.84)	
PCB-113/90/101	403	C	PCB-114	(2.34)		PCB-142	(2.49)		PCB-167	6.71	J
PCB-83	21.8		PCB-105	84.3		PCB-132	86.3		PCB-156/157	[19]	J EMPC C
PCB-99	167		PCB-127	(2.36)		PCB-133	(2.18)		PCB-169	(2.09)	
PCB-112	(1.92)		PCB-126	(2.08)							
			Conc.	2,400					**Conc.**	991	
			EMPC	2,410					**EMPC**	1,040	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(1.02)		PCB-174	33.2		PCB-202	[7.27]	J EMPC	PCB-208	(5.76)	
PCB-179	17.2		PCB-177	[14.5]	EMPC	PCB-201	(1.56)		PCB-207	(5.85)	
PCB-184	(1.02)		PCB-181	(2.51)		PCB-204	(1.35)		PCB-206	30.8	
PCB-176	[3.88]	J EMPC	PCB-171/173	[7.13]	J EMPC C	PCB-197	(1.47)				
PCB-186	(0.897)		PCB-172	(2.89)		PCB-200	(1.4)		**Conc.**	30.8	
PCB-178	10.5		PCB-192	(1.94)		PCB-198/199	39.2	C	**EMPC**	30.8	
PCB-175	(2.88)		PCB-180/193	[64.9]	EMPC C	PCB-196	13.4				
PCB-187	51		PCB-191	(2.22)		PCB-203	24.9		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(2.37)		PCB-170	26.3		PCB-195	(3.23)		PCB-209	(3.24)	
PCB-183	20.5		PCB-190	(2.33)		PCB-194	22.9				
PCB-185	(2.83)		PCB-189	(1.92)		PCB-205	(2.74)				
			Conc.	159		**Conc.**	100				
			EMPC	249		**EMPC**	108				

Sample ID: MW-13-0519

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	0.98 L	Sample ID:	B3256_16680_PCB_004	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	8	QC Batch No.:	16680	Date Analyzed:	22-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	19				ES PCB-1	87
PCB-81 344'5-TeCB	ND	4.41			ES PCB-3	94.5
PCB-105 233'44'-PeCB	182				ES PCB-4	104
PCB-114 2344'5-PeCB	EMPC		8.73	J	ES PCB-15	96.9
PCB-118 23'44'5-PeCB	535				ES PCB-19	105
PCB-123 23'44'5'-PeCB	7.99			J	ES PCB-37	102
PCB-126 33'44'5-PeCB	ND	1.26			ES PCB-54	97.4
PCB-156/157 233'44'5/233'44'5'-HxCB	81.6			C	ES PCB-77	97.9
PCB-167 23'44'55'-HxCB	29.8				ES PCB-81	96.3
PCB-169 33'44'55'-HxCB	ND	2.23			ES PCB-104	98.1
PCB-189 233'44'55'-HpCB	EMPC		5.94	J	ES PCB-105	109
					ES PCB-114	103
TEQs (WHO 2005 M/H)					ES PCB-118	103
					ES PCB-123	105
ND = 0	0.027		0.0274		ES PCB-126	105
ND = 0.5 x DL	0.124		0.125		ES PCB-153	106
ND = DL	0.221		0.222		ES PCB-155	104
					ES PCB-156/157	118
Totals					ES PCB-167	114
Mono-CB	24.5				ES PCB-169	132
Di-CB	1,240		1,260		ES PCB-170	97
Tri-CB	7,660				ES PCB-180	93.4
Tetra-CB	8,140		8,160		ES PCB-188	98.2
Penta-CB	6,370		6,420		ES PCB-189	102
Hexa-CB	4,120		4,140		ES PCB-202	107
Hepta-CB	1,590		1,590		ES PCB-205	112
Octa-CB	404		440		ES PCB-206	125
Nona-CB	78.1				ES PCB-208	107
Deca-CB			13.9		ES PCB-209	141
					CS PCB-28	101
Total PCB (Mono-Deca)	29,600		29,800		CS PCB-111	99.2
					CS PCB-178	102

Checkcode: 845-882-WBZ/C SGS North America - PCB v0.83 Report Created: 28-May-2019 10:40 Analyst: ah

Sample ID: MW-13-0519

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	0.98 L	Sample ID:	B3256_16680_PCB_004	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	8	QC Batch No.:	16680	Date Analyzed:	22-May-2019
		Units	pg/L	Checkcode:	845-882-WBZ/C	Time Analyzed:	17:13:31

Mono	Conc.	Qualifiers
PCB-1	24.5	
PCB-2	(2.6)	
PCB-3	(2.72)	
Conc.	24.5	
EMPC	24.5	

Di	Conc.	Qualifiers
PCB-4	365	
PCB-10	4.51	J
PCB-9	[12.3]	EMPC
PCB-7	[13.3]	EMPC
PCB-6	649	
PCB-5	(2.16)	
PCB-8	117	
PCB-14	(2.1)	
PCB-11	44.1	B
PCB-13/12	37.7	C
PCB-15	19.5	
Conc.	1,240	
EMPC	1,260	

Tri	Conc.	Qualifiers
PCB-19	211	
PCB-30/18	1,420	C
PCB-17	785	
PCB-27	447	
PCB-24	(4.68)	
PCB-16	90.1	
PCB-32	300	
PCB-34	(5.77)	
PCB-23	(5.83)	
PCB-26/29	1,910	C
PCB-25	975	
PCB-31	796	
PCB-28/20	574	C
PCB-21/33	72	C
PCB-22	45.3	
PCB-36	(4.94)	
PCB-39	(5.44)	
PCB-38	(5.39)	
PCB-35	(5.63)	
PCB-37	30.8	
Conc.	7,660	
EMPC	7,660	

Tetra	Conc.	Qualifiers
PCB-54	[3.57]	J EMPC
PCB-50/53	334	C
PCB-45	224	
PCB-51	137	
PCB-46	103	
PCB-52	2,160	
PCB-73	5.8	J
PCB-43	8.06	J
PCB-69/49	1,470	C
PCB-48	48.6	
PCB-44/47/65	1,220	C
PCB-59/62/75	191	C
PCB-42	217	
PCB-41	[8.92]	J EMPC
PCB-71/40	537	C
PCB-64	537	

Tetra	Conc.	Qualifiers
PCB-72	13.2	
PCB-68	19.9	
PCB-57	(4.26)	
PCB-58	(3.82)	
PCB-67	7.7	J
PCB-63	[7.42]	J EMPC
PCB-61/70/74/76	468	C
PCB-66	300	
PCB-55	(3.87)	
PCB-56	87.1	
PCB-60	29.4	
PCB-80	(4.03)	
PCB-79	(3.72)	
PCB-78	(4.22)	
PCB-81	(4.41)	
PCB-77	19	
Conc.	8,140	
EMPC	8,160	

Totals	Conc.	EMPC
Mono-Tri	8,920	8,950
Tetra-Hexa	18,600	18,700
Hepta-Deca	2,070	2,120
Mono-Deca	29,600	29,800

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Sample ID: MW-13-0519 — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(1.05)		PCB-109/119/86/97/125/87	498	C	PCB-155	(0.918)		PCB-165	(1.04)	
PCB-96	20.8		PCB-117	[16.6]	EMPC	PCB-152	(0.845)		PCB-146	116	
PCB-103	24.5		PCB-116/85	116	C	PCB-150	(0.963)		PCB-161	(0.903)	
PCB-94	(5.68)		PCB-110	1,340		PCB-136	153		PCB-153/168	702	C
PCB-95	1,290		PCB-115	(2.8)		PCB-145	(0.889)		PCB-141	163	
PCB-100/93	[15.1]	J EMPC C	PCB-82	81.3		PCB-148	(1.24)		PCB-130	63.2	
PCB-102	42.9		PCB-111	(3.5)		PCB-151/135	310	C	PCB-137	43.3	
PCB-98	(4.95)		PCB-120	(2.83)		PCB-154	20.4		PCB-164	66.1	
PCB-88	(5.46)		PCB-108/124	19.2	J C	PCB-144	39.1		PCB-163/138/129	935	C
PCB-91	256		PCB-107	41.1		PCB-147/149	759	C	PCB-160	(1.06)	
PCB-84	437		PCB-123	7.99	J	PCB-134	53.3		PCB-158	87.5	
PCB-89	9.05	J	PCB-106	(3.28)		PCB-143	(1.32)		PCB-128/166	131	C
PCB-121	(3.17)		PCB-118	535		PCB-139/140	[15.9]	J EMPC C	PCB-159	(1.65)	
PCB-92	196		PCB-122	[8.46]	J EMPC	PCB-131	13.9		PCB-162	(1.95)	
PCB-113/90/101	860	C	PCB-114	[8.73]	J EMPC	PCB-142	(1.4)		PCB-167	29.8	
PCB-83	42.2		PCB-105	182		PCB-132	338		PCB-156/157	81.6	C
PCB-99	372		PCB-127	(3.08)		PCB-133	15.2		PCB-169	(2.23)	
PCB-112	(2.88)		PCB-126	(1.26)							
			Conc.	6,370					**Conc.**	4,120	
			EMPC	6,420					**EMPC**	4,140	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.802)		PCB-174	196		PCB-202	33.5		PCB-208	14.4	
PCB-179	90.8		PCB-177	106		PCB-201	[18.4]	EMPC	PCB-207	9.27	J
PCB-184	(0.807)		PCB-181	(2.59)		PCB-204	(1.22)		PCB-206	54.3	
PCB-176	32.8		PCB-171/173	57.5	C	PCB-197	[3.65]	J EMPC			
PCB-186	(0.708)		PCB-172	32.1		PCB-200	[14.9]	EMPC	**Conc.**	78.1	
PCB-178	51.2		PCB-192	(2)		PCB-198/199	123	C	**EMPC**	78.1	
PCB-175	8.37	J	PCB-180/193	401	C	PCB-196	56.5				
PCB-187	240		PCB-191	7.13	J	PCB-203	68.3		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(2.44)		PCB-170	188		PCB-195	34.1		PCB-209	[13.9]	EMPC
PCB-183	117		PCB-190	36.8		PCB-194	87.7				
PCB-185	20.6		PCB-189	[5.94]	J EMPC	PCB-205	(2.31)				
			Conc.	1,590		**Conc.**	404				
			EMPC	1,590		**EMPC**	440				

Sample ID: MW-14-0519

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	0.98 L	Sample ID:	B3256_16680_PCB_005	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	7	QC Batch No.:	16680	Date Analyzed:	22-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	EMPC		7.77	J	ES PCB-1	77.8
PCB-81 344'5-TeCB	ND	4.12			ES PCB-3	88.8
PCB-105 233'44'-PeCB	201				ES PCB-4	96.7
PCB-114 2344'5-PeCB	EMPC		8.27	J	ES PCB-15	99.7
PCB-118 23'44'5-PeCB	682				ES PCB-19	102
PCB-123 23'44'5'-PeCB	EMPC		5.82	J	ES PCB-37	90.3
PCB-126 33'44'5-PeCB	ND	1.72			ES PCB-54	83.1
PCB-156/157 233'44'5/233'44'5'-HxCB	74.2			C	ES PCB-77	90.2
PCB-167 23'44'55'-HxCB	22.4				ES PCB-81	91
PCB-169 33'44'55'-HxCB	ND	2.1			ES PCB-104	95.2
PCB-189 233'44'55'-HpCB	ND	2.32			ES PCB-105	102
					ES PCB-114	102
TEQs (WHO 2005 M/H)					ES PCB-118	102
					ES PCB-123	102
ND = 0	0.0294		0.0306		ES PCB-126	102
ND = 0.5 x DL	0.148		0.149		ES PCB-153	102
ND = DL	0.266		0.266		ES PCB-155	108
					ES PCB-156/157	117
Totals					ES PCB-167	115
Mono-CB	25.5				ES PCB-169	124
Di-CB	181				ES PCB-170	99.5
Tri-CB	1,210				ES PCB-180	96.3
Tetra-CB	4,030		4,100		ES PCB-188	98.6
Penta-CB	6,320		6,370		ES PCB-189	102
Hexa-CB	3,220		3,260		ES PCB-202	104
Hepta-CB	662		723		ES PCB-205	111
Octa-CB	186		200		ES PCB-206	127
Nona-CB	29.8		36.4		ES PCB-208	109
Deca-CB	ND	2.47			ES PCB-209	142
					CS PCB-28	96.1
Total PCB (Mono-Deca)	15,900		16,100		CS PCB-111	101
					CS PCB-178	98.6

Checkcode: 639-692-BRQ/C SGS North America - PCB v0.83 Report Created: 24-May-2019 11:20 Analyst: ah

Sample ID: MW-14-0519 — Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	0.98 L	Sample ID:	B3256_16680_PCB_005	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	7	QC Batch No.:	16680	Date Analyzed:	22-May-2019
		Units	pg/L	Checkcode:	639-692-BRQ/C	Time Analyzed:	18:11:28

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	25.5		PCB-19	56.2		PCB-54	[5.17]	J EMPC	PCB-72	9.21	J
PCB-2	(2.42)		PCB-30/18	253	C	PCB-50/53	108	C	PCB-68	[10.2]	EMPC
PCB-3	(2.53)		PCB-17	127		PCB-45	55.8		PCB-57	(3.98)	
			PCB-27	23.2		PCB-51	95.6		PCB-58	(3.57)	
Conc.	25.5		PCB-24	(4.51)		PCB-46	34.7		PCB-67	(3.65)	
EMPC	25.5		PCB-16	79.4		PCB-52	1,060		PCB-63	[8.3]	J EMPC
			PCB-32	110		PCB-73	(1.98)		PCB-61/70/74/76	518	C
Di	**Conc.**	**Qualifiers**	PCB-34	(5.37)		PCB-43	[7.02]	J EMPC	PCB-66	304	
PCB-4	71.6		PCB-23	(5.43)		PCB-69/49	550	C	PCB-55	(3.62)	
PCB-10	3.18	J	PCB-26/29	61.3	C	PCB-48	46.6		PCB-56	74.9	
PCB-9	1.86	J	PCB-25	27.3		PCB-44/47/65	658	C	PCB-60	[17.3]	EMPC
PCB-7	3.71	J	PCB-31	154		PCB-59/62/75	32.1	C	PCB-80	(3.77)	
PCB-6	18.3		PCB-28/20	200	C	PCB-42	141		PCB-79	[5.17]	J EMPC
PCB-5	(2.5)		PCB-21/33	57	C	PCB-41	7.28	J	PCB-78	(3.94)	
PCB-8	40.8		PCB-22	39.4		PCB-71/40	187	C	PCB-81	(4.12)	
PCB-14	(2.42)		PCB-36	(4.6)		PCB-64	154		PCB-77	[7.77]	J EMPC
PCB-11	17.6	B	PCB-39	(5.06)							
PCB-13/12	5	J C	PCB-38	(5.02)							
PCB-15	19		PCB-35	(5.24)							
			PCB-37	21.5							
Conc.	181		**Conc.**	1,210					**Conc.**	4,030	
EMPC	181		**EMPC**	1,210					**EMPC**	4,100	

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Totals	Conc.	EMPC
Mono-Tri	1,410	1,410
Tetra-Hexa	13,600	13,700
Hepta-Deca	877	959
Mono-Deca	15,900	16,100

Sample ID: MW-14-0519 — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.911)		PCB-109/119/86/97/125/87	553	C	PCB-155	(0.557)		PCB-165	(0.679)	
PCB-96	[5.85]	J EMPC	PCB-117	23.6		PCB-152	(0.513)		PCB-146	104	
PCB-103	17.6		PCB-116/85	108	C	PCB-150	[3.28]	J EMPC	PCB-161	(0.591)	
PCB-94	7.03	J	PCB-110	1,180		PCB-136	112		PCB-153/168	561	C
PCB-95	1,030		PCB-115	(1.73)		PCB-145	(0.539)		PCB-141	110	
PCB-100/93	14.5	J C	PCB-82	74.8		PCB-148	4.05	J	PCB-130	43.9	
PCB-102	30.9		PCB-111	(2.16)		PCB-151/135	237	C	PCB-137	32.3	
PCB-98	(3.05)		PCB-120	4.49	J	PCB-154	17.6		PCB-164	51.4	
PCB-88	(3.36)		PCB-108/124	[18.1]	J EMPC C	PCB-144	[22.1]	EMPC	PCB-163/138/129	731	C
PCB-91	179		PCB-107	56.1		PCB-147/149	586	C	PCB-160	(0.693)	
PCB-84	342		PCB-123	[5.82]	J EMPC	PCB-134	49.6		PCB-158	66.8	
PCB-89	7.94	J	PCB-106	(2.02)		PCB-143	(0.866)		PCB-128/166	108	C
PCB-121	(1.95)		PCB-118	682		PCB-139/140	[14.2]	J EMPC C	PCB-159	(1.32)	
PCB-92	213		PCB-122	[4.82]	J EMPC	PCB-131	11.1		PCB-162	(1.56)	
PCB-113/90/101	1,080	C	PCB-114	[8.27]	J EMPC	PCB-142	(0.916)		PCB-167	22.4	
PCB-83	64.4		PCB-105	201		PCB-132	278		PCB-156/157	74.2	C
PCB-99	464		PCB-127	(1.94)		PCB-133	15.8		PCB-169	(2.1)	
PCB-112	(1.77)		PCB-126	(1.72)							
			Conc.	6,320					**Conc.**	3,220	
			EMPC	6,370					**EMPC**	3,260	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.932)		PCB-174	87.3		PCB-202	[13.6]	EMPC	PCB-208	[6.61]	J EMPC
PCB-179	41.3		PCB-177	51.4		PCB-201	8.8	J	PCB-207	(4.67)	
PCB-184	(0.938)		PCB-181	(2.86)		PCB-204	(0.747)		PCB-206	29.8	
PCB-176	[13.6]	EMPC	PCB-171/173	27.2	C	PCB-197	(0.814)				
PCB-186	(0.823)		PCB-172	11.4		PCB-200	8.06	J	**Conc.**	29.8	
PCB-178	22.6		PCB-192	(2.21)		PCB-198/199	59.3	C	**EMPC**	36.4	
PCB-175	(3.28)		PCB-180/193	182	C	PCB-196	24.6				
PCB-187	120		PCB-191	(2.53)		PCB-203	33.8		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(2.69)		PCB-170	94.1		PCB-195	14.1		PCB-209	(2.47)	
PCB-183	[47.6]	EMPC	PCB-190	14.5		PCB-194	37.5				
PCB-185	8.94	J	PCB-189	(2.32)		PCB-205	(3.06)				
			Conc.	662		**Conc.**	186				
			EMPC	723		**EMPC**	200				

Sample ID: MW-15-0519

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	1.00 L	Sample ID:	B3256_16680_PCB_006	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	7	QC Batch No.:	16680	Date Analyzed:	22-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	ND	5.47			ES PCB-1	91
PCB-81 344'5-TeCB	ND	4.64			ES PCB-3	100
PCB-105 233'44'-PeCB	ND	1.96			ES PCB-4	105
PCB-114 2344'5-PeCB	ND	1.92			ES PCB-15	112
PCB-118 23'44'5-PeCB	EMPC		2.81	J	ES PCB-19	115
PCB-123 23'44'5'-PeCB	ND	2.04			ES PCB-37	85.8
PCB-126 33'44'5-PeCB	ND	2.32			ES PCB-54	78.9
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	2.54		C	ES PCB-77	89.2
PCB-167 23'44'55'-HxCB	ND	1.78			ES PCB-81	90.7
PCB-169 33'44'55'-HxCB	ND	2.12			ES PCB-104	95.1
PCB-189 233'44'55'-HpCB	ND	2.4			ES PCB-105	104
					ES PCB-114	103
TEQs (WHO 2005 M/H)					ES PCB-118	103
					ES PCB-123	104
ND = 0	0		0.0000844		ES PCB-126	98.4
ND = 0.5 x DL	0.149		0.149		ES PCB-153	104
ND = DL	0.298		0.298		ES PCB-155	99.9
					ES PCB-156/157	115
Totals					ES PCB-167	113
Mono-CB	ND	5.1			ES PCB-169	128
Di-CB			18.6		ES PCB-170	97.5
Tri-CB	ND	13.1			ES PCB-180	88.6
Tetra-CB	76.4		84.6		ES PCB-188	93.8
Penta-CB	4.68		12.8		ES PCB-189	97.8
Hexa-CB	3.99		9.33		ES PCB-202	102
Hepta-CB	ND	2.88			ES PCB-205	109
Octa-CB	ND	3.29			ES PCB-206	124
Nona-CB	ND	11.3			ES PCB-208	103
Deca-CB	ND	5.47			ES PCB-209	135
					CS PCB-28	85
Total PCB (Mono-Deca)	85.1		125		CS PCB-111	92
					CS PCB-178	90.7

Checkcode: 889-084-JKY/C SGS North America - PCB v0.83 Report Created: 24-May-2019 11:21 Analyst: ah

Sample ID: MW-15-0519 — Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	1.00 L	Sample ID:	B3256_16680_PCB_006	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	7	QC Batch No.:	16680	Date Analyzed:	22-May-2019
		Units	pg/L	Checkcode:	889-084-JKY/C	Time Analyzed:	19:09:26

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	(4.96)		PCB-19	(15.2)		PCB-54	(3.36)		PCB-72	(4.25)	
PCB-2	(5)		PCB-30/18	(10.8)	C	PCB-50/53	(4.31)	C	PCB-68	15.4	
PCB-3	(5.23)		PCB-17	(15.9)		PCB-45	(5.35)		PCB-57	(4.48)	
			PCB-27	(11.1)		PCB-51	42.4		PCB-58	(4.02)	
Conc.	0		PCB-24	(11.1)		PCB-46	(5.47)		PCB-67	(4.11)	
EMPC	0		PCB-16	(16.3)		PCB-52	[8.14]	J EMPC	PCB-63	(4.91)	
			PCB-32	(10.3)		PCB-73	(3.39)		PCB-61/70/74/76	(4.29)	C
Di	**Conc.**	**Qualifiers**	PCB-34	(11.6)		PCB-43	(4.34)		PCB-66	(4.16)	
PCB-4	(5.29)		PCB-23	(11.7)		PCB-69/49	(3.87)	C	PCB-55	(4.08)	
PCB-10	(3.75)		PCB-26/29	(11.4)	C	PCB-48	(4.66)		PCB-56	(4.21)	
PCB-9	(1.86)		PCB-25	(9.71)		PCB-44/47/65	18.7	J C	PCB-60	(4.98)	
PCB-7	(2.07)		PCB-31	(9.88)		PCB-59/62/75	(3.49)	C	PCB-80	(4.24)	
PCB-6	(1.76)		PCB-28/20	(10.8)	C	PCB-42	(5.11)		PCB-79	(3.92)	
PCB-5	(2.14)		PCB-21/33	(11.1)	C	PCB-41	(6.06)		PCB-78	(4.44)	
PCB-8	(1.71)		PCB-22	(9.99)		PCB-71/40	(4.06)	C	PCB-81	(4.64)	
PCB-14	(2.08)		PCB-36	(9.9)		PCB-64	(3.49)		PCB-77	(5.47)	
PCB-11	[18.6]	B EMPC	PCB-39	(10.9)							
PCB-13/12	(2.08)	C	PCB-38	(10.8)							
PCB-15	(1.84)		PCB-35	(11.3)							
			PCB-37	(11)							
Conc.	0		**Conc.**	0					**Conc.**	76.4	
EMPC	18.6		**EMPC**	0					**EMPC**	84.6	

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Totals	Conc.	EMPC
Mono-Tri	0	18.6
Tetra-Hexa	85.1	107
Hepta-Deca	0	0
Mono-Deca	85.1	125

Sample ID: MW-15-0519 — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(2.19)		PCB-109/119/86/97/125/87	(2.3)	C	PCB-155	(1.73)		PCB-165	(1.94)	
PCB-96	(2.14)		PCB-117	(2.15)		PCB-152	(1.59)		PCB-146	(1.93)	
PCB-103	(2.73)		PCB-116/85	(2.41)	C	PCB-150	(1.81)		PCB-161	(1.7)	
PCB-94	(3.33)		PCB-110	4.68	J	PCB-136	(1.9)		PCB-153/168	3.99	J B C
PCB-95	(2.85)		PCB-115	(1.64)		PCB-145	(1.67)		PCB-141	(2.41)	
PCB-100/93	(2.96)	C	PCB-82	(2.89)		PCB-148	(2.33)		PCB-130	(2.85)	
PCB-102	(2.19)		PCB-111	(2.05)		PCB-151/135	(2.3)	C	PCB-137	(2.44)	
PCB-98	(2.9)		PCB-120	(1.66)		PCB-154	(2.18)		PCB-164	(1.68)	
PCB-88	(3.2)		PCB-108/124	(2)	C	PCB-144	(2.36)		PCB-163/138/129	(2.16)	C
PCB-91	(2.73)		PCB-107	(1.92)		PCB-147/149	[5.35]	J EMPC C	PCB-160	(1.99)	
PCB-84	(3.37)		PCB-123	(2.04)		PCB-134	(2.68)		PCB-158	(1.72)	
PCB-89	(2.79)		PCB-106	(1.92)		PCB-143	(2.48)		PCB-128/166	(1.98)	C
PCB-121	(1.86)		PCB-118	[2.81]	J EMPC	PCB-139/140	(2.2)	C	PCB-159	(1.51)	
PCB-92	(3)		PCB-122	(2.27)		PCB-131	(2.63)		PCB-162	(1.79)	
PCB-113/90/101	[5.26]	J EMPC C	PCB-114	(1.92)		PCB-142	(2.62)		PCB-167	(1.78)	
PCB-83	(3.59)		PCB-105	(1.96)		PCB-132	(2.53)		PCB-156/157	(2.54)	C
PCB-99	(2.16)		PCB-127	(1.8)		PCB-133	(2.3)		PCB-169	(2.12)	
PCB-112	(1.69)		PCB-126	(2.32)							
			Conc.	4.68					**Conc.**	3.99	
			EMPC	12.8					**EMPC**	9.33	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(1.4)		PCB-174	(3.63)		PCB-202	(2.02)		PCB-208	(7.16)	
PCB-179	(1.28)		PCB-177	(3.57)		PCB-201	(2.29)		PCB-207	(7.28)	
PCB-184	(1.41)		PCB-181	(3.37)		PCB-204	(1.98)		PCB-206	(15.5)	
PCB-176	(1.48)		PCB-171/173	(3.9)	C	PCB-197	(2.16)				
PCB-186	(1.24)		PCB-172	(3.88)		PCB-200	(2.06)		**Conc.**	0	
PCB-178	(1.96)		PCB-192	(2.6)		PCB-198/199	(2.55)	C	**EMPC**	0	
PCB-175	(3.86)		PCB-180/193	(3.15)	C	PCB-196	(2.92)				
PCB-187	(3.06)		PCB-191	(2.97)		PCB-203	(2.37)		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(3.17)		PCB-170	(4.33)		PCB-195	(5.38)		PCB-209	(5.47)	
PCB-183	(3.44)		PCB-190	(3.07)		PCB-194	(5.19)				
PCB-185	(3.79)		PCB-189	(2.4)		PCB-205	(4.56)				
			Conc.	0		**Conc.**	0				
			EMPC	0		**EMPC**	0				

Sample ID: MW-16-0519

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	0.97 L	Sample ID:	B3256_16680_PCB_007	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	7	QC Batch No.:	16680	Date Analyzed:	22-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	ND	3.42			ES PCB-1	81.1
PCB-81 344'5-TeCB	ND	3.71			ES PCB-3	87.2
PCB-105 233'44'-PeCB	2.67			J	ES PCB-4	96.4
PCB-114 2344'5-PeCB	ND	0.904			ES PCB-15	93.7
PCB-118 23'44'5-PeCB	8.08			J	ES PCB-19	101
PCB-123 23'44'5'-PeCB	ND	0.922			ES PCB-37	87.4
PCB-126 33'44'5-PeCB	ND	1.32			ES PCB-54	75
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	1.97		C	ES PCB-77	91.2
PCB-167 23'44'55'-HxCB	ND	1.34			ES PCB-81	88.2
PCB-169 33'44'55'-HxCB	ND	1.64			ES PCB-104	93.2
PCB-189 233'44'55'-HpCB	ND	1.44			ES PCB-105	105
					ES PCB-114	100
TEQs (WHO 2005 M/H)					ES PCB-118	103
					ES PCB-123	101
ND = 0	0.000323		0.000323		ES PCB-126	101
ND = 0.5 x DL	0.0919		0.0919		ES PCB-153	101
ND = DL	0.183		0.183		ES PCB-155	96.5
					ES PCB-156/157	115
Totals					ES PCB-167	110
Mono-CB	ND	3.58			ES PCB-169	125
Di-CB	3.93		25.1		ES PCB-170	95.3
Tri-CB	ND	7.51			ES PCB-180	89.5
Tetra-CB	144				ES PCB-188	92.9
Penta-CB	33.6		65.8		ES PCB-189	99.1
Hexa-CB	26.9		39.3		ES PCB-202	106
Hepta-CB	12.1				ES PCB-205	108
Octa-CB	ND	1.82			ES PCB-206	125
Nona-CB	ND	9.08			ES PCB-208	104
Deca-CB	ND	3.32			ES PCB-209	136
					CS PCB-28	91.4
Total PCB (Mono-Deca)	221		286		CS PCB-111	99.4
					CS PCB-178	96.7

Checkcode: 475-800-MFB/C SGS North America - PCB v0.83 Report Created: 24-May-2019 11:21 Analyst: ah

Sample ID: MW-16-0519

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	0.97 L	Sample ID:	B3256_16680_PCB_007	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	7	QC Batch No.:	16680	Date Analyzed:	22-May-2019
		Units	pg/L	Checkcode:	475-800-MFB/C	Time Analyzed:	20:07:23

Mono	Conc.	Qualifiers
PCB-1	(3.54)	
PCB-2	(3.46)	
PCB-3	(3.62)	
Conc.	0	
EMPC	0	

Di	Conc.	Qualifiers
PCB-4	(2.12)	
PCB-10	(1.5)	
PCB-9	3.93	J
PCB-7	(1.66)	
PCB-6	(1.41)	
PCB-5	(1.72)	
PCB-8	(1.37)	
PCB-14	(1.67)	
PCB-11	[21.2]	B EMPC
PCB-13/12	(1.67)	C
PCB-15	(1.47)	
Conc.	3.93	
EMPC	25.1	

Tri	Conc.	Qualifiers
PCB-19	(9.47)	
PCB-30/18	(6.75)	C
PCB-17	(9.95)	
PCB-27	(6.92)	
PCB-24	(6.95)	
PCB-16	(10.1)	
PCB-32	(6.4)	
PCB-34	(5.84)	
PCB-23	(5.9)	
PCB-26/29	(5.76)	C
PCB-25	(4.9)	
PCB-31	(4.99)	
PCB-28/20	(5.44)	C
PCB-21/33	(5.6)	C
PCB-22	(5.05)	
PCB-36	(5)	
PCB-39	(5.5)	
PCB-38	(5.45)	
PCB-35	(5.69)	
PCB-37	(5.55)	
Conc.	0	
EMPC	0	

Tetra	Conc.	Qualifiers
PCB-54	(2.84)	
PCB-50/53	(3.77)	C
PCB-45	(4.68)	
PCB-51	52.6	
PCB-46	(4.78)	
PCB-52	36.1	
PCB-73	(2.96)	
PCB-43	(3.79)	
PCB-69/49	7.67	J C
PCB-48	(4.08)	
PCB-44/47/65	31.5	C
PCB-59/62/75	(3.05)	C
PCB-42	(4.47)	
PCB-41	(5.29)	
PCB-71/40	(3.55)	C
PCB-64	(3.05)	

Tetra	Conc.	Qualifiers
PCB-72	(3.4)	
PCB-68	8.32	J
PCB-57	(3.59)	
PCB-58	(3.22)	
PCB-67	(3.29)	
PCB-63	(3.93)	
PCB-61/70/74/76	7.93	J C
PCB-66	(3.33)	
PCB-55	(3.26)	
PCB-56	(3.37)	
PCB-60	(3.99)	
PCB-80	(3.39)	
PCB-79	(3.13)	
PCB-78	(3.55)	
PCB-81	(3.71)	
PCB-77	(3.42)	
Conc.	144	
EMPC	144	

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Totals	Conc.	EMPC
Mono-Tri	3.93	25.1
Tetra-Hexa	205	249
Hepta-Deca	12.1	12.1
Mono-Deca	221	286

Sample ID: MW-16-0519 — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.982)		PCB-109/119/86/97/125/87	7.26	J C	PCB-155	(0.841)		PCB-165	(0.948)	
PCB-96	(0.963)		PCB-117	(0.972)		PCB-152	(0.774)		PCB-146	(0.942)	
PCB-103	(1.23)		PCB-116/85	(1.09)	C	PCB-150	(0.881)		PCB-161	(0.826)	
PCB-94	(1.5)		PCB-110	12.8		PCB-136	3.41	J	PCB-153/168	[7.59]	J B EMPC C
PCB-95	[13.9]	EMPC	PCB-115	(0.743)		PCB-145	(0.814)		PCB-141	(1.17)	
PCB-100/93	(1.34)	C	PCB-82	(1.3)		PCB-148	(1.14)		PCB-130	(1.39)	
PCB-102	(0.99)		PCB-111	(0.928)		PCB-151/135	(1.12)	C	PCB-137	(1.19)	
PCB-98	(1.31)		PCB-120	(0.751)		PCB-154	(1.06)		PCB-164	(0.817)	
PCB-88	(1.45)		PCB-108/124	(0.903)	C	PCB-144	(1.15)		PCB-163/138/129	11.6	J B C
PCB-91	2.77	J	PCB-107	(0.866)		PCB-147/149	11.9	J C	PCB-160	(0.968)	
PCB-84	(1.52)		PCB-123	(0.922)		PCB-134	(1.31)		PCB-158	(0.837)	
PCB-89	(1.26)		PCB-106	(0.868)		PCB-143	(1.21)		PCB-128/166	(1.5)	C
PCB-121	(0.841)		PCB-118	8.08	J	PCB-139/140	(1.07)	C	PCB-159	(1.14)	
PCB-92	(1.36)		PCB-122	(1.07)		PCB-131	(1.28)		PCB-162	(1.35)	
PCB-113/90/101	[13.2]	J EMPC C	PCB-114	(0.904)		PCB-142	(1.28)		PCB-167	(1.34)	
PCB-83	(1.62)		PCB-105	2.67	J	PCB-132	[4.75]	J EMPC	PCB-156/157	(1.97)	C
PCB-99	[5.09]	J EMPC	PCB-127	(0.854)		PCB-133	(1.12)		PCB-169	(1.64)	
PCB-112	(0.763)		PCB-126	(1.32)							
			Conc.	33.6					**Conc.**	26.9	
			EMPC	65.8					**EMPC**	39.3	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.963)		PCB-174	(1.54)		PCB-202	(1.21)		PCB-208	(5.15)	
PCB-179	(0.877)		PCB-177	(1.52)		PCB-201	(1.37)		PCB-207	(5.24)	
PCB-184	(0.969)		PCB-181	(1.43)		PCB-204	(1.19)		PCB-206	(13)	
PCB-176	(1.02)		PCB-171/173	(1.66)	C	PCB-197	(1.29)				
PCB-186	(0.85)		PCB-172	(1.65)		PCB-200	(1.23)		**Conc.**	0	
PCB-178	(1.35)		PCB-192	(1.11)		PCB-198/199	(1.53)	C	**EMPC**	0	
PCB-175	(1.64)		PCB-180/193	4.52	J C	PCB-196	(1.75)				
PCB-187	4.23	J	PCB-191	(1.26)		PCB-203	(1.42)		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(1.35)		PCB-170	3.36	J	PCB-195	(2.87)		PCB-209	(3.32)	
PCB-183	(1.46)		PCB-190	(1.27)		PCB-194	(2.77)				
PCB-185	(1.61)		PCB-189	(1.44)		PCB-205	(2.43)				
			Conc.	12.1		**Conc.**	0				
			EMPC	12.1		**EMPC**	0				

Sample ID: MW-17-0519

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	0.98 L	Sample ID:	B3256_16680_PCB_008	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	6	QC Batch No.:	16680	Date Analyzed:	22-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	ND	2.24			ES PCB-1	72.4
PCB-81 344'5-TeCB	ND	2.14			ES PCB-3	81.4
PCB-105 233'44'-PeCB	ND	0.802			ES PCB-4	90.1
PCB-114 2344'5-PeCB	ND	0.77			ES PCB-15	99.6
PCB-118 23'44'5-PeCB	EMPC		3	J	ES PCB-19	98.8
PCB-123 23'44'5'-PeCB	ND	0.788			ES PCB-37	82.3
PCB-126 33'44'5-PeCB	ND	0.578			ES PCB-54	80.2
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	1.08		C	ES PCB-77	87
PCB-167 23'44'55'-HxCB	ND	0.751			ES PCB-81	85.1
PCB-169 33'44'55'-HxCB	ND	0.888			ES PCB-104	87.7
PCB-189 233'44'55'-HpCB	ND	1.27			ES PCB-105	98.9
					ES PCB-114	95.6
TEQs (WHO 2005 M/H)					ES PCB-118	96
					ES PCB-123	97.2
ND = 0	0		0.00009		ES PCB-126	98.5
ND = 0.5 x DL	0.0428		0.0428		ES PCB-153	95.2
ND = DL	0.0855		0.0856		ES PCB-155	93
					ES PCB-156/157	109
Totals					ES PCB-167	103
Mono-CB	ND	2.2			ES PCB-169	119
Di-CB	14.9				ES PCB-170	92
Tri-CB	ND	4.34			ES PCB-180	85.8
Tetra-CB	120				ES PCB-188	86.6
Penta-CB	5.97		17.3		ES PCB-189	94.8
Hexa-CB	7.92		11.2		ES PCB-202	94.5
Hepta-CB	ND	1.3			ES PCB-205	107
Octa-CB	ND	1.17			ES PCB-206	120
Nona-CB	ND	5.21			ES PCB-208	101
Deca-CB	ND	1.7			ES PCB-209	137
					CS PCB-28	89
Total PCB (Mono-Deca)	149		164		CS PCB-111	96
					CS PCB-178	94.3

Checkcode: 168-688-PHF/C SGS North America - PCB v0.83 Report Created: 24-May-2019 11:21 Analyst: ah

Sample ID: MW-17-0519

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	07-May-2019
Project ID:	Nord Door	Weight/Volume:	0.98 L	Sample ID:	B3256_16680_PCB_008	Date Extracted:	15-May-2019
Date Collected:	03-May-2019	pH	6	QC Batch No.:	16680	Date Analyzed:	22-May-2019
		Units	pg/L	Checkcode:	168-688-PHF/C	Time Analyzed:	21:05:19

Mono	Conc.	Qualifiers
PCB-1	(2.21)	
PCB-2	(2.1)	
PCB-3	(2.19)	
Conc.	0	
EMPC	0	

Di	Conc.	Qualifiers
PCB-4	(1.35)	
PCB-10	(0.954)	
PCB-9	(1.29)	
PCB-7	(1.44)	
PCB-6	(1.23)	
PCB-5	(1.49)	
PCB-8	(1.19)	
PCB-14	(1.45)	
PCB-11	14.9	B
PCB-13/12	(1.45)	C
PCB-15	(1.28)	
Conc.	14.9	
EMPC	14.9	

Tri	Conc.	Qualifiers
PCB-19	(5.05)	
PCB-30/18	(3.6)	C
PCB-17	(5.31)	
PCB-27	(3.69)	
PCB-24	(3.71)	
PCB-16	(5.41)	
PCB-32	(3.42)	
PCB-34	(3.82)	
PCB-23	(3.86)	
PCB-26/29	(3.77)	C
PCB-25	(3.21)	
PCB-31	(3.26)	
PCB-28/20	(3.56)	C
PCB-21/33	(3.66)	C
PCB-22	(3.3)	
PCB-36	(3.27)	
PCB-39	(3.6)	
PCB-38	(3.57)	
PCB-35	(3.72)	
PCB-37	(3.63)	
Conc.	0	
EMPC	0	

Tetra	Conc.	Qualifiers
PCB-54	(1.69)	
PCB-50/53	(1.87)	C
PCB-45	(2.33)	
PCB-51	47.3	
PCB-46	(2.38)	
PCB-52	26.7	
PCB-73	(1.47)	
PCB-43	(1.88)	
PCB-69/49	(1.68)	C
PCB-48	(2.03)	
PCB-44/47/65	22.8	J C
PCB-59/62/75	(1.52)	C
PCB-42	(2.22)	
PCB-41	(2.63)	
PCB-71/40	(1.77)	C
PCB-64	(1.52)	

Tetra	Conc.	Qualifiers
PCB-72	(1.96)	
PCB-68	23.5	
PCB-57	(2.07)	
PCB-58	(1.86)	
PCB-67	(1.9)	
PCB-63	(2.27)	
PCB-61/70/74/76	(1.98)	C
PCB-66	(1.92)	
PCB-55	(1.88)	
PCB-56	(1.94)	
PCB-60	(2.3)	
PCB-80	(1.96)	
PCB-79	(1.81)	
PCB-78	(2.05)	
PCB-81	(2.14)	
PCB-77	(2.24)	
Conc.	120	
EMPC	120	

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Totals	Conc.	EMPC
Mono-Tri	14.9	14.9
Tetra-Hexa	134	149
Hepta-Deca	0	0
Mono-Deca	149	164

Sample ID: MW-17-0519 — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.774)		PCB-109/119/86/97/125/87	(0.888)	C	PCB-155	(0.594)		PCB-165	(0.666)	
PCB-96	(0.759)		PCB-117	(0.83)		PCB-152	(0.546)		PCB-146	(0.662)	
PCB-103	(1.05)		PCB-116/85	[1.02]	J EMPC C	PCB-150	(0.622)		PCB-161	(0.58)	
PCB-94	(1.29)		PCB-110	[3.9]	J EMPC	PCB-136	(0.653)		PCB-153/168	3.61	J B C
PCB-95	[3.41]	J EMPC	PCB-115	(0.635)		PCB-145	(0.575)		PCB-141	(0.825)	
PCB-100/93	(1.14)	C	PCB-82	(1.11)		PCB-148	(0.798)		PCB-130	(0.977)	
PCB-102	(0.846)		PCB-111	(0.793)		PCB-151/135	(0.787)	C	PCB-137	(0.837)	
PCB-98	(1.12)		PCB-120	(0.642)		PCB-154	(0.746)		PCB-164	(0.574)	
PCB-88	(1.24)		PCB-108/124	(0.772)	C	PCB-144	(0.809)		PCB-163/138/129	[3.24]	J B EMPC C
PCB-91	(1.05)		PCB-107	(0.74)		PCB-147/149	4.32	J C	PCB-160	(0.68)	
PCB-84	(1.3)		PCB-123	(0.788)		PCB-134	(0.918)		PCB-158	(0.588)	
PCB-89	(1.08)		PCB-106	(0.742)		PCB-143	(0.85)		PCB-128/166	(0.837)	C
PCB-121	(0.718)		PCB-118	[3]	J EMPC	PCB-139/140	(0.755)	C	PCB-159	(0.639)	
PCB-92	(1.16)		PCB-122	(0.91)		PCB-131	(0.901)		PCB-162	(0.756)	
PCB-113/90/101	5.97	J C	PCB-114	(0.77)		PCB-142	(0.898)		PCB-167	(0.751)	
PCB-83	(1.38)		PCB-105	(0.802)		PCB-132	(0.867)		PCB-156/157	(1.08)	C
PCB-99	(0.835)		PCB-127	(0.734)		PCB-133	(0.786)		PCB-169	(0.888)	
PCB-112	(0.652)		PCB-126	(0.578)							
			Conc.	5.97					**Conc.**	7.92	
			EMPC	17.3					**EMPC**	11.2	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.631)		PCB-174	(1.54)		PCB-202	(0.566)		PCB-208	(3.32)	
PCB-179	(0.574)		PCB-177	(1.52)		PCB-201	(0.641)		PCB-207	(3.37)	
PCB-184	(0.635)		PCB-181	(1.43)		PCB-204	(0.555)		PCB-206	(7.11)	
PCB-176	(0.666)		PCB-171/173	(1.66)	C	PCB-197	(0.605)				
PCB-186	(0.557)		PCB-172	(1.65)		PCB-200	(0.576)		**Conc.**	0	
PCB-178	(0.885)		PCB-192	(1.11)		PCB-198/199	(0.716)	C	**EMPC**	0	
PCB-175	(1.64)		PCB-180/193	(1.34)	C	PCB-196	(0.818)				
PCB-187	(1.3)		PCB-191	(1.27)		PCB-203	(0.665)		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(1.35)		PCB-170	(1.83)		PCB-195	(2.09)		PCB-209	(1.7)	
PCB-183	(1.46)		PCB-190	(1.3)		PCB-194	(2.01)				
PCB-185	(1.61)		PCB-189	(1.27)		PCB-205	(1.77)				
			Conc.	0		**Conc.**	0				
			EMPC	0		**EMPC**	0				

Sample ID: Method Blank B3256_16680

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	n/a
Project ID:	Nord Door	Weight/Volume:	1.00 L	Sample ID:	MB1_16680_PCB_TLX	Date Extracted:	15-May-2019
Date Collected:	n/a	pH	n/a	QC Batch No.:	16680	Date Analyzed:	22-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	ND	2.84			ES PCB-1	71.5
PCB-81 344'5-TeCB	ND	2.67			ES PCB-3	83.3
PCB-105 233'44'-PeCB	ND	1.84			ES PCB-4	88.1
PCB-114 2344'5-PeCB	ND	1.86			ES PCB-15	95.7
PCB-118 23'44'5-PeCB	ND	1.73			ES PCB-19	92.7
PCB-123 23'44'5'-PeCB	ND	1.77			ES PCB-37	85.3
PCB-126 33'44'5-PeCB	ND	1.52			ES PCB-54	79.1
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	2.28		C	ES PCB-77	83.6
PCB-167 23'44'55'-HxCB	ND	1.54			ES PCB-81	83.6
PCB-169 33'44'55'-HxCB	ND	1.72			ES PCB-104	91.4
PCB-189 233'44'55'-HpCB	ND	2.02			ES PCB-105	100
					ES PCB-114	96
TEQs (WHO 2005 M/H)					ES PCB-118	97.1
					ES PCB-123	100
ND = 0	0		0		ES PCB-126	98.4
ND = 0.5 x DL	0.102		0.102		ES PCB-153	97.4
ND = DL	0.205		0.205		ES PCB-155	95.9
					ES PCB-156/157	112
Totals					ES PCB-167	104
Mono-CB	ND	3.83			ES PCB-169	126
Di-CB			10.2		ES PCB-170	91.6
Tri-CB	ND	5.12			ES PCB-180	87.6
Tetra-CB	ND	3.02			ES PCB-188	90.6
Penta-CB	ND	1.68			ES PCB-189	96.2
Hexa-CB	2.84		5.61		ES PCB-202	104
Hepta-CB	ND	1.87			ES PCB-205	107
Octa-CB	ND	2.04			ES PCB-206	120
Nona-CB	ND	9.36			ES PCB-208	100
Deca-CB	ND	2.4			ES PCB-209	133
					CS PCB-28	91.6
Total PCB (Mono-Deca)	2.84		15.8		CS PCB-111	94.1
					CS PCB-178	91.8

Checkcode: 825-219-LLL/C SGS North America - PCB v0.83 Report Created: 24-May-2019 11:20 Analyst: ah

Sample ID: Method Blank B3256_16680 — Method 1668C

Client Data		**Sample Data**		**Laboratory Data**			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3256	Date Received:	n/a
Project ID:	Nord Door	Weight/Volume:	1.00 L	Sample ID:	MB1_16680_PCB_TLX	Date Extracted:	15-May-2019
Date Collected:	n/a	pH	n/a	QC Batch No.:	16680	Date Analyzed:	22-May-2019
		Units	pg/L	Checkcode:	825-219-LLL/C	Time Analyzed:	15:17:36

Mono	Conc.	Qualifiers
PCB-1	(3.92)	
PCB-2	(3.58)	
PCB-3	(3.75)	
Conc.	0	
EMPC	0	

Di	Conc.	Qualifiers
PCB-4	(3.12)	
PCB-10	(2.21)	
PCB-9	(3.22)	
PCB-7	(3.59)	
PCB-6	(3.05)	
PCB-5	(3.72)	
PCB-8	(2.97)	
PCB-14	(3.61)	
PCB-11	[10.2]	EMPC
PCB-13/12	(3.61)	C
PCB-15	(3.19)	
Conc.	0	
EMPC	10.2	

Tri	Conc.	Qualifiers
PCB-19	(6.29)	
PCB-30/18	(4.48)	C
PCB-17	(6.61)	
PCB-27	(4.6)	
PCB-24	(4.61)	
PCB-16	(6.74)	
PCB-32	(4.25)	
PCB-34	(4.16)	
PCB-23	(4.2)	
PCB-26/29	(4.1)	C
PCB-25	(3.49)	
PCB-31	(3.56)	
PCB-28/20	(3.88)	C
PCB-21/33	(3.99)	C
PCB-22	(3.59)	
PCB-36	(3.56)	
PCB-39	(3.92)	
PCB-38	(3.89)	
PCB-35	(4.06)	
PCB-37	(3.95)	
Conc.	0	
EMPC	0	

Tetra	Conc.	Qualifiers
PCB-54	(2.8)	
PCB-50/53	(3.55)	C
PCB-45	(4.41)	
PCB-51	(3.49)	
PCB-46	(4.5)	
PCB-52	(3.25)	
PCB-73	(2.79)	
PCB-43	(3.57)	
PCB-69/49	(3.19)	C
PCB-48	(3.84)	
PCB-44/47/65	(3.31)	C
PCB-59/62/75	(2.87)	C
PCB-42	(4.21)	
PCB-41	(4.98)	
PCB-71/40	(3.35)	C
PCB-64	(2.88)	

Tetra	Conc.	Qualifiers
PCB-72	(2.45)	
PCB-68	(2.6)	
PCB-57	(2.58)	
PCB-58	(2.32)	
PCB-67	(2.37)	
PCB-63	(2.83)	
PCB-61/70/74/76	(2.47)	C
PCB-66	(2.39)	
PCB-55	(2.35)	
PCB-56	(2.42)	
PCB-60	(2.87)	
PCB-80	(2.44)	
PCB-79	(2.26)	
PCB-78	(2.56)	
PCB-81	(2.67)	
PCB-77	(2.84)	
Conc.	0	
EMPC	0	

5500 Business Drive
Wilmington, NC 28405, USA
Tel: +1 910 794-1613
www.us.sgs.com

Totals	Conc.	EMPC
Mono-Tri	0	10.2
Tetra-Hexa	2.84	5.61
Hepta-Deca	0	0
Mono-Deca	2.84	15.8

SGS

Sample ID: Method Blank B3256_16680 — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(1.36)		PCB-109/119/86/97/125/87	(2)	C	PCB-155	(1.2)		PCB-165	(1.36)	
PCB-96	(1.34)		PCB-117	(1.87)		PCB-152	(1.11)		PCB-146	(1.35)	
PCB-103	(2.37)		PCB-116/85	(2.09)	C	PCB-150	(1.26)		PCB-161	(1.19)	
PCB-94	(2.89)		PCB-110	(1.71)		PCB-136	(1.32)		PCB-153/168	2.84	J C
PCB-95	(2.47)		PCB-115	(1.43)		PCB-145	(1.17)		PCB-141	(1.69)	
PCB-100/93	(2.57)	C	PCB-82	(2.51)		PCB-148	(1.63)		PCB-130	(2)	
PCB-102	(1.9)		PCB-111	(1.78)		PCB-151/135	(1.61)	C	PCB-137	(1.71)	
PCB-98	(2.52)		PCB-120	(1.44)		PCB-154	(1.53)		PCB-164	(1.17)	
PCB-88	(2.78)		PCB-108/124	(1.74)	C	PCB-144	(1.65)		PCB-163/138/129	[2.77]	J EMPC C
PCB-91	(2.37)		PCB-107	(1.66)		PCB-147/149	(1.48)	C	PCB-160	(1.39)	
PCB-84	(2.92)		PCB-123	(1.77)		PCB-134	(1.88)		PCB-158	(1.2)	
PCB-89	(2.42)		PCB-106	(1.67)		PCB-143	(1.74)		PCB-128/166	(1.72)	C
PCB-121	(1.62)		PCB-118	(1.73)		PCB-139/140	(1.54)	C	PCB-159	(1.31)	
PCB-92	(2.61)		PCB-122	(2.2)		PCB-131	(1.84)		PCB-162	(1.55)	
PCB-113/90/101	(2.18)	C	PCB-114	(1.86)		PCB-142	(1.84)		PCB-167	(1.54)	
PCB-83	(3.11)		PCB-105	(1.84)		PCB-132	(1.77)		PCB-156/157	(2.28)	C
PCB-99	(1.88)		PCB-127	(1.69)		PCB-133	(1.61)		PCB-169	(1.72)	
PCB-112	(1.47)		PCB-126	(1.52)							
			Conc.	0					**Conc.**	2.84	
			EMPC	0					**EMPC**	5.61	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(1.37)		PCB-174	(1.93)		PCB-202	(1.35)		PCB-208	(5.64)	
PCB-179	(1.24)		PCB-177	(1.9)		PCB-201	(1.53)		PCB-207	(5.73)	
PCB-184	(1.38)		PCB-181	(1.79)		PCB-204	(1.32)		PCB-206	(13.1)	
PCB-176	(1.44)		PCB-171/173	(2.07)	C	PCB-197	(1.44)				
PCB-186	(1.21)		PCB-172	(2.06)		PCB-200	(1.37)		**Conc.**	0	
PCB-178	(1.92)		PCB-192	(1.38)		PCB-198/199	(1.71)	C	**EMPC**	0	
PCB-175	(2.05)		PCB-180/193	(1.68)	C	PCB-196	(1.95)				
PCB-187	(1.63)		PCB-191	(1.58)		PCB-203	(1.58)		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(1.68)		PCB-170	(2.49)		PCB-195	(3.23)		PCB-209	(2.4)	
PCB-183	(1.83)		PCB-190	(1.76)		PCB-194	(3.11)				
PCB-185	(2.01)		PCB-189	(2.02)		PCB-205	(2.73)				
			Conc.	0		**Conc.**	0				
			EMPC	0		**EMPC**	0				

METHOD 1668C **PCB ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8A**

Lab Name: SGS North America
Initial Calibration: ICAL: MM4_PCB_08292018_04Jan2019
Instrument ID: MM4 GC Column ID:
VER Data Filename: 190522S03 Analysis Date: 22-MAY-2019 14:19:38
Lab ID: OPR1_16680_PCB

NATIVE ANALYTES	SPIKE CONC. (pg/uL)	RECOVERY (%)	RANGE (%)			OK
PCB-1 2-MoCB	50	109	60	-	135	Y
PCB-3 4-MoCB	50	107	60	-	135	Y
PCB-4 22'-DiCB	50	113	60	-	135	Y
PCB-15 44'-DiCB	50	101	60	-	135	Y
PCB-19 22'6-TrCB	50	108	60	-	135	Y
PCB-37 344'-TrCB	50	103	60	-	135	Y
PCB-54 22'66'-TeCB	50	103	60	-	135	Y
PCB-77 33'44'-TeCB	50	101	60	-	135	Y
PCB-81 344'5-TeCB	50	91.2	60	-	135	Y
PCB-104 22'466'-PeCB	50	93.3	60	-	135	Y
PCB-105 233'44'-PeCB	50	101	60	-	135	Y
PCB-114 2344'5-PeCB	50	95.2	60	-	135	Y
PCB-118 23'44'5-PeCB	50	95.9	60	-	135	Y
PCB-123 23'44'5'-PeCB	50	94	60	-	135	Y
PCB-126 33'44'5-PeCB	50	111	60	-	135	Y
PCB-155 22'44'66'-HxCB	50	90.4	60	-	135	Y
PCB-156/157 ...-HxCB	100	96.8	60	-	135	Y
PCB-167 23'44'55'-HxCB	50	98.5	60	-	135	Y
PCB-169 33'44'55'-HxCB	50	105	60	-	135	Y
PCB-188 22'34'566'-HpCB	50	102	60	-	135	Y
PCB-189 233'44'55'-HpCB	50	94.8	60	-	135	Y
PCB-202 22'33'55'66'-OcCB	50	99.4	60	-	135	Y
PCB-205 233'44'55'6-OcCB	50	100	60	-	135	Y
PCB-206 22'33'44'55'6-NoCB	50	110	60	-	135	Y
PCB-208 22'33'455'66'-NoCB	50	98.9	60	-	135	Y
PCB-209 DeCB	50	90.1	60	-	135	Y

Contract-required recovery limits for OPR as specified in Table 6,
Method 1668C.

Processed: 24 May 2019 11:19 Analyst: ah

METHOD 1668C **PCB ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8B**

Lab Name: SGS North America
Initial Calibration: ICAL: MM4_PCB_08292018_04Jan2019
Instrument ID: MM4 GC Column ID:
VER Data Filename: 190522S03 Analysis Date: 22-MAY-2019 14:19:38
Lab ID: OPR1_16680_PCB

LABELED STANDARDS	SPIKE CONC. (pg/uL)	RECOVERY (%)	RANGE (%)			OK
ES PCB-1	100	65.5	15	-	145	Y
ES PCB-3	100	77.8	15	-	145	Y
ES PCB-4	100	83.3	15	-	145	Y
ES PCB-15	100	96.3	15	-	145	Y
ES PCB-19	100	96.6	15	-	145	Y
ES PCB-37	100	84.9	15	-	145	Y
ES PCB-54	100	73	15	-	145	Y
ES PCB-77	100	90	40	-	145	Y
ES PCB-81	100	88.2	40	-	145	Y
ES PCB-104	100	90.4	40	-	145	Y
ES PCB-105	100	104	40	-	145	Y
ES PCB-114	100	101	40	-	145	Y
ES PCB-118	100	101	40	-	145	Y
ES PCB-123	100	102	40	-	145	Y
ES PCB-126	100	106	40	-	145	Y
ES PCB-153	100	102	40	-	145	Y
ES PCB-155	100	94.1	40	-	145	Y
ES PCB-156/157	200	120	40	-	145	Y
ES PCB-167	100	113	40	-	145	Y
ES PCB-169	100	136	40	-	145	Y
ES PCB-170	100	99.1	40	-	145	Y
ES PCB-180	100	90.7	40	-	145	Y
ES PCB-188	100	92.4	40	-	145	Y
ES PCB-189	100	101	40	-	145	Y
ES PCB-202	100	102	40	-	145	Y
ES PCB-205	100	111	40	-	145	Y
ES PCB-206	100	124	40	-	145	Y
ES PCB-208	100	105	40	-	145	Y
ES PCB-209	100	141	40	-	145	Y
CLEANUP STANDARDS						
CS PCB-28	100	89.8	15	-	145	Y
CS PCB-111	100	100	40	-	145	Y
CS PCB-178	100	97.6	40	-	145	Y

Processed: 24 May 2019 11:19 Analyst: ah

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Amy Boehm*
Receipt Date & Time:	*07-May-19 at 09:44*
AP Project name:	*B3256*
Requested TAT:	*21 days*
Projected due date:	*28-May-19*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Amy.Boehm@sgs.com*

Company Contact:	*Chris Kramer*
Company:	*SLR International Corp*
Project Name & Site:	*Nord Door*
Project PO#:	*108.00228.00059*
QAAP/Contract #:	*n/a*
Requested Analysis:	*Method 1668C*
Phone#:	*503-723-4423*
Email Address:	*ckramer@slrconsulting.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp	Container #	Shipping #
MW-11A-0519	B3256_001	water - D/F	2	1L amber	03-May-19	15:37	0.3, 0.4	1, 2	787080397260,787080397271,
MW-11B-0519	B3256_002	water - HOLD	2	1L amber	03-May-19	16:17	0.4	2	787080397271
MW-12-0519	B3256_003	water - D/F & PCB	2	1L amber	03-May-19	11:20	0.3	1	787080397260
MW-13-0519	B3256_004	water - D/F & PCB	2	1L amber	03-May-19	00:00	0.3, 0.4	1, 2	787080397260,787080397271,
MW-14-0519	B3256_005	water - D/F & PCB	2	1L amber	03-May-19	00:00	0.3, 0.4	1, 2	787080397260,787080397271,
MW-15-0519	B3256_006	water - PCB	2	1L amber	03-May-19	00:00	0.3	1	787080397260
MW-16-0519	B3256_007	water - D/F & PCB	2	1L amber	03-May-19	00:00	0.4	2	787080397271
MW-17-0519	B3256_008	water - D/F & PCB	2	1L amber	03-May-19	00:00	0.4	2	787080397271

Preservation Type: **Sample Seals:** No

Notes/Comments:

*Hold all D/F analysis pending soil results.

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Jay Burkamper *Logged in by: Jay Burkamper* *QC'ed by:* AK 7 May 19

B3256

SGS CHAIN OF CUSTODY

PROJECT INFO

PROJECT: Nord Door

P.O. #: 108.00228.00059

QUOTE #:

SITE REF:

TURN AROUND TIME: Standard TAT

REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☐ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

SEND DOCUMENTATION / RESULTS TO

COMPANY: SLR

CONTACT: Chris Kramer

ADDRESS: 1800 Blankenship Road, Ste 440

PHONE: 503-723-4423 EMAIL: ckramer@slrconsulting.com

INVOICE TO (☒ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	PRESERVATIVE	ANALYSIS & METHOD: Dioxins/Furans	ANALYSIS & METHOD: PCBs	MS MSD	MS/ DUP	REMARKS
001 MW-11A-0519	5/3/19	1537	2	water		X				
002 MW-11B-0519		1617	2							Hold
003 MW-12-0519		1120	2			X	X			
004 MW-13-0519			2			X	X			
005 MW-14-0519			2			X	X			
006 MW-15-0519			2				X			
007 MW-16-0519			2			X	X			
008 MW-17-0519			2			X	X			

Hold ALL analysis (soil) pending dioxin/furans results submitted last week.

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
	5/6/19	1300	
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: DATE: 5/7/19 TIME: 9:44 #1 0.3 #2 0.4

COOLER SEAL: ☒ INTACT ☐ BROKEN ☐ ABSENT

CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☐ ABSENT

CARRIER: TEMP: °C 0.3° + 0.4°

TRACKING #:

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

FINAL LAB REPORT

Nord Door

B3246

21-May-2019

Prepared by

SGS NORTH AMERICA

Prepared for

SLR International Corp

Chris Kramer

1800 Blankenship Rd, Ste 440
West Linn, OR 47068
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This report is approved by

Digitally signed by Amy Boehm
DN: CN=Amy Boehm, O=SGS, OU=Env, E=amy.boehm@sgs.com, C=US
Reason: I am approving this document
Location:
Date: 2019-05-21 14:36:56

Amy Boehm

Senior Project Manager

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	Nord Door
SGS Project #	B3246
Analytical Protocol(s)	1668C
No. Samples Submitted	2
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1
No. OPRs / Batch CS3	1
Date Received	30-Apr-19
Condition Received	Good
Temperature upon Receipt (ºC)	0.9
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska	17-012
Arkansas	18-042-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-17-00055
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2005, 2009 TNI, DoD ELAP QSM 5.1)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2018018
Massachusetts	M-NC919
Minnesota (Primary NELAP For Method 23)	1535636
Mississippi	Reciprocity
Montana	0106
New Hampshire	208318 & 208518
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	10101
Washington	C913
West Virginia	293

Rev. 06-Mar-2019

Sample ID: GP-801-GW

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3246	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	0.98 L	Sample ID:	B3246_16671_PCB_001	Date Extracted:	08-May-2019
Date Collected:	26-Apr-2019	pH	6	QC Batch No.:	16671	Date Analyzed:	20-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	39.4				ES PCB-1	70.7
PCB-81 344'5-TeCB	ND	4.46			ES PCB-3	77.4
PCB-105 233'44'-PeCB	28.9				ES PCB-4	86.4
PCB-114 2344'5-PeCB	EMPC		3.52	J	ES PCB-15	83.7
PCB-118 23'44'5-PeCB	91.9				ES PCB-19	88.5
PCB-123 23'44'5'-PeCB	EMPC		2.39	J	ES PCB-37	84.8
PCB-126 33'44'5-PeCB	2.94			J	ES PCB-54	83.9
PCB-156/157 233'44'5/233'44'5'-HxCB	13.4			J C	ES PCB-77	81.1
PCB-167 23'44'55'-HxCB	5.78			J	ES PCB-81	80
PCB-169 33'44'55'-HxCB	3.03			J	ES PCB-104	94.8
PCB-189 233'44'55'-HpCB	ND	2.6			ES PCB-105	98.8
					ES PCB-114	95.4
TEQs (WHO 2005 M/H)					ES PCB-118	95.7
					ES PCB-123	98
ND = 0	0.393		0.393		ES PCB-126	96.1
ND = 0.5 x DL	0.393		0.394		ES PCB-153	97.3
ND = DL	0.394		0.394		ES PCB-155	101
					ES PCB-156/157	112
Totals					ES PCB-167	105
Mono-CB	91.5				ES PCB-169	122
Di-CB	2,230				ES PCB-170	90.8
Tri-CB	9,330		9,340		ES PCB-180	86.6
Tetra-CB	4,530		4,570		ES PCB-188	95.9
Penta-CB	754		865		ES PCB-189	95.3
Hexa-CB	371		384		ES PCB-202	103
Hepta-CB	58.1		91.3		ES PCB-205	108
Octa-CB	27.5		33.5		ES PCB-206	118
Nona-CB	ND	10.6			ES PCB-208	98.5
Deca-CB	ND	4.1			ES PCB-209	129
					CS PCB-28	90.5
Total PCB (Mono-Deca)	17,400		17,600		CS PCB-111	95.7
					CS PCB-178	98.7

Checkcode: 920-749-YNB/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:16 Analyst: MS

Sample ID: GP-801-GW

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3246	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	0.98 L	Sample ID:	B3246_16671_PCB_001	Date Extracted:	08-May-2019
Date Collected:	26-Apr-2019	pH	6	QC Batch No.:	16671	Date Analyzed:	20-May-2019
		Units	pg/L	Checkcode:	920-749-YNB/C	Time Analyzed:	18:58:40

Mono	Conc.	Qualifiers
PCB-1	32.1	
PCB-2	25.2	
PCB-3	34.2	
Conc.	91.5	
EMPC	91.5	

Di	Conc.	Qualifiers
PCB-4	357	
PCB-10	10.8	
PCB-9	32.3	
PCB-7	25.4	
PCB-6	778	
PCB-5	7.12	J
PCB-8	674	
PCB-14	(2.22)	
PCB-11	29.6	B
PCB-13/12	79.3	C
PCB-15	234	
Conc.	2,230	
EMPC	2,230	

Tri	Conc.	Qualifiers
PCB-19	177	
PCB-30/18	1,430	C
PCB-17	845	
PCB-27	114	
PCB-24	23.2	
PCB-16	740	
PCB-32	449	
PCB-34	[16.9]	EMPC
PCB-23	(5.96)	
PCB-26/29	628	C
PCB-25	341	
PCB-31	1,390	
PCB-28/20	1,880	C
PCB-21/33	426	C
PCB-22	547	
PCB-36	(5.06)	
PCB-39	(5.6)	
PCB-38	(5.55)	
PCB-35	7.51	J
PCB-37	334	
Conc.	9,330	
EMPC	9,340	

Tetra	Conc.	Qualifiers
PCB-54	[2.9]	J EMPC
PCB-50/53	132	C
PCB-45	189	
PCB-51	95.7	
PCB-46	71.8	
PCB-52	580	
PCB-73	(3.15)	
PCB-43	28.8	
PCB-69/49	466	C
PCB-48	121	
PCB-44/47/65	715	C
PCB-59/62/75	97.2	C
PCB-42	241	
PCB-41	37.6	
PCB-71/40	342	C
PCB-64	319	

Tetra	Conc.	Qualifiers
PCB-72	8.93	J
PCB-68	[16.1]	EMPC
PCB-57	[4.43]	J EMPC
PCB-58	(3.67)	
PCB-67	[19.6]	EMPC
PCB-63	23.5	
PCB-61/70/74/76	537	C
PCB-66	304	
PCB-55	[3.91]	J EMPC
PCB-56	138	
PCB-60	37.4	
PCB-80	(3.92)	
PCB-79	(3.66)	
PCB-78	(4.18)	
PCB-81	(4.46)	
PCB-77	39.4	
Conc.	4,530	
EMPC	4,570	

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Totals	Conc.	EMPC
Mono-Tri	11,600	11,700
Tetra-Hexa	5,650	5,820
Hepta-Deca	85.5	125
Mono-Deca	17,400	17,600

Sample ID: GP-801-GW — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(1.43)		PCB-109/119/86/97/125/87	88.8	C	PCB-155	(1.05)		PCB-165	1.47	J
PCB-96	3.6	J	PCB-117	[4.42]	J EMPC	PCB-152	(0.987)		PCB-146	14.5	
PCB-103	(3.39)		PCB-116/85	23.1	C	PCB-150	(1.12)		PCB-161	(0.961)	
PCB-94	(4.13)		PCB-110	132		PCB-136	11.4		PCB-153/168	76.4	C
PCB-95	129		PCB-115	(2.46)		PCB-145	(1.04)		PCB-141	12.1	
PCB-100/93	(3.68)	C	PCB-82	16.3		PCB-148	(1.35)		PCB-130	6.38	J
PCB-102	[5.12]	J EMPC	PCB-111	(2.61)		PCB-151/135	25.7	C	PCB-137	6.31	J
PCB-98	(3.69)		PCB-120	[1.9]	J EMPC	PCB-154	3.49	J	PCB-164	5.51	J
PCB-88	(3.89)		PCB-108/124	5.6	J C	PCB-144	[1.94]	J EMPC	PCB-163/138/129	78.9	C
PCB-91	32		PCB-107	[8.37]	J EMPC	PCB-147/149	59.9	C	PCB-160	(1.1)	
PCB-84	[50.2]	EMPC	PCB-123	[2.39]	J EMPC	PCB-134	[4.34]	J EMPC	PCB-158	[6.46]	J EMPC
PCB-89	[4.98]	J EMPC	PCB-106	(2.4)		PCB-143	(1.41)		PCB-128/166	14.5	J C
PCB-121	(2.36)		PCB-118	91.9		PCB-139/140	4.2	J C	PCB-159	(1.3)	
PCB-92	[30.3]	EMPC	PCB-122	(2.9)		PCB-131	(1.5)		PCB-162	(1.51)	
PCB-113/90/101	132	C	PCB-114	[3.52]	J EMPC	PCB-142	(1.53)		PCB-167	5.78	J
PCB-83	11.7		PCB-105	28.9		PCB-132	28.4		PCB-156/157	13.4	J C
PCB-99	56.5		PCB-127	(2.27)		PCB-133	(1.34)		PCB-169	3.03	J
PCB-112	(2.29)		PCB-126	2.94	J						
			Conc.	754					**Conc.**	371	
			EMPC	865					**EMPC**	384	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(1.5)		PCB-174	11.2		PCB-202	2.94	J	PCB-208	(6.39)	
PCB-179	[5.31]	J EMPC	PCB-177	5.08	J	PCB-201	[1.4]	J EMPC	PCB-207	(6.54)	
PCB-184	(1.54)		PCB-181	(1.92)		PCB-204	(1.19)		PCB-206	(14.8)	
PCB-176	(1.65)		PCB-171/173	[4.35]	J EMPC C	PCB-197	(1.29)				
PCB-186	(1.36)		PCB-172	4.34	J	PCB-200	(1.27)		**Conc.**	0	
PCB-178	(2.16)		PCB-192	(1.49)		PCB-198/199	10.3	J C	**EMPC**	0	
PCB-175	(2.15)		PCB-180/193	23.9	C	PCB-196	[2.88]	J EMPC			
PCB-187	[13]	EMPC	PCB-191	(1.71)		PCB-203	7.49	J	**Deca**	**Conc.**	**Qualifiers**
PCB-182	(1.8)		PCB-170	13.6		PCB-195	[1.72]	J EMPC	PCB-209	(4.1)	
PCB-183	[6.82]	J EMPC	PCB-190	[2.44]	J EMPC	PCB-194	6.73	J			
PCB-185	[1.28]	J EMPC	PCB-189	(2.6)		PCB-205	(2.9)				
			Conc.	58.1		**Conc.**	27.5				
			EMPC	91.3		**EMPC**	33.5				

Sample ID: GP-802-GW

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3246	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	0.86 L	Sample ID:	B3246_16671_PCB_002	Date Extracted:	08-May-2019
Date Collected:	26-Apr-2019	pH	5	QC Batch No.:	16671	Date Analyzed:	20-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	ND	4.74			ES PCB-1	67.4
PCB-81 344'5-TeCB	ND	4.18			ES PCB-3	71.8
PCB-105 233'44'-PeCB	EMPC		1.27	J B	ES PCB-4	79.1
PCB-114 2344'5-PeCB	ND	1.99			ES PCB-15	82.4
PCB-118 23'44'5-PeCB	4.5			J B	ES PCB-19	82.4
PCB-123 23'44'5'-PeCB	ND	1.95			ES PCB-37	77.4
PCB-126 33'44'5-PeCB	ND	1.5			ES PCB-54	68.4
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	2.28		C	ES PCB-77	73.6
PCB-167 23'44'55'-HxCB	ND	1.53			ES PCB-81	75.8
PCB-169 33'44'55'-HxCB	ND	1.97			ES PCB-104	84.9
PCB-189 233'44'55'-HpCB	ND	2.46			ES PCB-105	93.8
					ES PCB-114	91.1
TEQs (WHO 2005 M/H)					ES PCB-118	91.9
					ES PCB-123	94.5
ND = 0	0.000135		0.000173		ES PCB-126	93.2
ND = 0.5 x DL	0.106		0.106		ES PCB-153	95.8
ND = DL	0.211		0.211		ES PCB-155	93.7
					ES PCB-156/157	109
Totals					ES PCB-167	104
Mono-CB	ND	4.6			ES PCB-169	120
Di-CB	2.31		24		ES PCB-170	86.8
Tri-CB	ND	8.21			ES PCB-180	83.9
Tetra-CB	102		115		ES PCB-188	92.1
Penta-CB	17		18.3		ES PCB-189	92.7
Hexa-CB	4.88		13.7		ES PCB-202	98.5
Hepta-CB	3.44				ES PCB-205	105
Octa-CB	ND	2.86			ES PCB-206	117
Nona-CB	ND	10.8			ES PCB-208	97.5
Deca-CB	ND	4.6			ES PCB-209	126
					CS PCB-28	82.5
Total PCB (Mono-Deca)	130		174		CS PCB-111	90.1
					CS PCB-178	97

Checkcode: 667-905-RKN/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:43 Analyst: MS

Sample ID: GP-802-GW

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3246	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	0.86 L	Sample ID:	B3246_16671_PCB_002	Date Extracted:	08-May-2019
Date Collected:	26-Apr-2019	pH	5	QC Batch No.:	16671	Date Analyzed:	20-May-2019
		Units	pg/L	Checkcode:	667-905-RKN/C	Time Analyzed:	19:56:07

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	(4.37)		PCB-19	(9.65)		PCB-54	(3.28)		PCB-72	(3.6)	
PCB-2	(4.5)		PCB-30/18	(6.89)	C	PCB-50/53	(4.68)	C	PCB-68	[12.5]	EMPC
PCB-3	(4.83)		PCB-17	(10.1)		PCB-45	(5.65)		PCB-57	(3.85)	
			PCB-27	(7.2)		PCB-51	39.3		PCB-58	(3.44)	
Conc.	0		PCB-24	(6.99)		PCB-46	(5.91)		PCB-67	(3.51)	
EMPC	0		PCB-16	(10.4)		PCB-52	(4.22)		PCB-63	(4.21)	
			PCB-32	(6.52)		PCB-73	(3.59)		PCB-61/70/74/76	(3.72)	C
Di	**Conc.**	**Qualifiers**	PCB-34	(7.01)		PCB-43	(4.56)		PCB-66	(3.59)	
PCB-4	(3.54)		PCB-23	(7.08)		PCB-69/49	(4.15)	C	PCB-55	(3.53)	
PCB-10	(2.62)		PCB-26/29	(6.94)	C	PCB-48	(4.96)		PCB-56	(3.71)	
PCB-9	(2.46)		PCB-25	(5.96)		PCB-44/47/65	63.1	C	PCB-60	(4.45)	
PCB-7	(2.74)		PCB-31	(6.13)		PCB-59/62/75	(3.72)	C	PCB-80	(3.67)	
PCB-6	(2.35)		PCB-28/20	(6.62)	C	PCB-42	(5.42)		PCB-79	(3.42)	
PCB-5	(2.82)		PCB-21/33	(6.79)	C	PCB-41	(6.13)		PCB-78	(3.92)	
PCB-8	2.31	J	PCB-22	(6.13)		PCB-71/40	(4.41)	C	PCB-81	(4.18)	
PCB-14	(2.76)		PCB-36	(6.01)		PCB-64	(3.69)		PCB-77	(4.74)	
PCB-11	[21.7]	B EMPC	PCB-39	(6.65)							
PCB-13/12	(2.73)	C	PCB-38	(6.59)							
PCB-15	(2.55)		PCB-35	(6.85)							
			PCB-37	(6.78)							
Conc.	2.31		**Conc.**	0					**Conc.**	102	
EMPC	24		**EMPC**	0					**EMPC**	115	

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Totals	Conc.	EMPC
Mono-Tri	2.31	24
Tetra-Hexa	124	147
Hepta-Deca	3.44	3.44
Mono-Deca	130	174

Sample ID: GP-802-GW — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(1.55)		PCB-109/119/86/97/125/87	(2.15)	C	PCB-155	(1.29)		PCB-165	(1.4)	
PCB-96	(1.56)		PCB-117	(2.07)		PCB-152	(1.21)		PCB-146	(1.41)	
PCB-103	(2.51)		PCB-116/85	(2.21)	C	PCB-150	(1.38)		PCB-161	(1.19)	
PCB-94	(3.07)		PCB-110	4.82	J B	PCB-136	(1.45)		PCB-153/168	[4.97]	J B EMPC C
PCB-95	3.28	J B	PCB-115	(1.83)		PCB-145	(1.28)		PCB-141	(1.73)	
PCB-100/93	(2.73)	C	PCB-82	(2.71)		PCB-148	(1.66)		PCB-130	(2.03)	
PCB-102	(2.03)		PCB-111	(1.93)		PCB-151/135	(1.66)	C	PCB-137	(1.87)	
PCB-98	(2.74)		PCB-120	(1.57)		PCB-154	(1.57)		PCB-164	(1.15)	
PCB-88	(2.88)		PCB-108/124	(1.89)	C	PCB-144	(1.68)		PCB-163/138/129	4.88	J B C
PCB-91	(2.59)		PCB-107	(1.71)		PCB-147/149	[3.84]	J B EMPC C	PCB-160	(1.35)	
PCB-84	(3.18)		PCB-123	(1.95)		PCB-134	(2.01)		PCB-158	(1.25)	
PCB-89	(2.62)		PCB-106	(1.78)		PCB-143	(1.74)		PCB-128/166	(1.7)	C
PCB-121	(1.75)		PCB-118	4.5	J B	PCB-139/140	(1.57)	C	PCB-159	(1.3)	
PCB-92	(2.77)		PCB-122	(2.37)		PCB-131	(1.85)		PCB-162	(1.51)	
PCB-113/90/101	4.41	J B C	PCB-114	(1.99)		PCB-142	(1.88)		PCB-167	(1.53)	
PCB-83	(3.39)		PCB-105	[1.27]	J B EMPC	PCB-132	(1.75)		PCB-156/157	(2.28)	C
PCB-99	(1.86)		PCB-127	(1.87)		PCB-133	(1.65)		PCB-169	(1.97)	
PCB-112	(1.7)		PCB-126	(1.5)							
			Conc.	17					**Conc.**	4.88	
			EMPC	18.3					**EMPC**	13.7	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(1.42)		PCB-174	(2.96)		PCB-202	(1.83)		PCB-208	(6.29)	
PCB-179	(1.34)		PCB-177	(3.1)		PCB-201	(2.07)		PCB-207	(6.44)	
PCB-184	(1.46)		PCB-181	(2.88)		PCB-204	(1.78)		PCB-206	(15.3)	
PCB-176	(1.56)		PCB-171/173	(3.35)	C	PCB-197	(1.95)				
PCB-186	(1.28)		PCB-172	(3.27)		PCB-200	(1.91)		**Conc.**	0	
PCB-178	(2.05)		PCB-192	(2.24)		PCB-198/199	(2.35)	C	**EMPC**	0	
PCB-175	(3.22)		PCB-180/193	3.44	J C	PCB-196	(2.69)				
PCB-187	(2.63)		PCB-191	(2.57)		PCB-203	(2.16)		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(2.7)		PCB-170	(3.78)		PCB-195	(4.61)		PCB-209	(4.6)	
PCB-183	(2.84)		PCB-190	(2.74)		PCB-194	(4.42)				
PCB-185	(3.51)		PCB-189	(2.46)		PCB-205	(3.88)				
			Conc.	3.44		**Conc.**	0				
			EMPC	3.44		**EMPC**	0				

Sample ID: Method Blank B3246_16671

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3246	Date Received:	n/a
Project ID:	Nord Door	Weight/Volume:	1.00 L	Sample ID:	MB1_16671_PCB_TLX	Date Extracted:	08-May-2019
Date Collected:	n/a	pH	n/a	QC Batch No.:	16671	Date Analyzed:	20-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	ND	3.53			ES PCB-1	65
PCB-81 344'5-TeCB	ND	3.43			ES PCB-3	72
PCB-105 233'44'-PeCB	EMPC		1.51	J	ES PCB-4	83.2
PCB-114 2344'5-PeCB	ND	1.46			ES PCB-15	83.7
PCB-118 23'44'5-PeCB	2.41			J	ES PCB-19	87
PCB-123 23'44'5'-PeCB	ND	1.54			ES PCB-37	80
PCB-126 33'44'5-PeCB	ND	1.52			ES PCB-54	83.6
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	1.62		C	ES PCB-77	79.2
PCB-167 23'44'55'-HxCB	ND	1.05			ES PCB-81	78.5
PCB-169 33'44'55'-HxCB	ND	1.43			ES PCB-104	93.5
PCB-189 233'44'55'-HpCB	ND	2.06			ES PCB-105	97.6
					ES PCB-114	98.1
TEQs (WHO 2005 M/H)					ES PCB-118	97.2
					ES PCB-123	98.1
ND = 0	0.0000724		0.000118		ES PCB-126	102
ND = 0.5 x DL	0.0985		0.0985		ES PCB-153	95.9
ND = DL	0.197		0.197		ES PCB-155	93.9
					ES PCB-156/157	112
Totals					ES PCB-167	107
Mono-CB	ND	2.7			ES PCB-169	125
Di-CB			13.3		ES PCB-170	88.9
Tri-CB	ND	5.73			ES PCB-180	85.5
Tetra-CB	ND	3.21			ES PCB-188	98.7
Penta-CB	2.41		12.4		ES PCB-189	93.7
Hexa-CB	6.53		8.53		ES PCB-202	101
Hepta-CB	ND	1.86			ES PCB-205	108
Octa-CB	ND	1.94			ES PCB-206	117
Nona-CB	ND	7.89			ES PCB-208	99
Deca-CB	ND	3.91			ES PCB-209	129
					CS PCB-28	86.7
Total PCB (Mono-Deca)	8.94		34.2		CS PCB-111	98.1
					CS PCB-178	101

Checkcode: 781-051-SZS/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:11 Analyst: MS

Sample ID: Method Blank B3246_16671

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Aqueous	Project No.:	B3246	Date Received:	n/a
Project ID:	Nord Door	Weight/Volume:	1.00 L	Sample ID:	MB1_16671_PCB_TLX	Date Extracted:	08-May-2019
Date Collected:	n/a	pH	n/a	QC Batch No.:	16671	Date Analyzed:	20-May-2019
		Units	pg/L	Checkcode:	781-051-SZS/C	Time Analyzed:	18:01:14

Mono	Conc.	Qualifiers
PCB-1	(2.67)	
PCB-2	(2.54)	
PCB-3	(2.73)	
Conc.	0	
EMPC	0	

Di	Conc.	Qualifiers
PCB-4	(2.14)	
PCB-10	(1.58)	
PCB-9	(1.66)	
PCB-7	(1.85)	
PCB-6	(1.58)	
PCB-5	(1.9)	
PCB-8	(1.55)	
PCB-14	(1.86)	
PCB-11	[13.3]	EMPC
PCB-13/12	(1.84)	C
PCB-15	(1.72)	
Conc.	0	
EMPC	13.3	

Tri	Conc.	Qualifiers
PCB-19	(6.43)	
PCB-30/18	(4.59)	C
PCB-17	(6.7)	
PCB-27	(4.8)	
PCB-24	(4.65)	
PCB-16	(6.94)	
PCB-32	(4.34)	
PCB-34	(5.21)	
PCB-23	(5.25)	
PCB-26/29	(5.15)	C
PCB-25	(4.42)	
PCB-31	(4.55)	
PCB-28/20	(4.91)	C
PCB-21/33	(5.04)	C
PCB-22	(4.55)	
PCB-36	(4.46)	
PCB-39	(4.93)	
PCB-38	(4.89)	
PCB-35	(5.09)	
PCB-37	(5.03)	
Conc.	0	
EMPC	0	

Tetra	Conc.	Qualifiers
PCB-54	(2.62)	
PCB-50/53	(3.4)	C
PCB-45	(4.1)	
PCB-51	(3.36)	
PCB-46	(4.3)	
PCB-52	(3.06)	
PCB-73	(2.61)	
PCB-43	(3.31)	
PCB-69/49	(3.02)	C
PCB-48	(3.6)	
PCB-44/47/65	(3.12)	C
PCB-59/62/75	(2.7)	C
PCB-42	(3.94)	
PCB-41	(4.46)	
PCB-71/40	(3.2)	C
PCB-64	(2.68)	

Tetra	Conc.	Qualifiers
PCB-72	(2.96)	
PCB-68	(3.19)	
PCB-57	(3.16)	
PCB-58	(2.83)	
PCB-67	(2.88)	
PCB-63	(3.45)	
PCB-61/70/74/76	(3.05)	C
PCB-66	(2.95)	
PCB-55	(2.9)	
PCB-56	(3.05)	
PCB-60	(3.65)	
PCB-80	(3.02)	
PCB-79	(2.81)	
PCB-78	(3.22)	
PCB-81	(3.43)	
PCB-77	(3.53)	
Conc.	0	
EMPC	0	

5500 Business Drive
Wilmington, NC 28405, USA
Tel: +1 910 794-1613
www.us.sgs.com

Totals	Conc.	EMPC
Mono-Tri	0	13.3
Tetra-Hexa	8.94	20.9
Hepta-Deca	0	0
Mono-Deca	8.94	34.2

Sample ID: Method Blank B3246_16671 — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(1.48)		PCB-109/119/86/97/125/87	(1.7)	C	PCB-155	(1.14)		PCB-165	(1.3)	
PCB-96	(1.49)		PCB-117	(1.64)		PCB-152	(1.07)		PCB-146	(1.31)	
PCB-103	(1.98)		PCB-116/85	(1.74)	C	PCB-150	(1.21)		PCB-161	(1.1)	
PCB-94	(2.42)		PCB-110	[2.65]	J EMPC	PCB-136	(1.28)		PCB-153/168	3.28	J C
PCB-95	[2.52]	J EMPC	PCB-115	(1.44)		PCB-145	(1.13)		PCB-141	(1.6)	
PCB-100/93	(2.15)	C	PCB-82	(2.14)		PCB-148	(1.54)		PCB-130	(1.88)	
PCB-102	(1.6)		PCB-111	(1.53)		PCB-151/135	(1.54)	C	PCB-137	(1.74)	
PCB-98	(2.16)		PCB-120	(1.24)		PCB-154	(1.46)		PCB-164	(1.07)	
PCB-88	(2.28)		PCB-108/124	(1.49)	C	PCB-144	(1.56)		PCB-163/138/129	3.25	J C
PCB-91	(2.04)		PCB-107	(1.35)		PCB-147/149	[2]	J EMPC C	PCB-160	(1.26)	
PCB-84	(2.51)		PCB-123	(1.54)		PCB-134	(1.87)		PCB-158	(1.16)	
PCB-89	(2.06)		PCB-106	(1.4)		PCB-143	(1.61)		PCB-128/166	(1.17)	C
PCB-121	(1.38)		PCB-118	2.41	J	PCB-139/140	(1.46)	C	PCB-159	(0.893)	
PCB-92	(2.19)		PCB-122	(1.74)		PCB-131	(1.72)		PCB-162	(1.04)	
PCB-113/90/101	[3.31]	J EMPC C	PCB-114	(1.46)		PCB-142	(1.75)		PCB-167	(1.05)	
PCB-83	(2.67)		PCB-105	[1.51]	J EMPC	PCB-132	(1.63)		PCB-156/157	(1.62)	C
PCB-99	(1.47)		PCB-127	(1.46)		PCB-133	(1.53)		PCB-169	(1.43)	
PCB-112	(1.34)		PCB-126	(1.52)							
			Conc.	2.41					**Conc.**	6.53	
			EMPC	12.4					**EMPC**	8.53	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(1.14)		PCB-174	(1.93)		PCB-202	(1.13)		PCB-208	(4.59)	
PCB-179	(1.08)		PCB-177	(2.02)		PCB-201	(1.28)		PCB-207	(4.7)	
PCB-184	(1.17)		PCB-181	(1.88)		PCB-204	(1.1)		PCB-206	(11.2)	
PCB-176	(1.25)		PCB-171/173	(2.19)	C	PCB-197	(1.2)				
PCB-186	(1.03)		PCB-172	(2.14)		PCB-200	(1.18)		**Conc.**	0	
PCB-178	(1.64)		PCB-192	(1.46)		PCB-198/199	(1.45)	C	**EMPC**	0	
PCB-175	(2.1)		PCB-180/193	(1.78)	C	PCB-196	(1.66)				
PCB-187	(1.72)		PCB-191	(1.68)		PCB-203	(1.33)		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(1.76)		PCB-170	(2.73)		PCB-195	(3.27)		PCB-209	(3.91)	
PCB-183	(1.85)		PCB-190	(1.98)		PCB-194	(3.14)				
PCB-185	(2.29)		PCB-189	(2.06)		PCB-205	(2.75)				
			Conc.	0		**Conc.**	0				
			EMPC	0		**EMPC**	0				

METHOD 1668C **PCB ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8A**

Lab Name: SGS North America
Initial Calibration: ICAL: MM4_PCB_08292018_04Jan2019
Instrument ID: MM4 GC Column ID:
VER Data Filename: 190520S09 Analysis Date: 20-MAY-2019 17:03:47
Lab ID: OPR1_16671_PCB

NATIVE ANALYTES	SPIKE CONC. (pg/uL)	RECOVERY (%)	RANGE (%)			OK
PCB-1 2-MoCB	50	108	60	-	135	Y
PCB-3 4-MoCB	50	108	60	-	135	Y
PCB-4 22'-DiCB	50	110	60	-	135	Y
PCB-15 44'-DiCB	50	102	60	-	135	Y
PCB-19 22'6-TrCB	50	106	60	-	135	Y
PCB-37 344'-TrCB	50	102	60	-	135	Y
PCB-54 22'66'-TeCB	50	104	60	-	135	Y
PCB-77 33'44'-TeCB	50	100	60	-	135	Y
PCB-81 344'5-TeCB	50	90.6	60	-	135	Y
PCB-104 22'466'-PeCB	50	93.7	60	-	135	Y
PCB-105 233'44'-PeCB	50	99.3	60	-	135	Y
PCB-114 2344'5-PeCB	50	96.5	60	-	135	Y
PCB-118 23'44'5-PeCB	50	96.6	60	-	135	Y
PCB-123 23'44'5'-PeCB	50	93.3	60	-	135	Y
PCB-126 33'44'5-PeCB	50	116	60	-	135	Y
PCB-155 22'44'66'-HxCB	50	88.7	60	-	135	Y
PCB-156/157 ...-HxCB	100	97.2	60	-	135	Y
PCB-167 23'44'55'-HxCB	50	99.6	60	-	135	Y
PCB-169 33'44'55'-HxCB	50	109	60	-	135	Y
PCB-188 22'34'566'-HpCB	50	99.6	60	-	135	Y
PCB-189 233'44'55'-HpCB	50	98.2	60	-	135	Y
PCB-202 22'33'55'66'-OcCB	50	95	60	-	135	Y
PCB-205 233'44'55'6-OcCB	50	102	60	-	135	Y
PCB-206 22'33'44'55'6-NoCB	50	108	60	-	135	Y
PCB-208 22'33'455'66'-NoCB	50	99.2	60	-	135	Y
PCB-209 DeCB	50	89	60	-	135	Y

Contract-required recovery limits for OPR as specified in Table 6,
Method 1668C.

Processed: 21 May 2019 09:11 Analyst: MS

METHOD 1668C **PCB ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8B**

Lab Name: SGS North America
Initial Calibration: ICAL: MM4_PCB_08292018_04Jan2019
Instrument ID: MM4 GC Column ID:
VER Data Filename: 190520S09 Analysis Date: 20-MAY-2019 17:03:47
Lab ID: OPR1_16671_PCB

LABELED STANDARDS	SPIKE CONC. (pg/uL)	RECOVERY (%)	RANGE (%)			OK
ES PCB-1	100	65.4	15	-	145	Y
ES PCB-3	100	68.6	15	-	145	Y
ES PCB-4	100	79.5	15	-	145	Y
ES PCB-15	100	75.4	15	-	145	Y
ES PCB-19	100	79.7	15	-	145	Y
ES PCB-37	100	73.8	15	-	145	Y
ES PCB-54	100	72.1	15	-	145	Y
ES PCB-77	100	73.3	40	-	145	Y
ES PCB-81	100	71.3	40	-	145	Y
ES PCB-104	100	91.9	40	-	145	Y
ES PCB-105	100	96.2	40	-	145	Y
ES PCB-114	100	93.4	40	-	145	Y
ES PCB-118	100	92.4	40	-	145	Y
ES PCB-123	100	94.1	40	-	145	Y
ES PCB-126	100	95.2	40	-	145	Y
ES PCB-153	100	98	40	-	145	Y
ES PCB-155	100	94.7	40	-	145	Y
ES PCB-156/157	200	111	40	-	145	Y
ES PCB-167	100	103	40	-	145	Y
ES PCB-169	100	120	40	-	145	Y
ES PCB-170	100	89.9	40	-	145	Y
ES PCB-180	100	82.5	40	-	145	Y
ES PCB-188	100	94.3	40	-	145	Y
ES PCB-189	100	94.9	40	-	145	Y
ES PCB-202	100	101	40	-	145	Y
ES PCB-205	100	106	40	-	145	Y
ES PCB-206	100	120	40	-	145	Y
ES PCB-208	100	99.7	40	-	145	Y
ES PCB-209	100	132	40	-	145	Y
CLEANUP STANDARDS						
CS PCB-28	100	80	15	-	145	Y
CS PCB-111	100	88.7	40	-	145	Y
CS PCB-178	100	94.6	40	-	145	Y

Processed: 21 May 2019 09:11 Analyst: MS

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Amy Boehm*
Receipt Date & Time:	*30-Apr-19 at 11:48*
AP Project name:	*B3246*
Requested TAT:	*21 days*
Projected due date:	*21-May-19*
Matrix:	*Aqueous*
Phone#:	*910-794-1613*
Email Address:	*Amy.Boehm@sgs.com*

Company Contact:	*Chris Kramer*
Company:	*SLR International Corp*
Project Name & Site:	*Nord Door*
Project PO#:	*108.00228.00059*
QAAP/Contract #:	*n/a*
Requested Analysis:	*Method 1668C*
Phone#:	*503-723-4423*
Email Address:	*ckramer@slrconsulting.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp	Container #	Shipping #
GP-801-GW	B3246_001	Water	2	1-Liter Amber	26-Apr-19	09:00	0.9	1	7869 4161 1768
GP-802-GW	B3246_002**	Water	2	1-Liter Amber	26-Apr-19	16:35	0.9	1	7869 4161 1768

Preservation Type: **Sample Seals:** No

Notes/Comments:

*Possible follow-up D/F analysis. **Sample 002 id on COC does not match id on sample, logged according sample label.

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* AK 30 Apr 19

SGS CHAIN OF CUSTODY

B3246

PROJECT INFO

PROJECT: Nord Door

P.O. #: 1066.00228.00059

QUOTE #:

SITE REF:

TURN AROUND TIME: Standard TAT

REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☐ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

SEND DOCUMENTATION / RESULTS TO

COMPANY: SLR

CONTACT: Chris Kramer

ADDRESS: 14600 Blankenship Rd, ste 440

PHONE: 503-723-4423 EMAIL: ckramer@slrconsulting.com

INVOICE TO (☒ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

	SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	PRESERVATIVE	ANALYSIS & METHOD: PCB	ANALYSIS & METHOD: Dioxin/Furan	MS MSD	MS/ DUP	REMARKS
001	GP-801-GW	4/29/19	0900	2	water		X				Possible Followup Dioxin/Furan analysis
002	GP-801-GW *	4/29/19	1635	2	water		X				" " " " "
	* sample label reads GP-802-GW ak 4/30/19										

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:
Steve Gable	4/29/19	1400	
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: Ashley Orcus DATE: 4/30/19 TIME: 11:48

COOLER SEAL: ☐ INTACT ☐ BROKEN ☒ ABSENT CeAg 4/30/19

CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☒ ABSENT

CARRIER: FedEx TEMP: °C 0.9°

TRACKING #: 7869 4161 1768

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

FINAL LAB REPORT

Nord Door

B3245

21-May-2019

Prepared by

SGS NORTH AMERICA

Prepared for

SLR International Corp

Chris Kramer

1800 Blankenship Rd, Ste 440
West Linn, OR 47068
Phone: 503-723-4423
Email: ckramer@slrconsulting.com

This report is approved by

Digitally signed by amy.boehm@sgs.com
DN: CN=amy.boehm@sgs.com
Reason: I am approving this document
Location:
Date: 2019-05-22 11:03:21

Amy Boehm

Senior Project Manager

PROJECT INFORMATION SUMMARY *(When applicable, see QC Annotations for details)*

Client Project	Nord Door
SGS Project #	B3245
Analytical Protocol(s)	1613B, 1668C
No. Samples Submitted	10
Additional QC Sample(s)	0
No. Laboratory Method Blanks	1 per method
No. OPRs / Batch CS3	1 per method
Date Received	30-Apr-19
Condition Received	Good
Temperature upon Receipt (ºC)	0.9
Extraction within Holding Time	Yes
Analysis within Holding Time	Yes

QC ANNOTATIONS:

1. Please see Appendices attached for data qualifier/attribute and lab identifier descriptions which may be contained in the project.

APPENDIX A: GENERAL DATA QUALIFIERS / DATA ATTRIBUTES

B	The analyte was found in the method blank, at a concentration that was at least 10% of the concentration in the sample.
C	Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group are shown with the number of the lowest IUPAC co-eluter.
E	The reported concentration exceeds the calibration range (upper point of the calibration curve) and is an estimated value.
EMPC	Represents an Estimated Maximum Possible Concentration. EMPCs arise in cases where the signal/noise ratio is not sufficient for peak identification (the determined ion-abundance ratio is outside the allowed theoretical range), or where there is a co-eluting interference.
H/h	If the standard recovery is below the method or SOP specified value “H” is assigned. If the obtained value is less than half the specified value “h” is assigned.
J	Indicates that an analyte has a concentration below the reporting limit (lowest point of the calibration curve) and is an estimated value.
ND	Indicates a non-detect.
NR or R	Indicates a value that is not reportable.
PR	Due to interference, the associated congener is poorly resolved.
QI	Indicates the presence of a quantitative interference.
SI	Denotes “Single Ion Mode” and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
U	The analyte was not detected. The estimated detection limit (EDL) may be reported for this analyte.
V	The labeled standard recovery was found to be outside of the method control limits.

APPENDIX B: DRBC/TMDL SPECIFIC DATA QUALIFIERS / DATA ATTRIBUTES

J	The reported result is an estimate. The value is less than the minimum calibration level but greater than the estimated detection limit (EDL).
U	The analyte was not detected in the sample at the estimated detection limit (EDL).
E	The reported concentration is an estimate. The value exceeds the upper calibration range (upper point of the calibration curve).
D	Dilution Data. Result was obtained from the analysis of a dilution.
B	Analyte found in the sample and associated method blank.
C	Co-eluting congener
Cxx	Co-elutes with the indicated congener, data is reported under the lowest IUPAC congener. 'Xx' denotes the IUPAC number with the lowest numerical designated congener.
NR	Analyte is not reportable because of problems in sample preparation or analysis.
V	Labeled standard recovery is not within method control limits.
X	Results from re-injection/repeat/second-column analysis.
EMPC	Estimated maximum possible concentration. Indicates that a peak is identified but did not meet the method specified ion-abundance ratio.

APPENDIX C: LAB IDENTIFIERS

AR	Indicates use of the archived portion of the sample extract.
CU	Indicates a sample that required additional clean-up prior to MS injection/processing.
D	Indicates a dilution of the sample extract. The number that follows the "D" indicates the dilution factor.
DE	Indicates a dilution performed with the addition of ES (extraction standard) solution.
DUP	Designation for a duplicate sample.
MS	Designation for a matrix spike.
MSD	Designation for a matrix spike duplicate.
RJ	Indicates a reinjection of the sample extract.
S	Indicates a sample split. The number that follows the "S" indicates the split factor.

SGS CERTIFICATIONS

Alaska	17-012
Arkansas	18-042-0
California (ELAP)	ELAP Cert #2914
CLIA	34D1013708
Connecticut	PH-0258
USDA Soil Permit	P330-17-00055
American Association for Laboratory Accreditation (A2LA)	2726.01 (ISO 17025:2005, 2009 TNI, DoD ELAP QSM 5.1)
Florida DOH	E87634
Louisiana DEQ	4115
Louisiana DOH	LA031
Maine	2018018
Massachusetts	M-NC919
Minnesota (Primary NELAP For Method 23)	1535636
Mississippi	Reciprocity
Montana	0106
New Hampshire	208318 & 208518
New Jersey	NC100
New York	11685
North Carolina DEQ	481
North Dakota	R-197
Oregon	NC200002
Pennsylvania	68-03675
South Carolina	99029002
Texas	T104704260
US Coast Guard	16714/159.317/SGS
Vermont	VT-87634
Virginia	10101
Washington	C913
West Virginia	293

Rev. 06-Mar-2019

Sample ID: GP-MW-11-SS

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Lab Project ID:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	12.13 g	Lab Sample ID	B3245_16666_DF_001	Date Extracted:	07-May-2019
Date Collected:	25-Apr-2019	% Solid:	74.2 %	QC Batch No:	16666	Date Analyzed:	13-May-2019
		Split:	-	Dilution:	-	Time Analyzed:	17:46:56

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	EMPC		0.33	J	ES 2378-TCDD	82.9	
12378-PeCDD	ND	0.211			ES 12378-PeCDD	67	
123478-HxCDD	EMPC		0.978	J	ES 123478-HxCDD	82.7	
123678-HxCDD	EMPC		5.49		ES 123678-HxCDD	85.8	
123789-HxCDD	EMPC		1.52	J	ES 123789-HxCDD	78.6	
1234678-HpCDD	149				ES 1234678-HpCDD	63.7	
OCDD	1,570				ES OCDD	43.1	
2378-TCDF	ND	0.246			ES 2378-TCDF	78.8	
12378-PeCDF	0.482			J	ES 12378-PeCDF	74	
23478-PeCDF	0.908			J	ES 23478-PeCDF	75	
123478-HxCDF	3.74				ES 123478-HxCDF	77.1	
123678-HxCDF	1.67			J	ES 123678-HxCDF	81.6	
234678-HxCDF	1.66			J	ES 234678-HxCDF	82.5	
123789-HxCDF	ND	0.271			ES 123789-HxCDF	68.5	
1234678-HpCDF	16.6				ES 1234678-HpCDF	81.6	
1234789-HpCDF	EMPC		0.684	J	ES 1234789-HpCDF	61	
OCDF	EMPC		11.8		ES OCDF	41.9	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	85.3	
Total TCDD	0.59		1.19		CS 12347-PeCDD	82.1	
Total PeCDD	1.85		1.85		CS 12346-PeCDF	84.8	
Total HxCDD	16.5		25.2		CS 123469-HxCDF	97.4	
Total HpCDD	264		264		CS 1234689-HpCDF	83.9	
Total TCDF	1.83		3.06				
Total PeCDF	16.4		16.6				
Total HxCDF	46.6		47.8				
Total HpCDF	43.6		45.1				
Total PCDD/Fs	**1,960**		**1,980**				
WHO-2005 TEQs							
TEQ: ND=0	3.12		4.26				
TEQ: ND=DL/2	3.25	0.388	4.39				
TEQ: ND=DL	3.38	0.776	4.52				

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Sample ID: GP-MW-12-SS

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Lab Project ID:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	14.69 g	Lab Sample ID	B3245_16666_DF_002	Date Extracted:	07-May-2019
Date Collected:	25-Apr-2019	% Solid:	89.3 %	QC Batch No:	16666	Date Analyzed:	13-May-2019
		Split:	-	Dilution:	-	Time Analyzed:	18:34:57

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.154			ES 2378-TCDD	80.3	
12378-PeCDD	ND	0.17			ES 12378-PeCDD	76.1	
123478-HxCDD	ND	0.0924			ES 123478-HxCDD	78.2	
123678-HxCDD	EMPC		0.36	J	ES 123678-HxCDD	79.4	
123789-HxCDD	0.307			J	ES 123789-HxCDD	78	
1234678-HpCDD	5.61				ES 1234678-HpCDD	63.1	
OCDD	40.5				ES OCDD	43.1	
2378-TCDF	EMPC		0.25	J	ES 2378-TCDF	85.6	
12378-PeCDF	ND	0.165			ES 12378-PeCDF	78.1	
23478-PeCDF	ND	0.154			ES 23478-PeCDF	80.2	
123478-HxCDF	ND	0.0684			ES 123478-HxCDF	77	
123678-HxCDF	ND	0.0693			ES 123678-HxCDF	78.4	
234678-HxCDF	ND	0.0699			ES 234678-HxCDF	78.2	
123789-HxCDF	ND	0.0947			ES 123789-HxCDF	72.3	
1234678-HpCDF	EMPC		0.788	J	ES 1234678-HpCDF	68.7	
1234789-HpCDF	ND	0.158			ES 1234789-HpCDF	62.3	
OCDF	2.33			J	ES OCDF	45.3	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	96.4	
Total TCDD	1.18		1.55		CS 12347-PeCDD	95.7	
Total PeCDD	ND		1.08		CS 12346-PeCDF	93.4	
Total HxCDD	1.86		3.33		CS 123469-HxCDF	100	
Total HpCDD	20		20		CS 1234689-HpCDF	84.1	
Total TCDF	0.172		0.884				
Total PeCDF	ND		1.04				
Total HxCDF	1.72		1.72				
Total HpCDF	ND		2.33				
Total PCDD/Fs	**67.8**		**74.8**				
WHO-2005 TEQs							
TEQ: ND=0	0.0996		0.168				
TEQ: ND=DL/2	0.308	0.223	0.377				
TEQ: ND=DL	0.516	0.447	0.585				

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Sample ID: GP-MW-12-SS-18-19

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Lab Project ID:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	9.35 g	Lab Sample ID	B3245_16666_DF_003	Date Extracted:	07-May-2019
Date Collected:	25-Apr-2019	% Solid:	61.6 %	QC Batch No:	16666	Date Analyzed:	13-May-2019
		Split:	-	Dilution:	-	Time Analyzed:	19:24:32

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	EMPC		0.596		ES 2378-TCDD	77.6	
12378-PeCDD	1.41			J	ES 12378-PeCDD	69.5	
123478-HxCDD	EMPC		1.72	J	ES 123478-HxCDD	74	
123678-HxCDD	EMPC		3.95		ES 123678-HxCDD	77.8	
123789-HxCDD	EMPC		1.96	J	ES 123789-HxCDD	78.3	
1234678-HpCDD	31.4				ES 1234678-HpCDD	62.9	
OCDD	111				ES OCDD	40.2	
2378-TCDF	1.78				ES 2378-TCDF	80.1	
12378-PeCDF	1.11			J	ES 12378-PeCDF	75.6	
23478-PeCDF	1.49			J	ES 23478-PeCDF	76	
123478-HxCDF	EMPC		1.17	J	ES 123478-HxCDF	78.4	
123678-HxCDF	EMPC		0.85	J	ES 123678-HxCDF	77.9	
234678-HxCDF	0.993			J	ES 234678-HxCDF	79	
123789-HxCDF	ND	0.196			ES 123789-HxCDF	69.7	
1234678-HpCDF	4.87				ES 1234678-HpCDF	66.7	
1234789-HpCDF	EMPC		0.292	J	ES 1234789-HpCDF	63.7	
OCDF	2.15			J	ES OCDF	43	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	86.7	
Total TCDD	45.2		53		CS 12347-PeCDD	84.2	
Total PeCDD	50.6		51.5		CS 12346-PeCDF	88	
Total HxCDD	49.6		63.6		CS 123469-HxCDF	95.4	
Total HpCDD	63.9		63.9		CS 1234689-HpCDF	76.2	
Total TCDF	36.7		39.1				
Total PeCDF	20.1		20.9				
Total HxCDF	3.98		10.6				
Total HpCDF	7.58		7.87				
Total PCDD/Fs	**391**		**424**				
WHO-2005 TEQs							
TEQ: ND=0	2.56		4.12				
TEQ: ND=DL/2	2.57	0.233	4.13				
TEQ: ND=DL	2.58	0.465	4.14				

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Sample ID: GP-MW-13-SS

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Lab Project ID:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	13.81 g	Lab Sample ID	B3245_16666_DF_004	Date Extracted:	07-May-2019
Date Collected:	25-Apr-2019	% Solid:	84.6 %	QC Batch No:	16666	Date Analyzed:	13-May-2019
		Split:	-	Dilution:	-	Time Analyzed:	20:21:49

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.0744			ES 2378-TCDD	81.4	
12378-PeCDD	ND	0.239			ES 12378-PeCDD	73.7	
123478-HxCDD	ND	0.136			ES 123478-HxCDD	79.3	
123678-HxCDD	EMPC		0.424	J	ES 123678-HxCDD	82.8	
123789-HxCDD	EMPC		0.198	J	ES 123789-HxCDD	83.5	
1234678-HpCDD	5.56				ES 1234678-HpCDD	66.6	
OCDD	55.6				ES OCDD	44.4	
2378-TCDF	0.246			J	ES 2378-TCDF	85.1	
12378-PeCDF	ND	0.0967			ES 12378-PeCDF	81.7	
23478-PeCDF	ND	0.1			ES 23478-PeCDF	78.5	
123478-HxCDF	ND	0.102			ES 123478-HxCDF	80	
123678-HxCDF	ND	0.098			ES 123678-HxCDF	83	
234678-HxCDF	ND	0.0985			ES 234678-HxCDF	83.7	
123789-HxCDF	ND	0.121			ES 123789-HxCDF	76	
1234678-HpCDF	EMPC		1.43	J	ES 1234678-HpCDF	73.3	
1234789-HpCDF	ND	0.183			ES 1234789-HpCDF	66.4	
OCDF	3.66				ES OCDF	48.6	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	96.1	
Total TCDD	0.727		1.94		CS 12347-PeCDD	98.1	
Total PeCDD	ND		0.632		CS 12346-PeCDF	103	
Total HxCDD	1.3		3.96		CS 123469-HxCDF	111	
Total HpCDD	16		16		CS 1234689-HpCDF	92.6	
Total TCDF	0.487		1.26				
Total PeCDF	ND		0.415				
Total HxCDF	1.91		1.91				
Total HpCDF	3.57		5				
Total PCDD/Fs	**83.2**		**90.4**				
WHO-2005 TEQs							
TEQ: ND=0	0.098		0.174				
TEQ: ND=DL/2	0.3	0.221	0.376				
TEQ: ND=DL	0.501	0.443	0.578				

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Sample ID: GP-MW-14-SS

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Lab Project ID:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	14.69 g	Lab Sample ID	B3245_16666_DF_005	Date Extracted:	07-May-2019
Date Collected:	25-Apr-2019	% Solid:	89.3 %	QC Batch No:	16666	Date Analyzed:	14-May-2019
		Split:	-	Dilution:	-	Time Analyzed:	1:31:37

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.0999			ES 2378-TCDD	93.5	
12378-PeCDD	ND	0.139			ES 12378-PeCDD	75.7	
123478-HxCDD	ND	0.138			ES 123478-HxCDD	81.5	
123678-HxCDD	EMPC		0.352	J	ES 123678-HxCDD	83.1	
123789-HxCDD	ND	0.142			ES 123789-HxCDD	80.5	
1234678-HpCDD	5.42				ES 1234678-HpCDD	83.7	
OCDD	41.9				ES OCDD	46.9	
2378-TCDF	0.164			J	ES 2378-TCDF	93.1	
12378-PeCDF	ND	0.102			ES 12378-PeCDF	85.7	
23478-PeCDF	ND	0.108			ES 23478-PeCDF	86.8	
123478-HxCDF	ND	0.103			ES 123478-HxCDF	81.4	
123678-HxCDF	ND	0.0928			ES 123678-HxCDF	83.3	
234678-HxCDF	ND	0.0926			ES 234678-HxCDF	82.3	
123789-HxCDF	ND	0.115			ES 123789-HxCDF	79.2	
1234678-HpCDF	EMPC		0.983	J	ES 1234678-HpCDF	78.7	
1234789-HpCDF	ND	0.0641			ES 1234789-HpCDF	73.7	
OCDF	3.18			J	ES OCDF	54	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	101	
Total TCDD	1		1.41		CS 12347-PeCDD	93.1	
Total PeCDD	0.659		0.849		CS 12346-PeCDF	104	
Total HxCDD	1.96		3.1		CS 123469-HxCDF	106	
Total HpCDD	12.7		12.7		CS 1234689-HpCDF	94.2	
Total TCDF	0.164		0.327				
Total PeCDF	ND		0.297				
Total HxCDF	1.44		1.44				
Total HpCDF	2.73		3.71				
Total PCDD/Fs	**65.7**		**68.9**				
WHO-2005 TEQs							
TEQ: ND=0	0.0841		0.129				
TEQ: ND=DL/2	0.256	0.185	0.301				
TEQ: ND=DL	0.427	0.369	0.472				

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Sample ID: GP-MW-16-SS

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Lab Project ID:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	14.20 g	Lab Sample ID	B3245_16666_DF_007	Date Extracted:	07-May-2019
Date Collected:	26-Apr-2019	% Solid:	86.8 %	QC Batch No:	16666	Date Analyzed:	14-May-2019
		Split:	-	Dilution:	-	Time Analyzed:	2:19:34

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	EMPC		0.27	J	ES 2378-TCDD	87.2	
12378-PeCDD	1.06			J	ES 12378-PeCDD	76.3	
123478-HxCDD	EMPC		1.43	J	ES 123478-HxCDD	84.1	
123678-HxCDD	10.6				ES 123678-HxCDD	81.4	
123789-HxCDD	3.96				ES 123789-HxCDD	82.3	
1234678-HpCDD	250				ES 1234678-HpCDD	73.9	
OCDD	1,680				ES OCDD	51.4	
2378-TCDF	1.15				ES 2378-TCDF	81.3	
12378-PeCDF	0.877			J	ES 12378-PeCDF	76.4	
23478-PeCDF	1.11			J	ES 23478-PeCDF	81	
123478-HxCDF	3.18				ES 123478-HxCDF	85.2	
123678-HxCDF	3.57				ES 123678-HxCDF	87.9	
234678-HxCDF	5.59				ES 234678-HxCDF	88.4	
123789-HxCDF	ND	0.182			ES 123789-HxCDF	82.9	
1234678-HpCDF	60.6				ES 1234678-HpCDF	81	
1234789-HpCDF	3.1				ES 1234789-HpCDF	70.8	
OCDF	115				ES OCDF	53.2	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	97.5	
Total TCDD	13.2		14.5		CS 12347-PeCDD	96.3	
Total PeCDD	18.1		19.5		CS 12346-PeCDF	107	
Total HxCDD	119		121		CS 123469-HxCDF	110	
Total HpCDD	680		680		CS 1234689-HpCDF	93.9	
Total TCDF	43.3		45.6				
Total PeCDF	81.9		82.2				
Total HxCDF	112		113				
Total HpCDF	167		169				
Total PCDD/Fs	**3,030**		**3,040**				
WHO-2005 TEQs							
TEQ: ND=0	7.89		8.31				
TEQ: ND=DL/2	7.9	0.186	8.32				
TEQ: ND=DL	7.91	0.371	8.33				

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Sample ID: GP-MW-17-SS

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Lab Project ID:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	13.52 g	Lab Sample ID	B3245_16666_DF_008	Date Extracted:	07-May-2019
Date Collected:	26-Apr-2019	% Solid:	83.5 %	QC Batch No:	16666	Date Analyzed:	14-May-2019
		Split:	-	Dilution:	-	Time Analyzed:	3:09:12

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.144			ES 2378-TCDD	89.1	
12378-PeCDD	ND	0.217			ES 12378-PeCDD	78.8	
123478-HxCDD	ND	0.198			ES 123478-HxCDD	83.3	
123678-HxCDD	EMPC		0.644	J	ES 123678-HxCDD	86.3	
123789-HxCDD	EMPC		0.294	J	ES 123789-HxCDD	85.6	
1234678-HpCDD	17.2				ES 1234678-HpCDD	71.1	
OCDD	233				ES OCDD	41.4	
2378-TCDF	ND	0.183			ES 2378-TCDF	90.2	
12378-PeCDF	ND	0.109			ES 12378-PeCDF	83.9	
23478-PeCDF	ND	0.113			ES 23478-PeCDF	86.2	
123478-HxCDF	0.361			J	ES 123478-HxCDF	88.1	
123678-HxCDF	EMPC		0.268	J	ES 123678-HxCDF	89	
234678-HxCDF	EMPC		0.414	J	ES 234678-HxCDF	88.1	
123789-HxCDF	ND	0.233			ES 123789-HxCDF	79.5	
1234678-HpCDF	6.01				ES 1234678-HpCDF	81.8	
1234789-HpCDF	0.321			J	ES 1234789-HpCDF	70.6	
OCDF	19.4				ES OCDF	50.8	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	95.3	
Total TCDD	2.08		2.21		CS 12347-PeCDD	93.1	
Total PeCDD	1.17		1.52		CS 12346-PeCDF	98.1	
Total HxCDD	6.29		7.69		CS 123469-HxCDF	109	
Total HpCDD	39.5		39.5		CS 1234689-HpCDF	90.8	
Total TCDF	0.363		0.743				
Total PeCDF	2.28		2.42				
Total HxCDF	8.14		8.82				
Total HpCDF	20.4		20.4				
Total PCDD/Fs	**332**		**335**				
WHO-2005 TEQs							
TEQ: ND=0	0.347		0.509				
TEQ: ND=DL/2	0.577	0.278	0.739				
TEQ: ND=DL	0.806	0.556	0.968				

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Sample ID: GP-801-SS

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Lab Project ID:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	13.90 g	Lab Sample ID	B3245_16666_DF_009	Date Extracted:	07-May-2019
Date Collected:	26-Apr-2019	% Solid:	83.3 %	QC Batch No:	16666	Date Analyzed:	14-May-2019
		Split:	-	Dilution:	-	Time Analyzed:	3:58:50

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.0799			ES 2378-TCDD	90.7	
12378-PeCDD	EMPC		0.194	J	ES 12378-PeCDD	81.8	
123478-HxCDD	0.299			J	ES 123478-HxCDD	84.7	
123678-HxCDD	2				ES 123678-HxCDD	86.9	
123789-HxCDD	0.571			J	ES 123789-HxCDD	83.3	
1234678-HpCDD	63.5				ES 1234678-HpCDD	73	
OCDD	1,380				ES OCDD	45.2	
2378-TCDF	EMPC		0.223	J	ES 2378-TCDF	91.8	
12378-PeCDF	0.258			J	ES 12378-PeCDF	84.9	
23478-PeCDF	EMPC		0.276	J	ES 23478-PeCDF	87.8	
123478-HxCDF	0.579			J	ES 123478-HxCDF	84.9	
123678-HxCDF	0.807			J	ES 123678-HxCDF	85.8	
234678-HxCDF	1.07			J	ES 234678-HxCDF	86.9	
123789-HxCDF	ND	0.11			ES 123789-HxCDF	80.2	
1234678-HpCDF	7.32				ES 1234678-HpCDF	77.7	
1234789-HpCDF	0.62			J	ES 1234789-HpCDF	69.7	
OCDF	12				ES OCDF	52.1	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	91.9	
Total TCDD	1.65		3.5		CS 12347-PeCDD	93.1	
Total PeCDD	3.73		5.15		CS 12346-PeCDF	96.9	
Total HxCDD	23.8		23.9		CS 123469-HxCDF	103	
Total HpCDD	147		147		CS 1234689-HpCDF	85.4	
Total TCDF	4.22		4.73				
Total PeCDF	4.04		6.47				
Total HxCDF	17.5		17.5				
Total HpCDF	30.5		30.5				
Total PCDD/Fs	**1,620**		**1,630**				
WHO-2005 TEQs							
TEQ: ND=0	1.67		1.97				
TEQ: ND=DL/2	1.72	0.167	2.02				
TEQ: ND=DL	1.76	0.333	2.06				

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Sample ID: GP-802-SS

Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Lab Project ID:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	14.43 g	Lab Sample ID	B3245_16666_DF_010	Date Extracted:	07-May-2019
Date Collected:	26-Apr-2019	% Solid:	90.5 %	QC Batch No:	16666	Date Analyzed:	14-May-2019
		Split:	-	Dilution:	-	Time Analyzed:	4:48:28

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.115			ES 2378-TCDD	82.2	
12378-PeCDD	0.903			J	ES 12378-PeCDD	74.7	
123478-HxCDD	1.24			J	ES 123478-HxCDD	85.2	
123678-HxCDD	7.66				ES 123678-HxCDD	85.3	
123789-HxCDD	3.21				ES 123789-HxCDD	71.2	
1234678-HpCDD	130				ES 1234678-HpCDD	67.7	
OCDD	1,300				ES OCDD	38	
2378-TCDF	0.58				ES 2378-TCDF	87.1	
12378-PeCDF	0.375			J	ES 12378-PeCDF	77.6	
23478-PeCDF	0.411			J	ES 23478-PeCDF	84.9	
123478-HxCDF	EMPC		0.464	J	ES 123478-HxCDF	82.5	
123678-HxCDF	0.738			J	ES 123678-HxCDF	82.6	
234678-HxCDF	1.09			J	ES 234678-HxCDF	80.3	
123789-HxCDF	ND	0.173			ES 123789-HxCDF	73.6	
1234678-HpCDF	17.7				ES 1234678-HpCDF	69.3	
1234789-HpCDF	0.907			J	ES 1234789-HpCDF	65.8	
OCDF	27.8				ES OCDF	43.1	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	87.7	
Total TCDD	5.04		6.25		CS 12347-PeCDD	90.5	
Total PeCDD	6.55		9.95		CS 12346-PeCDF	96.2	
Total HxCDD	50.7		51.4		CS 123469-HxCDF	107	
Total HpCDD	268		268		CS 1234689-HpCDF	82.6	
Total TCDF	3.63		8.37				
Total PeCDF	7.27		7.27				
Total HxCDF	23.7		24.2				
Total HpCDF	58.2		58.2				
Total PCDD/Fs	**1,760**		**1,770**				
WHO-2005 TEQs							
TEQ: ND=0	4.37		4.42				
TEQ: ND=DL/2	4.44	0.269	4.48				
TEQ: ND=DL	4.5	0.538	4.55				

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Sample ID: Method Blank B3245_16666 — Method 1613B

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Lab Project ID:	B3245	Date Received:	n/a
Project ID:	Nord Door	Weight/Volume:	10.00 g	Lab Sample ID	MB1_16666_DF_SDS	Date Extracted:	07-May-2019
Date Collected:	n/a	% Solid:	n/a	QC Batch No:	16666	Date Analyzed:	14-May-2019
		Split:	-	Dilution:	-	Time Analyzed:	0:34:19

Analyte	Conc. (pg/g)	DL (pg/g)	EMPC (pg/g)	Qualifiers	Standard	ES Recoveries	Qualifiers
2378-TCDD	ND	0.113			ES 2378-TCDD	84.9	
12378-PeCDD	ND	0.125			ES 12378-PeCDD	77.7	
123478-HxCDD	ND	0.084			ES 123478-HxCDD	83.9	
123678-HxCDD	ND	0.0777			ES 123678-HxCDD	88.1	
123789-HxCDD	ND	0.0844			ES 123789-HxCDD	83	
1234678-HpCDD	ND	0.0793			ES 1234678-HpCDD	72.3	
OCDD	ND	0.0892			ES OCDD	45.6	
2378-TCDF	ND	0.0788			ES 2378-TCDF	84.9	
12378-PeCDF	ND	0.0664			ES 12378-PeCDF	79.7	
23478-PeCDF	ND	0.0654			ES 23478-PeCDF	78.9	
123478-HxCDF	ND	0.053			ES 123478-HxCDF	79.2	
123678-HxCDF	ND	0.0572			ES 123678-HxCDF	80.5	
234678-HxCDF	ND	0.0547			ES 234678-HxCDF	78.7	
123789-HxCDF	ND	0.0686			ES 123789-HxCDF	75.7	
1234678-HpCDF	ND	0.0571			ES 1234678-HpCDF	79	
1234789-HpCDF	ND	0.0734			ES 1234789-HpCDF	70.4	
OCDF	ND	0.123			ES OCDF	49.4	
Totals					**Standard**	**CS Recoveries**	
					CS 37Cl-2378-TCDD	93.9	
Total TCDD	ND	0.113	ND		CS 12347-PeCDD	89.9	
Total PeCDD	ND	0.125	ND		CS 12346-PeCDF	93.1	
Total HxCDD	ND	0.0818	ND		CS 123469-HxCDF	93.6	
Total HpCDD	ND	0.0793	ND		CS 1234689-HpCDF	84.9	
Total TCDF	ND	0.0788	ND				
Total PeCDF	ND	0.0659	ND				
Total HxCDF	ND	0.058	ND				
Total HpCDF	ND	0.0645	ND				
Total PCDD/Fs	**ND**		**ND**				
WHO-2005 TEQs							
TEQ: ND=0	0		0				
TEQ: ND=DL/2	0.159	0.159	0.159				
TEQ: ND=DL	0.318	0.318	0.318				

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METHOD 1613B **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8A**

Lab Name:	SGS North America		
Initial Calibration:	ICAL: HRMS2_DF_10122018_26NOV2018		
Instrument ID:	HRMS2	GC Column ID:	ZB-5ms
VER Data Filename:	190513B14	Analysis Date:	13-MAY-2019 22:55:08
Lab ID:	OPR1_16666_DF		

NATIVE ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
2,3,7,8-TCDD	10	10.2	6.7	-	15.8	Y
1,2,3,7,8-PeCDD	50	50.3	35	-	71	Y
1,2,3,4,7,8-HxCDD	50	55.3	35	-	82	Y
1,2,3,6,7,8-HxCDD	50	54.5	38	-	67	Y
1,2,3,7,8,9-HxCDD	50	52.6	32	-	81	Y
1,2,3,4,6,7,8-HpCDD	50	53.1	35	-	70	Y
OCDD	100	113	78	-	144	Y
2,3,7,8-TCDF	10	11.6	7.5	-	15.8	Y
1,2,3,7,8-PeCDF	50	51	40	-	67	Y
2,3,4,7,8-PeCDF	50	56.6	34	-	80	Y
1,2,3,4,7,8-HxCDF	50	53.8	36	-	67	Y
1,2,3,6,7,8-HxCDF	50	55.2	42	-	65	Y
2,3,4,6,7,8-HxCDF	50	54.8	35	-	78	Y
1,2,3,7,8,9-HxCDF	50	50.1	39	-	65	Y
1,2,3,4,6,7,8-HpCDF	50	53.1	41	-	61	Y
1,2,3,4,7,8,9-HpCDF	50	50.7	39	-	69	Y
OCDF	100	106	63	-	170	Y

Contract-required concentration limits for OPR as specified in Table 6,
Method 1613. 10/94

Processed: 17 May 2019 13:31 Analyst: FS

METHOD 1613B **PCDD/F ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8B**

Lab Name: SGS North America
Initial Calibration: ICAL: HRMS2_DF_10122018_26NOV2018
Instrument ID: HRMS2 GC Column ID: ZB-5ms
VER Data Filename: 190513B14 Analysis Date: 13-MAY-2019 22:55:08
Lab ID: OPR1_16666_DF

LABELED ANALYTES	SPIKE CONC.	CONC. FOUND	RANGE (ng/mL)			OK
13C-2,3,7,8-TCDD	100	87.3	20	-	175	Y
13C-1,2,3,7,8-PeCDD	100	78.9	21	-	227	Y
13C-1,2,3,4,7,8-HxCDD	100	84.1	21	-	193	Y
13C-1,2,3,6,7,8-HxCDD	100	89.5	25	-	163	Y
13C-1,2,3,7,8,9-HxCDD	100	83.1	26	-	166	Y
13C-1,2,3,4,6,7,8-HpCDD	100	73.8	26	-	166	Y
13C-OCDD	200	91.5	26	-	397	Y
13C-2,3,7,8-TCDF	100	90.4	22	-	152	Y
13C-1,2,3,7,8-PeCDF	100	88.6	21	-	192	Y
13C-2,3,4,7,8-PeCDF	100	85.9	13	-	328	Y
13C-1,2,3,4,7,8-HxCDF	100	86.1	19	-	202	Y
13C-1,2,3,6,7,8-HxCDF	100	89.6	21	-	159	Y
13C-2,3,4,6,7,8-HxCDF	100	86.8	22	-	176	Y
13C-1,2,3,7,8,9-HxCDF	100	80.2	17	-	205	Y
13C-1,2,3,4,6,7,8-HpCDF	100	80.6	21	-	158	Y
13C-1,2,3,4,7,8,9-HpCDF	100	74.5	20	-	186	Y
13C-OCDF	200	103	26	-	397	Y
CLEANUP STANDARD						
37Cl-2,3,7,8-TCDD	40	39.2	12.4	-	76.4	Y

Contract-required concentration limits for OPR as specified in Table 6,
Method 1613. 10/94

Processed: 17 May 2019 13:31 Analyst: FS

Sample ID: GP-MW-11-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.03 g	Sample ID:	B3245_16683_PCB_001-R1	Date Extracted:	15-May-2019
Date Collected:	25-Apr-2019	% Solid	74.2 %	QC Batch No.:	16683	Date Analyzed:	19-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/g	pg/g	pg/g			%
PCB-77 33'44'-TeCB	ND	0.495			ES PCB-1	63
PCB-81 344'5-TeCB	ND	0.48			ES PCB-3	71.9
PCB-105 233'44'-PeCB	1.5				ES PCB-4	78.3
PCB-114 2344'5-PeCB	ND	0.275			ES PCB-15	84.4
PCB-118 23'44'5-PeCB	4.25				ES PCB-19	85.4
PCB-123 23'44'5'-PeCB	ND	0.277			ES PCB-37	82.5
PCB-126 33'44'5-PeCB	ND	0.243			ES PCB-54	76.1
PCB-156/157 233'44'5/233'44'5'-HxCB	EMPC		0.729	J C	ES PCB-77	84
PCB-167 23'44'55'-HxCB	EMPC		0.354	J	ES PCB-81	83.6
PCB-169 33'44'55'-HxCB	ND	0.326			ES PCB-104	96
PCB-189 233'44'55'-HpCB	ND	0.259			ES PCB-105	102
					ES PCB-114	100
TEQs (WHO 2005 M/H)					ES PCB-118	100
					ES PCB-123	103
ND = 0	0.000173		0.000205		ES PCB-126	98.6
ND = 0.5 x DL	0.0174		0.0174		ES PCB-153	99.4
ND = DL	0.0345		0.0345		ES PCB-155	94.6
					ES PCB-156/157	114
Totals					ES PCB-167	106
Mono-CB	ND	0.554			ES PCB-169	106
Di-CB	3.77				ES PCB-170	93.8
Tri-CB	4.04				ES PCB-180	90.2
Tetra-CB	10.5		13.1		ES PCB-188	100
Penta-CB	37.1		39.4		ES PCB-189	102
Hexa-CB	33.9		42.5		ES PCB-202	102
Hepta-CB	16.4		20.7		ES PCB-205	111
Octa-CB	16		17.8		ES PCB-206	127
Nona-CB	25.7				ES PCB-208	103
Deca-CB	11.2				ES PCB-209	138
					CS PCB-28	92.3
Total PCB (Mono-Deca)	159		178		CS PCB-111	103
					CS PCB-178	107

Checkcode: 747-153-MYC/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:16 Analyst: ah

Sample ID: GP-MW-11-SS — Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.03 g	Sample ID:	B3245_16683_PCB_001-R1	Date Extracted:	15-May-2019
Date Collected:	25-Apr-2019	% Solid	74.2 %	QC Batch No.:	16683	Date Analyzed:	19-May-2019
		Units	pg/g	Checkcode:	747-153-MYC/C	Time Analyzed:	17:24:32

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	(0.557)		PCB-19	(0.742)		PCB-54	(0.367)		PCB-72	(0.431)	
PCB-2	(0.517)		PCB-30/18	0.918	J C	PCB-50/53	(0.452)	C	PCB-68	(0.458)	
PCB-3	(0.551)		PCB-17	(0.796)		PCB-45	(0.531)		PCB-57	(0.452)	
			PCB-27	(0.566)		PCB-51	(0.458)		PCB-58	(0.405)	
Conc.	0		PCB-24	(0.554)		PCB-46	(0.57)		PCB-67	(0.41)	
EMPC	0		PCB-16	(0.833)		PCB-52	2.14		PCB-63	(0.495)	
			PCB-32	(0.515)		PCB-73	(0.348)		PCB-61/70/74/76	3.29	J C
Di	**Conc.**	**Qualifiers**	PCB-34	(0.589)		PCB-43	(0.452)		PCB-66	2.14	
PCB-4	(0.468)		PCB-23	(0.585)		PCB-69/49	1.22	J C	PCB-55	(0.419)	
PCB-10	(0.347)		PCB-26/29	(0.575)	C	PCB-48	(0.483)		PCB-56	[0.74]	J EMPC
PCB-9	(0.201)		PCB-25	(0.493)		PCB-44/47/65	[1.89]	J EMPC C	PCB-60	(0.515)	
PCB-7	(0.226)		PCB-31	1.08		PCB-59/62/75	(0.369)	C	PCB-80	(0.43)	
PCB-6	(0.192)		PCB-28/20	1.31	J C	PCB-42	(0.538)		PCB-79	(0.39)	
PCB-5	(0.234)		PCB-21/33	(0.56)	C	PCB-41	(0.621)		PCB-78	(0.458)	
PCB-8	0.667	J	PCB-22	(0.511)		PCB-71/40	0.803	J C	PCB-81	(0.48)	
PCB-14	(0.222)		PCB-36	(0.505)		PCB-64	0.897	J	PCB-77	(0.495)	
PCB-11	2.49	B	PCB-39	(0.555)							
PCB-13/12	(0.225)	C	PCB-38	(0.552)							
PCB-15	0.612	J	PCB-35	(0.572)							
			PCB-37	0.738	J						
Conc.	3.77		**Conc.**	4.04					**Conc.**	10.5	
EMPC	3.77		**EMPC**	4.04					**EMPC**	13.1	

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Totals	Conc.	EMPC
Mono-Tri	7.81	7.81
Tetra-Hexa	81.5	95
Hepta-Deca	69.3	75.3
Mono-Deca	159	178

Sample ID: GP-MW-11-SS											Method 1668C
Penta	**Conc.**	**Qualifiers**	**Penta**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**
PCB-104	(0.172)		PCB-109/119/86/97/125/87	3.48	J C	PCB-155	(0.178)		PCB-165	(0.194)	
PCB-96	(0.175)		PCB-117	(0.285)		PCB-152	(0.166)		PCB-146	1.76	
PCB-103	(0.369)		PCB-116/85	[0.989]	J EMPC C	PCB-150	(0.191)		PCB-161	(0.171)	
PCB-94	(0.447)		PCB-110	8.42		PCB-136	[1.37]	EMPC	PCB-153/168	7.7	C
PCB-95	6.66		PCB-115	(0.227)		PCB-145	(0.174)		PCB-141	[1.26]	EMPC
PCB-100/93	(0.401)	C	PCB-82	(0.389)		PCB-148	(0.235)		PCB-130	[1]	EMPC
PCB-102	(0.288)		PCB-111	(0.275)		PCB-151/135	[3.12]	EMPC C	PCB-137	(0.249)	
PCB-98	(0.421)		PCB-120	(0.227)		PCB-154	(0.22)		PCB-164	0.721	J
PCB-88	(0.419)		PCB-108/124	(0.273)	C	PCB-144	(0.239)		PCB-163/138/129	9.61	C
PCB-91	1.32		PCB-107	0.444	J	PCB-147/149	8.34	C	PCB-160	(0.2)	
PCB-84	2.65		PCB-123	(0.277)		PCB-134	(0.273)		PCB-158	[0.752]	J EMPC
PCB-89	(0.386)		PCB-106	(0.263)		PCB-143	(0.256)		PCB-128/166	1.61	J C
PCB-121	(0.258)		PCB-118	4.25		PCB-139/140	(0.222)	C	PCB-159	(0.222)	
PCB-92	[1.29]	EMPC	PCB-122	(0.336)		PCB-131	(0.268)		PCB-162	(0.26)	
PCB-113/90/101	5.79	C	PCB-114	(0.275)		PCB-142	(0.264)		PCB-167	[0.354]	J EMPC
PCB-83	(0.477)		PCB-105	1.5		PCB-132	4.15		PCB-156/157	[0.729]	J EMPC C
PCB-99	2.62		PCB-127	(0.285)		PCB-133	(0.232)		PCB-169	(0.326)	
PCB-112	(0.237)		PCB-126	(0.243)							
			Conc.	37.1					**Conc.**	33.9	
			EMPC	39.4					**EMPC**	42.5	

Hepta	**Conc.**	**Qualifiers**	**Hepta**	**Conc.**	**Qualifiers**	**Octa**	**Conc.**	**Qualifiers**	**Nona**	**Conc.**	**Qualifiers**
PCB-188	(0.145)		PCB-174	2.71		PCB-202	1.56		PCB-208	6.23	
PCB-179	[0.942]	J EMPC	PCB-177	1.48		PCB-201	0.721	J	PCB-207	1.9	
PCB-184	(0.15)		PCB-181	(0.288)		PCB-204	(0.187)		PCB-206	17.5	
PCB-176	[0.388]	J EMPC	PCB-171/173	0.69	J C	PCB-197	(0.199)				
PCB-186	(0.132)		PCB-172	(0.335)		PCB-200	(0.207)		**Conc.**	25.7	
PCB-178	[0.861]	J EMPC	PCB-192	(0.228)		PCB-198/199	6.97	C	**EMPC**	25.7	
PCB-175	(0.323)		PCB-180/193	5.82	C	PCB-196	[1.77]	EMPC			
PCB-187	4.08		PCB-191	(0.262)		PCB-203	3.37		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(0.276)		PCB-170	[2.06]	EMPC	PCB-195	0.726	J	PCB-209	11.2	
PCB-183	1.62		PCB-190	(0.29)		PCB-194	2.7				
PCB-185	(0.358)		PCB-189	(0.259)		PCB-205	(0.387)				
			Conc.	16.4		**Conc.**	16				
			EMPC	20.7		**EMPC**	17.8				

Sample ID: GP-MW-12-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	9.85 g	Sample ID:	B3245_16683_PCB_002-R1	Date Extracted:	15-May-2019
Date Collected:	25-Apr-2019	% Solid	89.3 %	QC Batch No.:	16683	Date Analyzed:	19-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/g	pg/g	pg/g			%
PCB-77 33'44'-TeCB	ND	0.607			ES PCB-1	53.4
PCB-81 344'5-TeCB	ND	0.596			ES PCB-3	62.4
PCB-105 233'44'-PeCB	3.83				ES PCB-4	64.5
PCB-114 2344'5-PeCB	ND	0.254			ES PCB-15	72.8
PCB-118 23'44'5-PeCB	8.51				ES PCB-19	72.3
PCB-123 23'44'5'-PeCB	ND	0.237			ES PCB-37	83.1
PCB-126 33'44'5-PeCB	ND	0.388			ES PCB-54	68.6
PCB-156/157 233'44'5/233'44'5'-HxCB	2			J C	ES PCB-77	84.4
PCB-167 23'44'55'-HxCB	0.977			J	ES PCB-81	85.4
PCB-169 33'44'55'-HxCB	ND	0.655			ES PCB-104	85.9
PCB-189 233'44'55'-HpCB	ND	0.84			ES PCB-105	98
					ES PCB-114	95.5
TEQs (WHO 2005 M/H)					ES PCB-118	98.6
					ES PCB-123	99.3
ND = 0	0.00046		0.00046		ES PCB-126	93.3
ND = 0.5 x DL	0.0298		0.0298		ES PCB-153	98.5
ND = DL	0.0592		0.0592		ES PCB-155	103
					ES PCB-156/157	109
Totals					ES PCB-167	102
Mono-CB			2.65		ES PCB-169	98.9
Di-CB	9.46				ES PCB-170	109
Tri-CB	9.79		11		ES PCB-180	106
Tetra-CB	19.4		23.3		ES PCB-188	100
Penta-CB	63.1		63.6		ES PCB-189	101
Hexa-CB	95.5		100		ES PCB-202	96.6
Hepta-CB	66.5		69.9		ES PCB-205	105
Octa-CB	25.8		29		ES PCB-206	118
Nona-CB	9.05				ES PCB-208	109
Deca-CB			3.45		ES PCB-209	120
					CS PCB-28	93.9
Total PCB (Mono-Deca)	299		321		CS PCB-111	97.1
					CS PCB-178	98

Checkcode: 711-719-JDY/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:16 Analyst: ah

Sample ID: GP-MW-12-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	9.85 g	Sample ID:	B3245_16683_PCB_002-R1	Date Extracted:	15-May-2019
Date Collected:	25-Apr-2019	% Solid	89.3 %	QC Batch No.:	16683	Date Analyzed:	19-May-2019
		Units	pg/g	Checkcode:	711-719-JDY/C	Time Analyzed:	18:22:01

Mono	Conc.	Qualifiers
PCB-1	[2.65]	EMPC
PCB-2	(0.557)	
PCB-3	(0.595)	
Conc.	0	
EMPC	2.65	

Di	Conc.	Qualifiers
PCB-4	0.666	J
PCB-10	(0.333)	
PCB-9	(0.35)	
PCB-7	(0.393)	
PCB-6	0.635	J
PCB-5	(0.407)	
PCB-8	2.79	
PCB-14	(0.387)	
PCB-11	4.09	B
PCB-13/12	(0.391)	C
PCB-15	1.27	
Conc.	9.46	
EMPC	9.46	

Tri	Conc.	Qualifiers
PCB-19	(0.906)	
PCB-30/18	[1.17]	J EMPC C
PCB-17	(0.972)	
PCB-27	(0.691)	
PCB-24	(0.676)	
PCB-16	(1.02)	
PCB-32	(0.629)	
PCB-34	(0.682)	
PCB-23	(0.677)	
PCB-26/29	(0.665)	C
PCB-25	(0.571)	
PCB-31	2.29	
PCB-28/20	3.44	C
PCB-21/33	1.45	J C
PCB-22	0.855	J
PCB-36	(0.585)	
PCB-39	(0.642)	
PCB-38	(0.639)	
PCB-35	(0.663)	
PCB-37	1.75	
Conc.	9.79	
EMPC	11	

Tetra	Conc.	Qualifiers
PCB-54	(0.401)	
PCB-50/53	(0.549)	C
PCB-45	(0.645)	
PCB-51	(0.557)	
PCB-46	(0.693)	
PCB-52	3.29	
PCB-73	(0.423)	
PCB-43	(0.55)	
PCB-69/49	1.75	J C
PCB-48	(0.587)	
PCB-44/47/65	2.81	J C
PCB-59/62/75	(0.448)	C
PCB-42	(0.654)	
PCB-41	(0.755)	
PCB-71/40	(0.522)	C
PCB-64	1.51	

Tetra	Conc.	Qualifiers
PCB-72	(0.534)	
PCB-68	(0.567)	
PCB-57	(0.56)	
PCB-58	(0.503)	
PCB-67	(0.508)	
PCB-63	(0.614)	
PCB-61/70/74/76	7.37	C
PCB-66	[3.95]	EMPC
PCB-55	(0.52)	
PCB-56	1.52	
PCB-60	1.13	
PCB-80	(0.534)	
PCB-79	(0.483)	
PCB-78	(0.567)	
PCB-81	(0.596)	
PCB-77	(0.607)	
Conc.	19.4	
EMPC	23.3	

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Totals	Conc.	EMPC
Mono-Tri	19.2	23.1
Tetra-Hexa	178	187
Hepta-Deca	101	111
Mono-Deca	299	321

SGS

Sample ID: GP-MW-12-SS — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.193)		PCB-109/119/86/97/125/87	5.02	J C	PCB-155	(0.183)		PCB-165	(0.213)	
PCB-96	(0.197)		PCB-117	(0.244)		PCB-152	(0.171)		PCB-146	3.28	
PCB-103	(0.316)		PCB-116/85	1.98	J C	PCB-150	(0.196)		PCB-161	(0.188)	
PCB-94	(0.383)		PCB-110	16.3		PCB-136	3.16		PCB-153/168	14.2	C
PCB-95	8.18		PCB-115	(0.194)		PCB-145	(0.179)		PCB-141	3.19	
PCB-100/93	(0.344)	C	PCB-82	(0.334)		PCB-148	(0.257)		PCB-130	[1.45]	EMPC
PCB-102	(0.247)		PCB-111	(0.236)		PCB-151/135	8.06	C	PCB-137	[0.747]	J EMPC
PCB-98	(0.361)		PCB-120	(0.194)		PCB-154	(0.242)		PCB-164	[1.93]	EMPC
PCB-88	(0.359)		PCB-108/124	0.456	J C	PCB-144	(0.261)		PCB-163/138/129	25.3	C
PCB-91	1.56		PCB-107	[0.56]	J EMPC	PCB-147/149	20.4	C	PCB-160	(0.219)	
PCB-84	2.92		PCB-123	(0.237)		PCB-134	1.11		PCB-158	2.38	
PCB-89	(0.331)		PCB-106	(0.225)		PCB-143	(0.281)		PCB-128/166	4.19	C
PCB-121	(0.221)		PCB-118	8.51		PCB-139/140	[0.454]	J EMPC C	PCB-159	(0.362)	
PCB-92	1.72		PCB-122	(0.311)		PCB-131	(0.294)		PCB-162	(0.424)	
PCB-113/90/101	8.47	C	PCB-114	(0.254)		PCB-142	(0.289)		PCB-167	0.977	J
PCB-83	(0.409)		PCB-105	3.83		PCB-132	7.11		PCB-156/157	2	J C
PCB-99	4.16		PCB-127	(0.241)		PCB-133	(0.254)		PCB-169	(0.655)	
PCB-112	(0.203)		PCB-126	(0.388)							
			Conc.	63.1					**Conc.**	95.5	
			EMPC	63.6					**EMPC**	100	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.169)		PCB-174	8.22		PCB-202	[2.03]	EMPC	PCB-208	1.82	
PCB-179	4.02		PCB-177	5.29		PCB-201	[1.08]	EMPC	PCB-207	(0.928)	
PCB-184	(0.174)		PCB-181	(0.658)		PCB-204	(0.293)		PCB-206	7.23	
PCB-176	1.26		PCB-171/173	2.36	C	PCB-197	(0.313)				
PCB-186	(0.154)		PCB-172	[1.31]	EMPC	PCB-200	(0.326)		**Conc.**	9.05	
PCB-178	[2.05]	EMPC	PCB-192	(0.519)		PCB-198/199	8.83	C	**EMPC**	9.05	
PCB-175	(0.737)		PCB-180/193	17.8	C	PCB-196	3.47				
PCB-187	13.2		PCB-191	(0.598)		PCB-203	4.8		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(0.629)		PCB-170	7.6		PCB-195	2.18		PCB-209	[3.45]	EMPC
PCB-183	5.32		PCB-190	1.41		PCB-194	6.57				
PCB-185	(0.817)		PCB-189	(0.84)		PCB-205	(0.867)				
			Conc.	66.5		**Conc.**	25.8				
			EMPC	69.9		**EMPC**	29				

Sample ID: GP-MW-13-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.04 g	Sample ID:	B3245_16683_PCB_004-R1	Date Extracted:	15-May-2019
Date Collected:	25-Apr-2019	% Solid	84.6 %	QC Batch No.:	16683	Date Analyzed:	19-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/g	pg/g	pg/g			%
PCB-77 33'44'-TeCB	1.89				ES PCB-1	47.9
PCB-81 344'5-TeCB	ND	0.745			ES PCB-3	56.4
PCB-105 233'44'-PeCB	9.56				ES PCB-4	60
PCB-114 2344'5-PeCB	0.61			J	ES PCB-15	71.5
PCB-118 23'44'5-PeCB	20.7				ES PCB-19	67.8
PCB-123 23'44'5'-PeCB	0.58			J	ES PCB-37	76.1
PCB-126 33'44'5-PeCB	ND	0.313			ES PCB-54	59.2
PCB-156/157 233'44'5/233'44'5'-HxCB	3.34			C	ES PCB-77	85.3
PCB-167 23'44'55'-HxCB	EMPC		1.23		ES PCB-81	84
PCB-169 33'44'55'-HxCB	ND	0.365			ES PCB-104	78.1
PCB-189 233'44'55'-HpCB	ND	0.462			ES PCB-105	102
					ES PCB-114	96.4
TEQs (WHO 2005 M/H)					ES PCB-118	98.7
					ES PCB-123	98.2
ND = 0	0.00123		0.00127		ES PCB-126	98.7
ND = 0.5 x DL	0.0225		0.0225		ES PCB-153	97.6
ND = DL	0.0437		0.0438		ES PCB-155	87.7
					ES PCB-156/157	117
Totals					ES PCB-167	107
Mono-CB	ND	0.806			ES PCB-169	113
Di-CB	5.63		10.5		ES PCB-170	96.3
Tri-CB	24.4		28.2		ES PCB-180	91.7
Tetra-CB	94.4		95.4		ES PCB-188	94.3
Penta-CB	158		159		ES PCB-189	106
Hexa-CB	140		146		ES PCB-202	103
Hepta-CB	67.4		70.3		ES PCB-205	114
Octa-CB	10.3		23.9		ES PCB-206	129
Nona-CB	7.46				ES PCB-208	105
Deca-CB	5.56				ES PCB-209	137
					CS PCB-28	85.8
Total PCB (Mono-Deca)	514		546		CS PCB-111	94.5
					CS PCB-178	101

Checkcode: 143-730-JNV/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:16 Analyst: ah

Sample ID: GP-MW-13-SS — Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.04 g	Sample ID:	B3245_16683_PCB_004-R1	Date Extracted:	15-May-2019
Date Collected:	25-Apr-2019	% Solid	84.6 %	QC Batch No.:	16683	Date Analyzed:	19-May-2019
		Units	pg/g	Checkcode:	143-730-JNV/C	Time Analyzed:	19:19:27

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	(0.801)		PCB-19	(1.48)		PCB-54	(0.508)		PCB-72	(0.668)	
PCB-2	(0.759)		PCB-30/18	4.1	C	PCB-50/53	1.81	J C	PCB-68	(0.709)	
PCB-3	(0.811)		PCB-17	[2.06]	EMPC	PCB-45	1.87		PCB-57	(0.7)	
			PCB-27	(1.13)		PCB-51	(0.642)		PCB-58	(0.628)	
Conc.	0		PCB-24	(1.11)		PCB-46	(0.799)		PCB-67	(0.635)	
EMPC	0		PCB-16	(1.66)		PCB-52	13.6		PCB-63	(0.767)	
			PCB-32	[1.73]	EMPC	PCB-73	(0.488)		PCB-61/70/74/76	20.4	C
Di	**Conc.**	**Qualifiers**	PCB-34	(0.763)		PCB-43	(0.634)		PCB-66	12.3	
PCB-4	0.969	J	PCB-23	(0.757)		PCB-69/49	7.4	C	PCB-55	(0.65)	
PCB-10	(0.368)		PCB-26/29	(0.744)	C	PCB-48	1.51		PCB-56	5.05	
PCB-9	(0.513)		PCB-25	(0.638)		PCB-44/47/65	11.8	C	PCB-60	2.61	
PCB-7	(0.577)		PCB-31	5.35		PCB-59/62/75	[0.975]	J EMPC C	PCB-80	(0.667)	
PCB-6	(0.491)		PCB-28/20	7.11	C	PCB-42	3.2		PCB-79	(0.604)	
PCB-5	(0.598)		PCB-21/33	2.76	C	PCB-41	(0.871)		PCB-78	(0.709)	
PCB-8	2.33		PCB-22	1.95		PCB-71/40	5.32	C	PCB-81	(0.745)	
PCB-14	(0.568)		PCB-36	(0.654)		PCB-64	5.63		PCB-77	1.89	
PCB-11	[4.88]	B EMPC	PCB-39	(0.718)							
PCB-13/12	(0.574)	C	PCB-38	(0.714)							
PCB-15	2.33		PCB-35	(0.741)							
			PCB-37	3.17							
Conc.	5.63		**Conc.**	24.4					**Conc.**	94.4	
EMPC	10.5		**EMPC**	28.2					**EMPC**	95.4	

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Totals	Conc.	EMPC
Mono-Tri	30.1	38.7
Tetra-Hexa	393	400
Hepta-Deca	90.8	107
Mono-Deca	514	546

Sample ID: GP-MW-13-SS — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.202)		PCB-109/119/86/97/125/87	14.2	C	PCB-155	(0.199)		PCB-165	(0.192)	
PCB-96	(0.206)		PCB-117	[0.527]	J EMPC	PCB-152	(0.185)		PCB-146	4.24	
PCB-103	(0.489)		PCB-116/85	4.65	C	PCB-150	(0.213)		PCB-161	(0.17)	
PCB-94	(0.592)		PCB-110	31.3		PCB-136	4.57		PCB-153/168	25.7	C
PCB-95	21.2		PCB-115	(0.301)		PCB-145	(0.194)		PCB-141	4.86	
PCB-100/93	(0.532)	C	PCB-82	3.03		PCB-148	(0.233)		PCB-130	2.58	
PCB-102	0.735	J	PCB-111	(0.365)		PCB-151/135	9.89	C	PCB-137	[1.5]	EMPC
PCB-98	(0.559)		PCB-120	(0.301)		PCB-154	(0.219)		PCB-164	2.56	
PCB-88	(0.556)		PCB-108/124	1.06	J C	PCB-144	[1.22]	EMPC	PCB-163/138/129	36.8	C
PCB-91	3.96		PCB-107	1.69		PCB-147/149	24.4	C	PCB-160	(0.198)	
PCB-84	7.17		PCB-123	0.58	J	PCB-134	[1.73]	EMPC	PCB-158	3.87	
PCB-89	(0.512)		PCB-106	(0.349)		PCB-143	(0.254)		PCB-128/166	5.66	C
PCB-121	(0.342)		PCB-118	20.7		PCB-139/140	0.677	J C	PCB-159	(0.256)	
PCB-92	4.44		PCB-122	(0.447)		PCB-131	(0.266)		PCB-162	(0.3)	
PCB-113/90/101	21.2	C	PCB-114	0.61	J	PCB-142	(0.262)		PCB-167	[1.23]	EMPC
PCB-83	1.64		PCB-105	9.56		PCB-132	11		PCB-156/157	3.34	C
PCB-99	10.6		PCB-127	(0.348)		PCB-133	(0.23)		PCB-169	(0.365)	
PCB-112	(0.314)		PCB-126	(0.313)							
			Conc.	158					**Conc.**	140	
			EMPC	159					**EMPC**	146	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.275)		PCB-174	8.24		PCB-202	1.95		PCB-208	1.76	
PCB-179	3.58		PCB-177	5.08		PCB-201	[1.08]	EMPC	PCB-207	(1.06)	
PCB-184	(0.284)		PCB-181	(0.455)		PCB-204	(0.357)		PCB-206	5.71	
PCB-176	1.34		PCB-171/173	2.53	C	PCB-197	(0.381)				
PCB-186	(0.251)		PCB-172	[1.37]	EMPC	PCB-200	(0.397)		**Conc.**	7.46	
PCB-178	1.98		PCB-192	(0.359)		PCB-198/199	[6.76]	EMPC C	**EMPC**	7.46	
PCB-175	(0.51)		PCB-180/193	19.2	C	PCB-196	3.26				
PCB-187	11.2		PCB-191	(0.414)		PCB-203	[3.9]	EMPC	**Deca**	**Conc.**	**Qualifiers**
PCB-182	(0.435)		PCB-170	9.38		PCB-195	[1.84]	EMPC	PCB-209	5.56	
PCB-183	4.88		PCB-190	[1.47]	EMPC	PCB-194	5.11				
PCB-185	(0.565)		PCB-189	(0.462)		PCB-205	(0.894)				
			Conc.	67.4		**Conc.**	10.3				
			EMPC	70.3		**EMPC**	23.9				

Sample ID: GP-MW-14-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	9.96 g	Sample ID:	B3245_16683_PCB_005-R1	Date Extracted:	15-May-2019
Date Collected:	25-Apr-2019	% Solid	89.3 %	QC Batch No.:	16683	Date Analyzed:	19-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/g	pg/g	pg/g			%
PCB-77 33'44'-TeCB	EMPC		1	J	ES PCB-1	64.9
PCB-81 344'5-TeCB	ND	0.696			ES PCB-3	70.1
PCB-105 233'44'-PeCB	12.5				ES PCB-4	73.6
PCB-114 2344'5-PeCB	ND	0.301			ES PCB-15	75.6
PCB-118 23'44'5-PeCB	28				ES PCB-19	76.9
PCB-123 23'44'5'-PeCB	0.483			J	ES PCB-37	81.1
PCB-126 33'44'5-PeCB	ND	0.255			ES PCB-54	67.9
PCB-156/157 233'44'5/233'44'5'-HxCB	5.29			C	ES PCB-77	87.6
PCB-167 23'44'55'-HxCB	2.08				ES PCB-81	87.1
PCB-169 33'44'55'-HxCB	ND	0.422			ES PCB-104	82.2
PCB-189 233'44'55'-HpCB	ND	0.404			ES PCB-105	98.4
					ES PCB-114	95.9
TEQs (WHO 2005 M/H)					ES PCB-118	95.4
					ES PCB-123	96.5
ND = 0	0.00145		0.00155		ES PCB-126	98.8
ND = 0.5 x DL	0.0207		0.0208		ES PCB-153	94.1
ND = DL	0.0399		0.04		ES PCB-155	92.3
					ES PCB-156/157	116
Totals					ES PCB-167	106
Mono-CB	6.77		8.32		ES PCB-169	111
Di-CB	17.1				ES PCB-170	90.5
Tri-CB	24.1		29.9		ES PCB-180	87.2
Tetra-CB	84.6		87.7		ES PCB-188	95.5
Penta-CB	209		221		ES PCB-189	98.1
Hexa-CB	234		234		ES PCB-202	105
Hepta-CB	97.3		101		ES PCB-205	111
Octa-CB	47.2				ES PCB-206	131
Nona-CB	16.4				ES PCB-208	100
Deca-CB			4.51		ES PCB-209	130
					CS PCB-28	88
Total PCB (Mono-Deca)	736		768		CS PCB-111	96.7
					CS PCB-178	99.8

Checkcode: 575-042-MTY/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:16 Analyst: ah

Sample ID: GP-MW-14-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	9.96 g	Sample ID:	B3245_16683_PCB_005-R1	Date Extracted:	15-May-2019
Date Collected:	25-Apr-2019	% Solid	89.3 %	QC Batch No.:	16683	Date Analyzed:	19-May-2019
		Units	pg/g	Checkcode:	575-042-MTY/C	Time Analyzed:	20:16:54

Mono	Conc.	Qualifiers
PCB-1	3.89	
PCB-2	[1.55]	EMPC
PCB-3	2.88	
Conc.	6.77	
EMPC	8.32	
Di	**Conc.**	**Qualifiers**
PCB-4	0.998	J
PCB-10	(0.243)	
PCB-9	(0.406)	
PCB-7	(0.456)	
PCB-6	0.986	J
PCB-5	(0.472)	
PCB-8	3.06	
PCB-14	(0.449)	
PCB-11	8.15	B
PCB-13/12	0.556	J C
PCB-15	3.38	
Conc.	17.1	
EMPC	17.1	

Tri	Conc.	Qualifiers
PCB-19	(1.18)	
PCB-30/18	[3]	EMPC C
PCB-17	[1.9]	EMPC
PCB-27	(0.901)	
PCB-24	(0.882)	
PCB-16	(1.33)	
PCB-32	1.86	
PCB-34	(0.895)	
PCB-23	(0.888)	
PCB-26/29	[0.868]	J EMPC C
PCB-25	(0.748)	
PCB-31	5.56	
PCB-28/20	7.55	C
PCB-21/33	3.19	C
PCB-22	2.09	
PCB-36	(0.767)	
PCB-39	(0.842)	
PCB-38	(0.838)	
PCB-35	(0.869)	
PCB-37	3.89	
Conc.	24.1	
EMPC	29.9	

Tetra	Conc.	Qualifiers
PCB-54	(0.528)	
PCB-50/53	1.46	J C
PCB-45	1.06	
PCB-51	(0.663)	
PCB-46	(0.826)	
PCB-52	15.6	
PCB-73	(0.504)	
PCB-43	(0.655)	
PCB-69/49	5.96	C
PCB-48	[1.19]	EMPC
PCB-44/47/65	9.96	C
PCB-59/62/75	[0.92]	J EMPC C
PCB-42	2.53	
PCB-41	(0.9)	
PCB-71/40	3.9	C
PCB-64	5.89	

Tetra	Conc.	Qualifiers
PCB-72	(0.624)	
PCB-68	(0.663)	
PCB-57	(0.654)	
PCB-58	(0.587)	
PCB-67	(0.593)	
PCB-63	(0.717)	
PCB-61/70/74/76	19.6	C
PCB-66	11.1	
PCB-55	(0.608)	
PCB-56	4.75	
PCB-60	2.76	
PCB-80	(0.624)	
PCB-79	(0.564)	
PCB-78	(0.663)	
PCB-81	(0.696)	
PCB-77	[1]	J EMPC
Conc.	84.6	
EMPC	87.7	

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Totals	Conc.	EMPC
Mono-Tri	48.1	55.4
Tetra-Hexa	527	543
Hepta-Deca	161	170
Mono-Deca	736	768

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Sample ID: GP-MW-14-SS — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.226)		PCB-109/119/86/97/125/87	20.8	C	PCB-155	(0.22)		PCB-165	(0.258)	
PCB-96	(0.23)		PCB-117	[0.668]	J EMPC	PCB-152	(0.205)		PCB-146	5.5	
PCB-103	(0.391)		PCB-116/85	5.37	C	PCB-150	(0.235)		PCB-161	(0.227)	
PCB-94	(0.473)		PCB-110	43.9		PCB-136	6.62		PCB-153/168	42.4	C
PCB-95	30.9		PCB-115	(0.24)		PCB-145	(0.214)		PCB-141	9.48	
PCB-100/93	(0.425)	C	PCB-82	3.56		PCB-148	(0.312)		PCB-130	3.68	
PCB-102	0.777	J	PCB-111	(0.291)		PCB-151/135	15.9	C	PCB-137	3.52	
PCB-98	(0.446)		PCB-120	(0.24)		PCB-154	(0.293)		PCB-164	3.59	
PCB-88	(0.444)		PCB-108/124	1.25	J C	PCB-144	2.44		PCB-163/138/129	58.1	C
PCB-91	4.88		PCB-107	[1.96]	EMPC	PCB-147/149	38.6	C	PCB-160	(0.266)	
PCB-84	[9.43]	EMPC	PCB-123	0.483	J	PCB-134	2.99		PCB-158	6.39	
PCB-89	(0.409)		PCB-106	(0.279)		PCB-143	(0.34)		PCB-128/166	8.72	C
PCB-121	(0.273)		PCB-118	28		PCB-139/140	[0.809]	J EMPC C	PCB-159	(0.281)	
PCB-92	6.72		PCB-122	(0.368)		PCB-131	0.734	J	PCB-162	(0.33)	
PCB-113/90/101	34.1	C	PCB-114	(0.301)		PCB-142	(0.351)		PCB-167	2.08	
PCB-83	1.81		PCB-105	12.5		PCB-132	17.5		PCB-156/157	5.29	C
PCB-99	14		PCB-127	(0.284)		PCB-133	(0.308)		PCB-169	(0.422)	
PCB-112	(0.251)		PCB-126	(0.255)							
			Conc.	209					**Conc.**	234	
			EMPC	221					**EMPC**	234	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.22)		PCB-174	12		PCB-202	3.9		PCB-208	3.72	
PCB-179	5.39		PCB-177	6.42		PCB-201	2.16		PCB-207	(1.11)	
PCB-184	(0.227)		PCB-181	(0.422)		PCB-204	(0.215)		PCB-206	12.7	
PCB-176	1.73		PCB-171/173	4.02	C	PCB-197	(0.23)				
PCB-186	(0.2)		PCB-172	[1.38]	EMPC	PCB-200	1.38		**Conc.**	16.4	
PCB-178	[2.35]	EMPC	PCB-192	(0.333)		PCB-198/199	14.7	C	**EMPC**	16.4	
PCB-175	[0.438]	J EMPC	PCB-180/193	27.4	C	PCB-196	5.06				
PCB-187	15.1		PCB-191	(0.384)		PCB-203	7.37		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(0.403)		PCB-170	13.9		PCB-195	2.69		PCB-209	[4.51]	EMPC
PCB-183	7.78		PCB-190	2.41		PCB-194	9.96				
PCB-185	1.11		PCB-189	(0.404)		PCB-205	(1.02)				
			Conc.	97.3		**Conc.**	47.2				
			EMPC	101		**EMPC**	47.2				

Sample ID: GP-MW-15-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.04 g	Sample ID:	B3245_16683_PCB_006-R1	Date Extracted:	15-May-2019
Date Collected:	26-Apr-2019	% Solid	72.2 %	QC Batch No.:	16683	Date Analyzed:	19-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/g	pg/g	pg/g			%
PCB-77 33'44'-TeCB	8.19				ES PCB-1	59.8
PCB-81 344'5-TeCB	ND	0.921			ES PCB-3	70.1
PCB-105 233'44'-PeCB	52.1				ES PCB-4	71.5
PCB-114 2344'5-PeCB	3.1				ES PCB-15	76.7
PCB-118 23'44'5-PeCB	91.1				ES PCB-19	76.5
PCB-123 23'44'5'-PeCB	2.78				ES PCB-37	77.4
PCB-126 33'44'5-PeCB	ND	0.685			ES PCB-54	74.1
PCB-156/157 233'44'5/233'44'5'-HxCB	12.7			C	ES PCB-77	77.8
PCB-167 23'44'55'-HxCB	5.21				ES PCB-81	77.2
PCB-169 33'44'55'-HxCB	ND	1.1			ES PCB-104	91.9
PCB-189 233'44'55'-HpCB	ND	0.899			ES PCB-105	88.8
					ES PCB-114	87.1
TEQs (WHO 2005 M/H)					ES PCB-118	89.2
					ES PCB-123	93.7
ND = 0	0.00583		0.00583		ES PCB-126	85.1
ND = 0.5 x DL	0.0567		0.0567		ES PCB-153	97.6
ND = DL	0.108		0.108		ES PCB-155	108
					ES PCB-156/157	106
Totals					ES PCB-167	99
Mono-CB	10.6				ES PCB-169	99.1
Di-CB	21.7				ES PCB-170	102
Tri-CB	134				ES PCB-180	94.5
Tetra-CB	661		669		ES PCB-188	102
Penta-CB	879		887		ES PCB-189	97.4
Hexa-CB	791		808		ES PCB-202	99.4
Hepta-CB	419		439		ES PCB-205	109
Octa-CB	172		177		ES PCB-206	132
Nona-CB	66.9				ES PCB-208	105
Deca-CB	28.1				ES PCB-209	132
					CS PCB-28	96.8
Total PCB (Mono-Deca)	3,180		3,240		CS PCB-111	93.4
					CS PCB-178	104

Checkcode: 882-041-MWZ/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:16 Analyst: ah

Sample ID: GP-MW-15-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.04 g	Sample ID:	B3245_16683_PCB_006-R1	Date Extracted:	15-May-2019
Date Collected:	26-Apr-2019	% Solid	72.2 %	QC Batch No.:	16683	Date Analyzed:	19-May-2019
		Units	pg/g	Checkcode:	882-041-MWZ/C	Time Analyzed:	21:14:20

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	2.37		PCB-19	(1.29)		PCB-54	(0.408)		PCB-72	(0.826)	
PCB-2	4.26		PCB-30/18	11.1	C	PCB-50/53	9.83	C	PCB-68	(0.877)	
PCB-3	3.94		PCB-17	6.51		PCB-45	9.89		PCB-57	(0.866)	
			PCB-27	(0.981)		PCB-51	[2.29]	EMPC	PCB-58	1.51	
Conc.	10.6		PCB-24	(0.96)		PCB-46	[3.74]	EMPC	PCB-67	1.4	
EMPC	10.6		PCB-16	4.87		PCB-52	87.6		PCB-63	4.04	
			PCB-32	7.19		PCB-73	(0.565)		PCB-61/70/74/76	142	C
Di	**Conc.**	**Qualifiers**	PCB-34	(1)		PCB-43	[2.22]	EMPC	PCB-66	68.3	
PCB-4	1.11		PCB-23	(0.996)		PCB-69/49	46.2	C	PCB-55	(0.804)	
PCB-10	(0.261)		PCB-26/29	3.45	C	PCB-48	16.6		PCB-56	41.3	
PCB-9	(0.268)		PCB-25	1.6		PCB-44/47/65	77.1	C	PCB-60	23.9	
PCB-7	(0.301)		PCB-31	29.1		PCB-59/62/75	6.41	C	PCB-80	(0.825)	
PCB-6	0.941	J	PCB-28/20	34.6	C	PCB-42	21.6		PCB-79	(0.747)	
PCB-5	(0.312)		PCB-21/33	15.3	C	PCB-41	5.47		PCB-78	(0.877)	
PCB-8	3.93		PCB-22	9.27		PCB-71/40	41.2	C	PCB-81	(0.921)	
PCB-14	0.343	J	PCB-36	(0.86)		PCB-64	48.1		PCB-77	8.19	
PCB-11	8.38	B	PCB-39	(0.945)							
PCB-13/12	2.82	C	PCB-38	(0.94)							
PCB-15	4.19		PCB-35	(0.974)							
			PCB-37	11.2							
Conc.	21.7		**Conc.**	134					**Conc.**	661	
EMPC	21.7		**EMPC**	134					**EMPC**	669	

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Totals	Conc.	EMPC
Mono-Tri	166	166
Tetra-Hexa	2,330	2,360
Hepta-Deca	686	711
Mono-Deca	3,180	3,240

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Sample ID: GP-MW-15-SS											Method 1668C
Penta	**Conc.**	**Qualifiers**	**Penta**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**
PCB-104	(0.253)		PCB-109/119/86/97/125/87	88.3	C	PCB-155	(0.226)		PCB-165	(0.277)	
PCB-96	[1.76]	EMPC	PCB-117	3.92		PCB-152	(0.21)		PCB-146	25.4	
PCB-103	1.85		PCB-116/85	28.1	C	PCB-150	(0.242)		PCB-161	(0.244)	
PCB-94	(0.489)		PCB-110	149		PCB-136	25.7		PCB-153/168	154	C
PCB-95	107		PCB-115	(0.248)		PCB-145	(0.22)		PCB-141	32.4	
PCB-100/93	[1.94]	J EMPC C	PCB-82	19		PCB-148	(0.335)		PCB-130	11.9	
PCB-102	4.17		PCB-111	(0.301)		PCB-151/135	69.1	C	PCB-137	[4.55]	EMPC
PCB-98	[0.715]	J EMPC	PCB-120	(0.248)		PCB-154	4.04		PCB-164	[9.21]	EMPC
PCB-88	(0.459)		PCB-108/124	[3.85]	EMPC C	PCB-144	9.07		PCB-163/138/129	170	C
PCB-91	28		PCB-107	7.98		PCB-147/149	159	C	PCB-160	(0.285)	
PCB-84	41.9		PCB-123	2.78		PCB-134	9.86		PCB-158	16.5	
PCB-89	2.5		PCB-106	(0.288)		PCB-143	(0.365)		PCB-128/166	22.5	C
PCB-121	(0.282)		PCB-118	91.1		PCB-139/140	[1.66]	J EMPC C	PCB-159	[1.35]	EMPC
PCB-92	28.5		PCB-122	2.46		PCB-131	1.91		PCB-162	(0.812)	
PCB-113/90/101	147	C	PCB-114	3.1		PCB-142	(0.377)		PCB-167	5.21	
PCB-83	6.41		PCB-105	52.1		PCB-132	58.8		PCB-156/157	12.7	C
PCB-99	64.7		PCB-127	(0.291)		PCB-133	2.84		PCB-169	(1.1)	
PCB-112	(0.259)		PCB-126	(0.685)							
			Conc.	879					**Conc.**	791	
			EMPC	887					**EMPC**	808	

Hepta	**Conc.**	**Qualifiers**	**Hepta**	**Conc.**	**Qualifiers**	**Octa**	**Conc.**	**Qualifiers**	**Nona**	**Conc.**	**Qualifiers**
PCB-188	(0.205)		PCB-174	54		PCB-202	13.5		PCB-208	15.7	
PCB-179	22.5		PCB-177	31.5		PCB-201	7.92		PCB-207	5.6	
PCB-184	(0.212)		PCB-181	(0.919)		PCB-204	(0.323)		PCB-206	45.5	
PCB-176	8.27		PCB-171/173	[14]	EMPC C	PCB-197	1.58				
PCB-186	(0.187)		PCB-172	8.68		PCB-200	[5.12]	EMPC	**Conc.**	66.9	
PCB-178	13.2		PCB-192	(0.725)		PCB-198/199	53.1	C	**EMPC**	66.9	
PCB-175	2.64		PCB-180/193	113	C	PCB-196	20.9				
PCB-187	76.9		PCB-191	[1.42]	EMPC	PCB-203	30.1		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(0.879)		PCB-170	45.8		PCB-195	10.3		PCB-209	28.1	
PCB-183	35.2		PCB-190	7.31		PCB-194	34.4				
PCB-185	[5.22]	EMPC	PCB-189	(0.899)		PCB-205	(1.23)				
			Conc.	419		**Conc.**	172				
			EMPC	439		**EMPC**	177				

Sample ID: GP-MW-16-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.07 g	Sample ID:	B3245_16683_PCB_007-R1-D2	Date Extracted:	15-May-2019
Date Collected:	26-Apr-2019	% Solid	86.8 %	QC Batch No.:	16683	Date Analyzed:	20-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/g	pg/g	pg/g			%
PCB-77 33'44'-TeCB	12.5				ES PCB-1	54.5
PCB-81 344'5-TeCB	ND	2.12			ES PCB-3	68.9
PCB-105 233'44'-PeCB	71.6				ES PCB-4	70
PCB-114 2344'5-PeCB	4.08				ES PCB-15	82.5
PCB-118 23'44'5-PeCB	187				ES PCB-19	81.5
PCB-123 23'44'5'-PeCB	EMPC		3.28		ES PCB-37	78.9
PCB-126 33'44'5-PeCB	EMPC		8.27		ES PCB-54	79.6
PCB-156/157 233'44'5/233'44'5'-HxCB	52.9			C	ES PCB-77	66.4
PCB-167 23'44'55'-HxCB	33.8				ES PCB-81	66.2
PCB-169 33'44'55'-HxCB	ND	3.47			ES PCB-104	113
PCB-189 233'44'55'-HpCB	EMPC		7.51		ES PCB-105	77.6
					ES PCB-114	76.6
TEQs (WHO 2005 M/H)					ES PCB-118	79.1
					ES PCB-123	83.3
ND = 0	0.0117		0.839		ES PCB-126	59.4
ND = 0.5 x DL	0.224		0.892		ES PCB-153	106
ND = DL	0.436		0.944		ES PCB-155	136
					ES PCB-156/157	88.6
Totals					ES PCB-167	89.5
Mono-CB	4.78		8.56		ES PCB-169	73.5
Di-CB	37.5				ES PCB-170	105
Tri-CB	188		192		ES PCB-180	115
Tetra-CB	653		657		ES PCB-188	116
Penta-CB	2,020		2,040		ES PCB-189	96.9
Hexa-CB	2,480		2,480		ES PCB-202	87.5
Hepta-CB	1,280		1,290		ES PCB-205	108
Octa-CB	223		274		ES PCB-206	123
Nona-CB	67.4				ES PCB-208	108
Deca-CB	21.8				ES PCB-209	130
					CS PCB-28	103
Total PCB (Mono-Deca)	6,980		7,070		CS PCB-111	92.8
					CS PCB-178	109

Checkcode: 778-496-NFL/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:17 Analyst: ah

Sample ID: GP-MW-16-SS — Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.07 g	Sample ID:	B3245_16683_PCB_007-R1-D2	Date Extracted:	15-May-2019
Date Collected:	26-Apr-2019	% Solid	86.8 %	QC Batch No.:	16683	Date Analyzed:	20-May-2019
		Units	pg/g	Checkcode:	778-496-NFL/C	Time Analyzed:	13:13:45

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	[3.78]	EMPC	PCB-19	2.66		PCB-54	(0.661)		PCB-72	(1.83)	
PCB-2	(0.859)		PCB-30/18	21.2	C	PCB-50/53	19.1	C	PCB-68	(1.97)	
PCB-3	4.78		PCB-17	11.6		PCB-45	15.2		PCB-57	(1.95)	
			PCB-27	[1.87]	EMPC	PCB-51	[3.84]	EMPC	PCB-58	(1.75)	
Conc.	4.78		PCB-24	(1.06)		PCB-46	10.1		PCB-67	(1.78)	
EMPC	8.56		PCB-16	10.7		PCB-52	133		PCB-63	(2.13)	
			PCB-32	7.35		PCB-73	(1.02)		PCB-61/70/74/76	116	C
Di	**Conc.**	**Qualifiers**	PCB-34	(1.47)		PCB-43	(1.3)		PCB-66	60.3	
PCB-4	3.95		PCB-23	(1.48)		PCB-69/49	43.3	C	PCB-55	(1.79)	
PCB-10	(0.522)		PCB-26/29	5.96	C	PCB-48	11.4		PCB-56	26.5	
PCB-9	(0.377)		PCB-25	[2.13]	EMPC	PCB-44/47/65	79.2	C	PCB-60	18	
PCB-7	(0.42)		PCB-31	35.1		PCB-59/62/75	8.13	C	PCB-80	(1.86)	
PCB-6	2.03		PCB-28/20	42.5	C	PCB-42	19.8		PCB-79	2.98	
PCB-5	(0.433)		PCB-21/33	20.8	C	PCB-41	6.98		PCB-78	(1.99)	
PCB-8	10.4		PCB-22	12.1		PCB-71/40	33.6	C	PCB-81	(2.12)	
PCB-14	(0.424)		PCB-36	(1.26)		PCB-64	37.2		PCB-77	12.5	
PCB-11	7.08	B	PCB-39	(1.39)							
PCB-13/12	2.77	C	PCB-38	(1.38)							
PCB-15	11.4		PCB-35	(1.43)							
			PCB-37	18							
Conc.	37.5		**Conc.**	188					**Conc.**	653	
EMPC	37.5		**EMPC**	192					**EMPC**	657	

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Totals	Conc.	EMPC
Mono-Tri	230	238
Tetra-Hexa	5,150	5,180
Hepta-Deca	1,600	1,660
Mono-Deca	6,980	7,070

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Sample ID: GP-MW-16-SS											Method 1668C
Penta	**Conc.**	**Qualifiers**	**Penta**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**
PCB-104	(0.344)		PCB-109/119/86/97/125/87	171	C	PCB-155	(0.415)		PCB-165	(0.682)	
PCB-96	2.78		PCB-117	4.05		PCB-152	(0.389)		PCB-146	83.4	
PCB-103	2.93		PCB-116/85	41.7	C	PCB-150	(0.441)		PCB-161	(0.58)	
PCB-94	(2.18)		PCB-110	363		PCB-136	77.4		PCB-153/168	379	C
PCB-95	391		PCB-115	(1.29)		PCB-145	(0.41)		PCB-141	97.8	
PCB-100/93	(1.94)	C	PCB-82	31.3		PCB-148	(0.812)		PCB-130	46.9	
PCB-102	12.1		PCB-111	(1.37)		PCB-151/135	214	C	PCB-137	24.5	
PCB-98	(1.94)		PCB-120	(1.11)		PCB-154	8.81		PCB-164	30.7	
PCB-88	(2.05)		PCB-108/124	12.5	C	PCB-144	30.5		PCB-163/138/129	518	C
PCB-91	59		PCB-107	19.5		PCB-147/149	488	C	PCB-160	(0.662)	
PCB-84	136		PCB-123	[3.28]	EMPC	PCB-134	33.9		PCB-158	50.8	
PCB-89	5.87		PCB-106	(1.26)		PCB-143	(0.849)		PCB-128/166	76.1	C
PCB-121	(1.24)		PCB-118	187		PCB-139/140	11.5	C	PCB-159	4.24	
PCB-92	65.6		PCB-122	[3.15]	EMPC	PCB-131	[7.04]	EMPC	PCB-162	(2.21)	
PCB-113/90/101	319	C	PCB-114	4.08		PCB-142	(0.921)		PCB-167	33.8	
PCB-83	22.9		PCB-105	71.6		PCB-132	203		PCB-156/157	52.9	C
PCB-99	99.7		PCB-127	(1.44)		PCB-133	9.72		PCB-169	(3.47)	
PCB-112	(1.21)		PCB-126	[8.27]	EMPC						
			Conc.	2,020					**Conc.**	2,480	
			EMPC	2,040					**EMPC**	2,480	

Hepta	**Conc.**	**Qualifiers**	**Hepta**	**Conc.**	**Qualifiers**	**Octa**	**Conc.**	**Qualifiers**	**Nona**	**Conc.**	**Qualifiers**
PCB-188	(0.466)		PCB-174	179		PCB-202	[19]	EMPC	PCB-208	15.3	
PCB-179	51.8		PCB-177	99.5		PCB-201	14.8		PCB-207	5.8	
PCB-184	(0.476)		PCB-181	(2.37)		PCB-204	(0.531)		PCB-206	46.3	
PCB-176	20		PCB-171/173	54.3	C	PCB-197	(0.58)				
PCB-186	(0.42)		PCB-172	29.8		PCB-200	9.48		**Conc.**	67.4	
PCB-178	30.6		PCB-192	(1.84)		PCB-198/199	66.9	C	**EMPC**	67.4	
PCB-175	7.03		PCB-180/193	321	C	PCB-196	37.6				
PCB-187	186		PCB-191	5.27		PCB-203	[32.4]	EMPC	**Deca**	**Conc.**	**Qualifiers**
PCB-182	(2.23)		PCB-170	159		PCB-195	22.9		PCB-209	21.8	
PCB-183	109		PCB-190	19.7		PCB-194	71.1				
PCB-185	12.8		PCB-189	[7.51]	EMPC	PCB-205	(2.73)				
			Conc.	1,280		**Conc.**	223				
			EMPC	1,290		**EMPC**	274				

Sample ID: GP-MW-17-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.07 g	Sample ID:	B3245_16683_PCB_008-R1-RJ	Date Extracted:	15-May-2019
Date Collected:	26-Apr-2019	% Solid	83.5 %	QC Batch No.:	16683	Date Analyzed:	20-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/g	pg/g	pg/g			%
PCB-77 33'44'-TeCB	ND	0.74			ES PCB-1	45
PCB-81 344'5-TeCB	ND	0.831			ES PCB-3	59.6
PCB-105 233'44'-PeCB	2.42				ES PCB-4	63.3
PCB-114 2344'5-PeCB	ND	0.475			ES PCB-15	74.5
PCB-118 23'44'5-PeCB	5.86				ES PCB-19	72
PCB-123 23'44'5'-PeCB	ND	0.532			ES PCB-37	80.6
PCB-126 33'44'5-PeCB	ND	0.65			ES PCB-54	64.7
PCB-156/157 233'44'5/233'44'5'-HxCB	2.48			C	ES PCB-77	77.5
PCB-167 23'44'55'-HxCB	EMPC		1.59		ES PCB-81	77.6
PCB-169 33'44'55'-HxCB	ND	1.57			ES PCB-104	84.9
PCB-189 233'44'55'-HpCB	ND	1.44			ES PCB-105	94.1
					ES PCB-114	97.4
TEQs (WHO 2005 M/H)					ES PCB-118	94.4
					ES PCB-123	92.7
ND = 0	0.000323		0.00037		ES PCB-126	91.4
ND = 0.5 x DL	0.0566		0.0566		ES PCB-153	100
ND = DL	0.113		0.113		ES PCB-155	102
					ES PCB-156/157	117
Totals					ES PCB-167	103
Mono-CB	14.9				ES PCB-169	96.5
Di-CB	9.92				ES PCB-170	96.7
Tri-CB	4.98		6.64		ES PCB-180	90.3
Tetra-CB	18.5		21.3		ES PCB-188	105
Penta-CB	42		45		ES PCB-189	100
Hexa-CB	128		137		ES PCB-202	98.8
Hepta-CB	91		103		ES PCB-205	111
Octa-CB	24.2		27.1		ES PCB-206	130
Nona-CB	ND	3.19			ES PCB-208	107
Deca-CB	ND	1.81			ES PCB-209	145
					CS PCB-28	96.6
Total PCB (Mono-Deca)	333		365		CS PCB-111	102
					CS PCB-178	106

Checkcode: 653-026-ZFL/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:17 Analyst: ah

Sample ID: GP-MW-17-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.07 g	Sample ID:	B3245_16683_PCB_008-R1-RJ	Date Extracted:	15-May-2019
Date Collected:	26-Apr-2019	% Solid	83.5 %	QC Batch No.:	16683	Date Analyzed:	20-May-2019
		Units	pg/g	Checkcode:	653-026-ZFL/C	Time Analyzed:	14:11:16

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	14.9		PCB-19	(1.87)		PCB-54	(0.772)		PCB-72	(0.716)	
PCB-2	(0.767)		PCB-30/18	(1.34)	C	PCB-50/53	(0.95)	C	PCB-68	(0.773)	
PCB-3	(0.824)		PCB-17	(1.96)		PCB-45	(1.14)		PCB-57	(0.765)	
			PCB-27	(1.4)		PCB-51	(0.939)		PCB-58	(0.684)	
Conc.	14.9		PCB-24	(1.36)		PCB-46	(1.2)		PCB-67	(0.697)	
EMPC	14.9		PCB-16	(2.02)		PCB-52	3.05		PCB-63	(0.836)	
			PCB-32	(1.27)		PCB-73	(0.728)		PCB-61/70/74/76	6.03	C
Di	**Conc.**	**Qualifiers**	PCB-34	(1.29)		PCB-43	(0.924)		PCB-66	3.32	
PCB-4	1.07		PCB-23	(1.3)		PCB-69/49	[1.66]	J EMPC C	PCB-55	(0.701)	
PCB-10	(0.338)		PCB-26/29	(1.28)	C	PCB-48	(1.01)		PCB-56	[1.18]	EMPC
PCB-9	(0.443)		PCB-25	(1.1)		PCB-44/47/65	3.32	C	PCB-60	(0.884)	
PCB-7	(0.494)		PCB-31	2.2		PCB-59/62/75	(0.754)	C	PCB-80	(0.73)	
PCB-6	(0.423)		PCB-28/20	2.79	C	PCB-42	(1.1)		PCB-79	(0.681)	
PCB-5	(0.508)		PCB-21/33	(1.25)	C	PCB-41	(1.24)		PCB-78	(0.779)	
PCB-8	1.46		PCB-22	(1.13)		PCB-71/40	1.15	J C	PCB-81	(0.831)	
PCB-14	(0.497)		PCB-36	(1.1)		PCB-64	1.59		PCB-77	(0.74)	
PCB-11	5.61	B	PCB-39	(1.22)							
PCB-13/12	(0.492)	C	PCB-38	(1.21)							
PCB-15	1.78		PCB-35	(1.26)							
			PCB-37	[1.66]	EMPC						
Conc.	9.92		**Conc.**	4.98					**Conc.**	18.5	
EMPC	9.92		**EMPC**	6.64					**EMPC**	21.3	

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Totals	Conc.	EMPC
Mono-Tri	29.8	31.4
Tetra-Hexa	188	203
Hepta-Deca	115	130
Mono-Deca	333	365

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Sample ID: GP-MW-17-SS — Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.403)		PCB-109/119/86/97/125/87	3.78	J C	PCB-155	(0.394)		PCB-165	(0.5)	
PCB-96	(0.406)		PCB-117	(0.566)		PCB-152	(0.37)		PCB-146	5.15	
PCB-103	(0.686)		PCB-116/85	[1.95]	J EMPC C	PCB-150	(0.42)		PCB-161	(0.425)	
PCB-94	(0.837)		PCB-110	12.4		PCB-136	[2.65]	EMPC	PCB-153/168	23.1	C
PCB-95	5.3		PCB-115	(0.498)		PCB-145	(0.39)		PCB-141	[2.48]	EMPC
PCB-100/93	(0.745)	C	PCB-82	(0.74)		PCB-148	(0.596)		PCB-130	[2.65]	EMPC
PCB-102	(0.555)		PCB-111	(0.528)		PCB-151/135	5.13	C	PCB-137	2.21	
PCB-98	(0.747)		PCB-120	(0.428)		PCB-154	(0.564)		PCB-164	3.67	
PCB-88	(0.787)		PCB-108/124	(0.517)	C	PCB-144	(0.602)		PCB-163/138/129	39.6	C
PCB-91	1.33		PCB-107	0.667	J	PCB-147/149	23.3	C	PCB-160	(0.486)	
PCB-84	[1.11]	EMPC	PCB-123	(0.532)		PCB-134	(0.721)		PCB-158	4.12	
PCB-89	(0.713)		PCB-106	(0.486)		PCB-143	(0.623)		PCB-128/166	8.23	C
PCB-121	(0.477)		PCB-118	5.86		PCB-139/140	0.887	J C	PCB-159	(0.811)	
PCB-92	1.22		PCB-122	(0.566)		PCB-131	(0.664)		PCB-162	(0.946)	
PCB-113/90/101	6.01	C	PCB-114	(0.475)		PCB-142	(0.676)		PCB-167	[1.59]	EMPC
PCB-83	(0.924)		PCB-105	2.42		PCB-132	9.89		PCB-156/157	2.48	C
PCB-99	3.05		PCB-127	(0.464)		PCB-133	(0.592)		PCB-169	(1.57)	
PCB-112	(0.464)		PCB-126	(0.65)							
			Conc.	42					**Conc.**	128	
			EMPC	45					**EMPC**	137	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.434)		PCB-174	12.8		PCB-202	(1.5)		PCB-208	(1.85)	
PCB-179	3.57		PCB-177	7.84		PCB-201	(1.7)		PCB-207	(1.89)	
PCB-184	(0.444)		PCB-181	(1.54)		PCB-204	(1.46)		PCB-206	(4.54)	
PCB-176	1.09		PCB-171/173	3.84	C	PCB-197	(1.6)				
PCB-186	(0.391)		PCB-172	2.22		PCB-200	(1.57)		**Conc.**	0	
PCB-178	2.73		PCB-192	(1.2)		PCB-198/199	8.61	C	**EMPC**	0	
PCB-175	(1.73)		PCB-180/193	28.4	C	PCB-196	3.69				
PCB-187	17.8		PCB-191	(1.38)		PCB-203	5.77		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(1.45)		PCB-170	[11.8]	EMPC	PCB-195	[2.87]	EMPC	PCB-209	(1.81)	
PCB-183	8.19		PCB-190	2.52		PCB-194	6.16				
PCB-185	(1.88)		PCB-189	(1.44)		PCB-205	(2.64)				
			Conc.	91		**Conc.**	24.2				
			EMPC	103		**EMPC**	27.1				

Sample ID: GP-801-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.06 g	Sample ID:	B3245_16683_PCB_009-R1-RJ	Date Extracted:	15-May-2019
Date Collected:	26-Apr-2019	% Solid	83.3 %	QC Batch No.:	16683	Date Analyzed:	20-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/g	pg/g	pg/g			%
PCB-77 33'44'-TeCB	EMPC		3.24		ES PCB-1	37.6
PCB-81 344'5-TeCB	ND	0.636			ES PCB-3	49.2
PCB-105 233'44'-PeCB	14.3				ES PCB-4	51.1
PCB-114 2344'5-PeCB	EMPC		0.694	J	ES PCB-15	75.9
PCB-118 23'44'5-PeCB	44				ES PCB-19	65.6
PCB-123 23'44'5'-PeCB	1.17				ES PCB-37	80
PCB-126 33'44'5-PeCB	ND	0.319			ES PCB-54	61
PCB-156/157 233'44'5/233'44'5'-HxCB	9.66			C	ES PCB-77	86.1
PCB-167 23'44'55'-HxCB	4.19				ES PCB-81	86.9
PCB-169 33'44'55'-HxCB	ND	0.444			ES PCB-104	75.3
PCB-189 233'44'55'-HpCB	1.49				ES PCB-105	103
					ES PCB-114	97.5
TEQs (WHO 2005 M/H)					ES PCB-118	98.5
					ES PCB-123	99.1
ND = 0	0.00225		0.00259		ES PCB-126	96.1
ND = 0.5 x DL	0.025		0.0253		ES PCB-153	99.8
ND = DL	0.0478		0.0481		ES PCB-155	96.2
					ES PCB-156/157	119
Totals					ES PCB-167	114
Mono-CB	ND	0.779			ES PCB-169	119
Di-CB	12.8				ES PCB-170	99.2
Tri-CB	59.7		65.8		ES PCB-180	94
Tetra-CB	194		212		ES PCB-188	99.6
Penta-CB	504		516		ES PCB-189	101
Hexa-CB	669		671		ES PCB-202	104
Hepta-CB	276		284		ES PCB-205	113
Octa-CB	64.2		66.2		ES PCB-206	126
Nona-CB	8.14				ES PCB-208	105
Deca-CB	4.76				ES PCB-209	133
					CS PCB-28	97.4
Total PCB (Mono-Deca)	1,790		1,840		CS PCB-111	101
					CS PCB-178	112

Checkcode: 308-818-VBT/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:17 Analyst: ah

Sample ID: GP-801-SS — Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.06 g	Sample ID:	B3245_16683_PCB_009-R1-RJ	Date Extracted:	15-May-2019
Date Collected:	26-Apr-2019	% Solid	83.3 %	QC Batch No.:	16683	Date Analyzed:	20-May-2019
		Units	pg/g	Checkcode:	308-818-VBT/C	Time Analyzed:	15:08:49

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	(0.827)		PCB-19	(1.36)		PCB-54	(0.378)		PCB-72	[1.24]	EMPC
PCB-2	(0.682)		PCB-30/18	6.38	C	PCB-50/53	4.92	C	PCB-68	1.61	
PCB-3	(0.732)		PCB-17	4.34		PCB-45	[3.78]	EMPC	PCB-57	(0.586)	
			PCB-27	(1.01)		PCB-51	[1.11]	EMPC	PCB-58	(0.524)	
Conc.	0		PCB-24	(0.984)		PCB-46	2.21		PCB-67	(0.534)	
EMPC	0		PCB-16	3.04		PCB-52	26.1		PCB-63	(0.641)	
			PCB-32	4.79		PCB-73	(0.397)		PCB-61/70/74/76	37.9	C
Di	**Conc.**	**Qualifiers**	PCB-34	(0.893)		PCB-43	(0.504)		PCB-66	27.8	
PCB-4	0.895	J	PCB-23	(0.9)		PCB-69/49	18.5	C	PCB-55	(0.537)	
PCB-10	(0.42)		PCB-26/29	1.94	J C	PCB-48	[2.71]	EMPC	PCB-56	10.2	
PCB-9	(0.449)		PCB-25	(0.759)		PCB-44/47/65	27.8	C	PCB-60	[4.73]	EMPC
PCB-7	(0.5)		PCB-31	12.1		PCB-59/62/75	2.33	J C	PCB-80	(0.559)	
PCB-6	0.406	J	PCB-28/20	17.7	C	PCB-42	9.29		PCB-79	0.813	J
PCB-5	(0.515)		PCB-21/33	5.51	C	PCB-41	[0.835]	J EMPC	PCB-78	(0.597)	
PCB-8	2.16		PCB-22	3.99		PCB-71/40	12.3	C	PCB-81	(0.636)	
PCB-14	(0.504)		PCB-36	(0.765)		PCB-64	12.2		PCB-77	[3.24]	EMPC
PCB-11	4.47	B	PCB-39	(0.846)							
PCB-13/12	(0.499)	C	PCB-38	(0.839)							
PCB-15	4.83		PCB-35	(0.872)							
			PCB-37	[6.06]	EMPC						
Conc.	12.8		**Conc.**	59.7					**Conc.**	194	
EMPC	12.8		**EMPC**	65.8					**EMPC**	212	

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Totals	Conc.	EMPC
Mono-Tri	72.5	78.5
Tetra-Hexa	1,370	1,400
Hepta-Deca	353	363
Mono-Deca	1,790	1,840

SGS

Sample ID: GP-801-SS									Method 1668C		
Penta	**Conc.**	**Qualifiers**	**Penta**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**
PCB-104	(0.189)		PCB-109/119/86/97/125/87	36.2	C	PCB-155	(0.222)		PCB-165	(0.245)	
PCB-96	1.02		PCB-117	2.95		PCB-152	(0.209)		PCB-146	28.3	
PCB-103	[2.29]	EMPC	PCB-116/85	9.29	C	PCB-150	1.42		PCB-161	(0.209)	
PCB-94	(0.587)		PCB-110	103		PCB-136	26.3		PCB-153/168	128	C
PCB-95	79.8		PCB-115	(0.349)		PCB-145	(0.22)		PCB-141	24.8	
PCB-100/93	2.62	C	PCB-82	[7.47]	EMPC	PCB-148	0.766	J	PCB-130	9.53	
PCB-102	2.71		PCB-111	(0.37)		PCB-151/135	51.5	C	PCB-137	5.27	
PCB-98	(0.523)		PCB-120	1.33		PCB-154	7.52		PCB-164	8.46	
PCB-88	(0.551)		PCB-108/124	2.1	C	PCB-144	6.18		PCB-163/138/129	136	C
PCB-91	21.4		PCB-107	4.02		PCB-147/149	133	C	PCB-160	(0.238)	
PCB-84	26.6		PCB-123	1.17		PCB-134	8.34		PCB-158	12.4	
PCB-89	[0.988]	J EMPC	PCB-106	(0.34)		PCB-143	(0.306)		PCB-128/166	16.4	C
PCB-121	(0.334)		PCB-118	44		PCB-139/140	2.72	C	PCB-159	[0.897]	J EMPC
PCB-92	20.2		PCB-122	[0.771]	J EMPC	PCB-131	[1.51]	EMPC	PCB-162	(0.322)	
PCB-113/90/101	82.9	C	PCB-114	[0.694]	J EMPC	PCB-142	(0.332)		PCB-167	4.19	
PCB-83	5.05		PCB-105	14.3		PCB-132	44.1		PCB-156/157	9.66	C
PCB-99	42.8		PCB-127	(0.336)		PCB-133	3.54		PCB-169	(0.444)	
PCB-112	(0.325)		PCB-126	(0.319)							
			Conc.	504					**Conc.**	669	
			EMPC	516					**EMPC**	671	

Hepta	**Conc.**	**Qualifiers**	**Hepta**	**Conc.**	**Qualifiers**	**Octa**	**Conc.**	**Qualifiers**	**Nona**	**Conc.**	**Qualifiers**
PCB-188	(0.205)		PCB-174	35		PCB-202	3.43		PCB-208	1.91	
PCB-179	14.6		PCB-177	21		PCB-201	2.89		PCB-207	(0.977)	
PCB-184	(0.21)		PCB-181	(0.502)		PCB-204	(0.355)		PCB-206	6.23	
PCB-176	5.2		PCB-171/173	11.2	C	PCB-197	(0.388)				
PCB-186	(0.185)		PCB-172	5.42		PCB-200	[1.96]	EMPC	**Conc.**	8.14	
PCB-178	[6.97]	EMPC	PCB-192	(0.39)		PCB-198/199	17.6	C	**EMPC**	8.14	
PCB-175	1.39		PCB-180/193	74	C	PCB-196	9.53				
PCB-187	42.4		PCB-191	[1.26]	EMPC	PCB-203	9.97		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(0.472)		PCB-170	34.1		PCB-195	6.58		PCB-209	4.76	
PCB-183	19.8		PCB-190	6.78		PCB-194	14.2				
PCB-185	3.37		PCB-189	1.49		PCB-205	(1.13)				
			Conc.	276		**Conc.**	64.2				
			EMPC	284		**EMPC**	66.2				

Sample ID: GP-802-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.09 g	Sample ID:	B3245_16683_PCB_010-R1	Date Extracted:	15-May-2019
Date Collected:	26-Apr-2019	% Solid	90.5 %	QC Batch No.:	16683	Date Analyzed:	20-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/g	pg/g	pg/g			%
PCB-77 33'44'-TeCB	10.6				ES PCB-1	32.9
PCB-81 344'5-TeCB	ND	0.792			ES PCB-3	47.5
PCB-105 233'44'-PeCB	20.1				ES PCB-4	49.8
PCB-114 2344'5-PeCB	EMPC		1.2		ES PCB-15	73.4
PCB-118 23'44'5-PeCB	63.3				ES PCB-19	62.1
PCB-123 23'44'5'-PeCB	1.16				ES PCB-37	78.6
PCB-126 33'44'5-PeCB	ND	0.331			ES PCB-54	51
PCB-156/157 233'44'5/233'44'5'-HxCB	9.04			C	ES PCB-77	83.4
PCB-167 23'44'55'-HxCB	3.12				ES PCB-81	83.6
PCB-169 33'44'55'-HxCB	ND	0.701			ES PCB-104	75.6
PCB-189 233'44'55'-HpCB	ND	0.518			ES PCB-105	100
					ES PCB-114	97.6
TEQs (WHO 2005 M/H)					ES PCB-118	100
					ES PCB-123	102
ND = 0	0.00396		0.004		ES PCB-126	95.4
ND = 0.5 x DL	0.0312		0.0312		ES PCB-153	97
ND = DL	0.0584		0.0584		ES PCB-155	95.9
					ES PCB-156/157	109
Totals					ES PCB-167	105
Mono-CB	3.67		7.11		ES PCB-169	110
Di-CB	379				ES PCB-170	101
Tri-CB	1,800		1,800		ES PCB-180	95.8
Tetra-CB	881		887		ES PCB-188	92.9
Penta-CB	534		539		ES PCB-189	98.3
Hexa-CB	393		404		ES PCB-202	98.4
Hepta-CB	139		143		ES PCB-205	112
Octa-CB	43.5		55		ES PCB-206	129
Nona-CB	12.9		17.7		ES PCB-208	106
Deca-CB	12.2				ES PCB-209	134
					CS PCB-28	95.8
Total PCB (Mono-Deca)	4,200		4,250		CS PCB-111	105
					CS PCB-178	105

Checkcode: 735-146-TYR/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:16 Analyst: ah

Sample ID: GP-802-SS

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	30-Apr-2019
Project ID:	Nord Door	Weight/Volume:	10.09 g	Sample ID:	B3245_16683_PCB_010-R1	Date Extracted:	15-May-2019
Date Collected:	26-Apr-2019	% Solid	90.5 %	QC Batch No.:	16683	Date Analyzed:	20-May-2019
		Units	pg/g	Checkcode:	735-146-TYR/C	Time Analyzed:	01:04:07

Mono	Conc.	Qualifiers
PCB-1	3.67	
PCB-2	(0.631)	
PCB-3	[3.44]	EMPC
Conc.	3.67	
EMPC	7.11	
Di	**Conc.**	**Qualifiers**
PCB-4	82.5	
PCB-10	2.27	
PCB-9	5.08	
PCB-7	3.52	
PCB-6	72.3	
PCB-5	1.38	
PCB-8	133	
PCB-14	(0.403)	
PCB-11	7.43	B
PCB-13/12	9.65	C
PCB-15	61	
Conc.	379	
EMPC	379	

Tri	Conc.	Qualifiers
PCB-19	36.7	
PCB-30/18	311	C
PCB-17	195	
PCB-27	27	
PCB-24	6.41	
PCB-16	179	
PCB-32	110	
PCB-34	[2.61]	EMPC
PCB-23	(1.28)	
PCB-26/29	72.8	C
PCB-25	36.5	
PCB-31	220	
PCB-28/20	301	C
PCB-21/33	135	C
PCB-22	97.4	
PCB-36	(1.1)	
PCB-39	(1.21)	
PCB-38	(1.21)	
PCB-35	(1.25)	
PCB-37	76.4	
Conc.	1,800	
EMPC	1,800	

Tetra	Conc.	Qualifiers
PCB-54	(0.644)	
PCB-50/53	19.1	C
PCB-45	27.2	
PCB-51	[5]	EMPC
PCB-46	11	
PCB-52	107	
PCB-73	(0.473)	
PCB-43	4.59	
PCB-69/49	76	C
PCB-48	27.8	
PCB-44/47/65	115	C
PCB-59/62/75	15	C
PCB-42	40.5	
PCB-41	8.55	
PCB-71/40	58	C
PCB-64	55.4	

Tetra	Conc.	Qualifiers
PCB-72	[1.56]	EMPC
PCB-68	(0.755)	
PCB-57	(0.745)	
PCB-58	(0.669)	
PCB-67	4.45	
PCB-63	4.89	
PCB-61/70/74/76	148	C
PCB-66	91.5	
PCB-55	(0.692)	
PCB-56	45.1	
PCB-60	11.3	
PCB-80	(0.71)	
PCB-79	(0.643)	
PCB-78	(0.755)	
PCB-81	(0.792)	
PCB-77	10.6	
Conc.	881	
EMPC	887	

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Totals	Conc.	EMPC
Mono-Tri	2,180	2,190
Tetra-Hexa	1,810	1,830
Hepta-Deca	207	228
Mono-Deca	4,200	4,250

Sample ID: GP-802-SS											Method 1668C
Penta	**Conc.**	**Qualifiers**	**Penta**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**
PCB-104	(0.307)		PCB-109/119/86/97/125/87	52.3	C	PCB-155	(0.239)		PCB-165	(0.284)	
PCB-96	0.923	J	PCB-117	1.55		PCB-152	(0.223)		PCB-146	14.1	
PCB-103	1.63		PCB-116/85	13.6	C	PCB-150	(0.256)		PCB-161	(0.251)	
PCB-94	(0.503)		PCB-110	94.9		PCB-136	12.8		PCB-153/168	70.5	C
PCB-95	71		PCB-115	(0.255)		PCB-145	(0.233)		PCB-141	13	
PCB-100/93	(0.452)	C	PCB-82	9		PCB-148	(0.344)		PCB-130	8.99	
PCB-102	2.34		PCB-111	(0.309)		PCB-151/135	28.4	C	PCB-137	4.66	
PCB-98	(0.474)		PCB-120	(0.255)		PCB-154	2.42		PCB-164	[5.44]	EMPC
PCB-88	(0.472)		PCB-108/124	2.06	C	PCB-144	2.9		PCB-163/138/129	91.5	C
PCB-91	13.9		PCB-107	5.77		PCB-147/149	68.4	C	PCB-160	(0.293)	
PCB-84	29.2		PCB-123	1.16		PCB-134	[5.41]	EMPC	PCB-158	8.94	
PCB-89	(0.434)		PCB-106	(0.296)		PCB-143	(0.375)		PCB-128/166	14.8	C
PCB-121	(0.29)		PCB-118	63.3		PCB-139/140	1.9	J C	PCB-159	(0.479)	
PCB-92	20		PCB-122	0.947	J	PCB-131	1.29		PCB-162	(0.562)	
PCB-113/90/101	90.2	C	PCB-114	[1.2]	EMPC	PCB-142	(0.387)		PCB-167	3.12	
PCB-83	[4.7]	EMPC	PCB-105	20.1		PCB-132	34.4		PCB-156/157	9.04	C
PCB-99	39.7		PCB-127	(0.335)		PCB-133	1.75		PCB-169	(0.701)	
PCB-112	(0.266)		PCB-126	(0.331)							
			Conc.	534					**Conc.**	393	
			EMPC	539					**EMPC**	404	

Hepta	**Conc.**	**Qualifiers**	**Hepta**	**Conc.**	**Qualifiers**	**Octa**	**Conc.**	**Qualifiers**	**Nona**	**Conc.**	**Qualifiers**
PCB-188	(0.192)		PCB-174	17.4		PCB-202	5.32		PCB-208	[4.81]	EMPC
PCB-179	7.92		PCB-177	10.8		PCB-201	2.91		PCB-207	(1.28)	
PCB-184	(0.198)		PCB-181	(0.465)		PCB-204	(0.296)		PCB-206	12.9	
PCB-176	3.14		PCB-171/173	5.74	C	PCB-197	(0.316)				
PCB-186	(0.175)		PCB-172	2.72		PCB-200	[1.85]	EMPC	**Conc.**	12.9	
PCB-178	[3.88]	EMPC	PCB-192	(0.367)		PCB-198/199	16.8	C	**EMPC**	17.7	
PCB-175	(0.522)		PCB-180/193	35.4	C	PCB-196	6.22				
PCB-187	25.4		PCB-191	(0.423)		PCB-203	8.81		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(0.445)		PCB-170	15.1		PCB-195	3.5		PCB-209	12.2	
PCB-183	10.6		PCB-190	2.83		PCB-194	[9.63]	EMPC			
PCB-185	1.65		PCB-189	(0.518)		PCB-205	(1.01)				
			Conc.	139		**Conc.**	43.5				
			EMPC	143		**EMPC**	55				

Sample ID: Method Blank B3245_16683

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	n/a
Project ID:	Nord Door	Weight/Volume:	10.00 g	Sample ID:	MB1_16683_PCB_SDS	Date Extracted:	15-May-2019
Date Collected:	n/a	% Solid	n/a	QC Batch No.:	16683	Date Analyzed:	19-May-2019

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/g	pg/g	pg/g			%
PCB-77 33'44'-TeCB	ND	0.853			ES PCB-1	69.1
PCB-81 344'5-TeCB	ND	0.866			ES PCB-3	72.6
PCB-105 233'44'-PeCB	ND	0.361			ES PCB-4	82.3
PCB-114 2344'5-PeCB	ND	0.335			ES PCB-15	76.1
PCB-118 23'44'5-PeCB	ND	0.339			ES PCB-19	86.5
PCB-123 23'44'5'-PeCB	ND	0.338			ES PCB-37	73.7
PCB-126 33'44'5-PeCB	ND	0.457			ES PCB-54	79.4
PCB-156/157 233'44'5/233'44'5'-HxCB	ND	0.628		C	ES PCB-77	77.7
PCB-167 23'44'55'-HxCB	ND	0.413			ES PCB-81	75.9
PCB-169 33'44'55'-HxCB	ND	0.532			ES PCB-104	90.5
PCB-189 233'44'55'-HpCB	ND	0.611			ES PCB-105	93
					ES PCB-114	88.4
TEQs (WHO 2005 M/H)					ES PCB-118	92.2
					ES PCB-123	89.8
ND = 0	0		0		ES PCB-126	87.2
ND = 0.5 x DL	0.031		0.031		ES PCB-153	96.1
ND = DL	0.062		0.062		ES PCB-155	96.7
					ES PCB-156/157	108
Totals					ES PCB-167	102
Mono-CB	ND	0.888			ES PCB-169	105
Di-CB	2.68				ES PCB-170	92.8
Tri-CB	ND	1.33			ES PCB-180	86.9
Tetra-CB	ND	0.888			ES PCB-188	98.5
Penta-CB	ND	0.365			ES PCB-189	98.2
Hexa-CB	ND	0.47			ES PCB-202	101
Hepta-CB	ND	0.572			ES PCB-205	110
Octa-CB	ND	0.486			ES PCB-206	120
Nona-CB	ND	2.36			ES PCB-208	104
Deca-CB	ND	0.94			ES PCB-209	132
					CS PCB-28	85.4
Total PCB (Mono-Deca)	2.68		2.68		CS PCB-111	89.3
					CS PCB-178	99.4

Checkcode: 143-962-JLX/C SGS North America - PCB v0.83 Report Created: 21-May-2019 09:14 Analyst: ah

Sample ID: Method Blank B3245_16683

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SLR International Corp	Matrix:	Solid	Project No.:	B3245	Date Received:	n/a
Project ID:	Nord Door	Weight/Volume:	10.00 g	Sample ID:	MB1_16683_PCB_SDS	Date Extracted:	15-May-2019
Date Collected:	n/a	% Solid	n/a	QC Batch No.:	16683	Date Analyzed:	19-May-2019
		Units	pg/g	Checkcode:	143-962-JLX/C	Time Analyzed:	16:27:04

Mono	Conc.	Qualifiers
PCB-1	(0.887)	
PCB-2	(0.834)	
PCB-3	(0.89)	
Conc.	0	
EMPC	0	

Di	Conc.	Qualifiers
PCB-4	(0.629)	
PCB-10	(0.466)	
PCB-9	(0.4)	
PCB-7	(0.45)	
PCB-6	(0.382)	
PCB-5	(0.466)	
PCB-8	(0.367)	
PCB-14	(0.443)	
PCB-11	2.68	
PCB-13/12	(0.448)	C
PCB-15	(0.419)	
Conc.	2.68	
EMPC	2.68	

Tri	Conc.	Qualifiers
PCB-19	(1.5)	
PCB-30/18	(1.11)	C
PCB-17	(1.61)	
PCB-27	(1.14)	
PCB-24	(1.12)	
PCB-16	(1.68)	
PCB-32	(1.04)	
PCB-34	(1.19)	
PCB-23	(1.18)	
PCB-26/29	(1.16)	C
PCB-25	(0.993)	
PCB-31	(1.02)	
PCB-28/20	(1.09)	C
PCB-21/33	(1.13)	C
PCB-22	(1.03)	
PCB-36	(1.02)	
PCB-39	(1.12)	
PCB-38	(1.11)	
PCB-35	(1.15)	
PCB-37	(1.16)	
Conc.	0	
EMPC	0	

Tetra	Conc.	Qualifiers
PCB-54	(0.629)	
PCB-50/53	(1.1)	C
PCB-45	(1.29)	
PCB-51	(1.11)	
PCB-46	(1.39)	
PCB-52	(0.995)	
PCB-73	(0.848)	
PCB-43	(1.1)	
PCB-69/49	(0.986)	C
PCB-48	(1.18)	
PCB-44/47/65	(1.02)	C
PCB-59/62/75	(0.897)	C
PCB-42	(1.31)	
PCB-41	(1.51)	
PCB-71/40	(1.05)	C
PCB-64	(0.891)	

Tetra	Conc.	Qualifiers
PCB-72	(0.776)	
PCB-68	(0.825)	
PCB-57	(0.814)	
PCB-58	(0.73)	
PCB-67	(0.738)	
PCB-63	(0.892)	
PCB-61/70/74/76	(0.79)	C
PCB-66	(0.764)	
PCB-55	(0.756)	
PCB-56	(0.8)	
PCB-60	(0.928)	
PCB-80	(0.776)	
PCB-79	(0.702)	
PCB-78	(0.825)	
PCB-81	(0.866)	
PCB-77	(0.853)	
Conc.	0	
EMPC	0	

5500 Business Drive
Wilmington, NC 28405, USA
Tel: +1 910 794-1613
www.us.sgs.com

Totals	Conc.	EMPC
Mono-Tri	2.68	2.68
Tetra-Hexa	0	0
Hepta-Deca	0	0
Mono-Deca	2.68	2.68

SGS

Sample ID:	Method Blank B3245_16683										Method 1668C
Penta	**Conc.**	**Qualifiers**	**Penta**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**	**Hexa**	**Conc.**	**Qualifiers**
PCB-104	(0.364)		PCB-109/119/86/97/125/87	(0.374)	C	PCB-155	(0.309)		PCB-165	(0.407)	
PCB-96	(0.371)		PCB-117	(0.348)		PCB-152	(0.288)		PCB-146	(0.41)	
PCB-103	(0.45)		PCB-116/85	(0.397)	C	PCB-150	(0.331)		PCB-161	(0.359)	
PCB-94	(0.545)		PCB-110	(0.316)		PCB-136	(0.343)		PCB-153/168	(0.382)	C
PCB-95	(0.48)		PCB-115	(0.277)		PCB-145	(0.301)		PCB-141	(0.52)	
PCB-100/93	(0.49)	C	PCB-82	(0.475)		PCB-148	(0.492)		PCB-130	(0.607)	
PCB-102	(0.351)		PCB-111	(0.335)		PCB-151/135	(0.485)	C	PCB-137	(0.522)	
PCB-98	(0.514)		PCB-120	(0.277)		PCB-154	(0.462)		PCB-164	(0.352)	
PCB-88	(0.511)		PCB-108/124	(0.333)	C	PCB-144	(0.5)		PCB-163/138/129	(0.459)	C
PCB-91	(0.477)		PCB-107	(0.313)		PCB-147/149	(0.447)	C	PCB-160	(0.419)	
PCB-84	(0.559)		PCB-123	(0.338)		PCB-134	(0.573)		PCB-158	(0.37)	
PCB-89	(0.471)		PCB-106	(0.321)		PCB-143	(0.537)		PCB-128/166	(0.488)	C
PCB-121	(0.315)		PCB-118	(0.339)		PCB-139/140	(0.466)	C	PCB-159	(0.374)	
PCB-92	(0.506)		PCB-122	(0.41)		PCB-131	(0.562)		PCB-162	(0.438)	
PCB-113/90/101	(0.421)	C	PCB-114	(0.335)		PCB-142	(0.553)		PCB-167	(0.413)	
PCB-83	(0.582)		PCB-105	(0.361)		PCB-132	(0.529)		PCB-156/157	(0.628)	C
PCB-99	(0.359)		PCB-127	(0.334)		PCB-133	(0.485)		PCB-169	(0.532)	
PCB-112	(0.289)		PCB-126	(0.457)							
			Conc.	0					**Conc.**	0	
			EMPC	0					**EMPC**	0	

Hepta	**Conc.**	**Qualifiers**	**Hepta**	**Conc.**	**Qualifiers**	**Octa**	**Conc.**	**Qualifiers**	**Nona**	**Conc.**	**Qualifiers**
PCB-188	(0.296)		PCB-174	(0.641)		PCB-202	(0.261)		PCB-208	(1.43)	
PCB-179	(0.28)		PCB-177	(0.645)		PCB-201	(0.297)		PCB-207	(1.51)	
PCB-184	(0.307)		PCB-181	(0.604)		PCB-204	(0.256)		PCB-206	(3.29)	
PCB-176	(0.326)		PCB-171/173	(0.709)	C	PCB-197	(0.273)				
PCB-186	(0.27)		PCB-172	(0.703)		PCB-200	(0.285)		**Conc.**	0	
PCB-178	(0.432)		PCB-192	(0.477)		PCB-198/199	(0.347)	C	**EMPC**	0	
PCB-175	(0.678)		PCB-180/193	(0.579)	C	PCB-196	(0.389)				
PCB-187	(0.562)		PCB-191	(0.55)		PCB-203	(0.312)		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(0.578)		PCB-170	(0.889)		PCB-195	(0.875)		PCB-209	(0.94)	
PCB-183	(0.593)		PCB-190	(0.634)		PCB-194	(0.847)				
PCB-185	(0.75)		PCB-189	(0.611)		PCB-205	(0.711)				
			Conc.	0		**Conc.**	0				
			EMPC	0		**EMPC**	0				

METHOD 1668C **PCB ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8A**

Lab Name: SGS North America
Initial Calibration: ICAL: MM4_PCB_08292018_04Jan2019
Instrument ID: MM4 GC Column ID:
VER Data Filename: 190519S02 Analysis Date: 19-MAY-2019 15:29:33
Lab ID: OPR1_16683_PCB

NATIVE ANALYTES	SPIKE CONC. (pg/uL)	RECOVERY (%)	RANGE (%)			OK
PCB-1 2-MoCB	50	111	60	-	135	Y
PCB-3 4-MoCB	50	109	60	-	135	Y
PCB-4 22'-DiCB	50	113	60	-	135	Y
PCB-15 44'-DiCB	50	98.2	60	-	135	Y
PCB-19 22'6-TrCB	50	105	60	-	135	Y
PCB-37 344'-TrCB	50	97.9	60	-	135	Y
PCB-54 22'66'-TeCB	50	97.8	60	-	135	Y
PCB-77 33'44'-TeCB	50	97.2	60	-	135	Y
PCB-81 344'5-TeCB	50	86.3	60	-	135	Y
PCB-104 22'466'-PeCB	50	88.8	60	-	135	Y
PCB-105 233'44'-PeCB	50	97.4	60	-	135	Y
PCB-114 2344'5-PeCB	50	91.7	60	-	135	Y
PCB-118 23'44'5-PeCB	50	91.5	60	-	135	Y
PCB-123 23'44'5'-PeCB	50	88.5	60	-	135	Y
PCB-126 33'44'5-PeCB	50	110	60	-	135	Y
PCB-155 22'44'66'-HxCB	50	87.5	60	-	135	Y
PCB-156/157 ...-HxCB	100	92.7	60	-	135	Y
PCB-167 23'44'55'-HxCB	50	94.9	60	-	135	Y
PCB-169 33'44'55'-HxCB	50	103	60	-	135	Y
PCB-188 22'34'566'-HpCB	50	97.4	60	-	135	Y
PCB-189 233'44'55'-HpCB	50	96.3	60	-	135	Y
PCB-202 22'33'55'66'-OcCB	50	93.5	60	-	135	Y
PCB-205 233'44'55'6-OcCB	50	96.9	60	-	135	Y
PCB-206 22'33'44'55'6-NoCB	50	106	60	-	135	Y
PCB-208 22'33'455'66'-NoCB	50	100	60	-	135	Y
PCB-209 DeCB	50	88.6	60	-	135	Y

Contract-required recovery limits for OPR as specified in Table 6,
Method 1668C.

Processed: 21 May 2019 09:13 Analyst: ah

METHOD 1668C **PCB ONGOING PRECISION AND RECOVERY (OPR)** **FORM 8B**

Lab Name: SGS North America
Initial Calibration: ICAL: MM4_PCB_08292018_04Jan2019
Instrument ID: MM4 GC Column ID:
VER Data Filename: 190519S02 Analysis Date: 19-MAY-2019 15:29:33
Lab ID: OPR1_16683_PCB

LABELED STANDARDS	SPIKE CONC. (pg/uL)	RECOVERY (%)	RANGE (%)			OK
ES PCB-1	100	72.4	15	-	145	Y
ES PCB-3	100	74.3	15	-	145	Y
ES PCB-4	100	80.8	15	-	145	Y
ES PCB-15	100	78.6	15	-	145	Y
ES PCB-19	100	85.1	15	-	145	Y
ES PCB-37	100	73.1	15	-	145	Y
ES PCB-54	100	73.2	15	-	145	Y
ES PCB-77	100	78.1	40	-	145	Y
ES PCB-81	100	77.8	40	-	145	Y
ES PCB-104	100	84.3	40	-	145	Y
ES PCB-105	100	94.9	40	-	145	Y
ES PCB-114	100	91.4	40	-	145	Y
ES PCB-118	100	91.3	40	-	145	Y
ES PCB-123	100	92.8	40	-	145	Y
ES PCB-126	100	95.2	40	-	145	Y
ES PCB-153	100	89.7	40	-	145	Y
ES PCB-155	100	87.1	40	-	145	Y
ES PCB-156/157	200	108	40	-	145	Y
ES PCB-167	100	101	40	-	145	Y
ES PCB-169	100	115	40	-	145	Y
ES PCB-170	100	89	40	-	145	Y
ES PCB-180	100	84.2	40	-	145	Y
ES PCB-188	100	88.1	40	-	145	Y
ES PCB-189	100	98.1	40	-	145	Y
ES PCB-202	100	97.2	40	-	145	Y
ES PCB-205	100	108	40	-	145	Y
ES PCB-206	100	124	40	-	145	Y
ES PCB-208	100	98	40	-	145	Y
ES PCB-209	100	135	40	-	145	Y
CLEANUP STANDARDS						
CS PCB-28	100	90.4	15	-	145	Y
CS PCB-111	100	93.9	40	-	145	Y
CS PCB-178	100	98.5	40	-	145	Y

Processed: 21 May 2019 09:13 Analyst: ah

Sample Receipt Notification

5500 Business Drive
Wilmington, NC 28405 USA
Tel: 910 794-1613
Toll Free: 866 846-8290
Fax: 910 794-3919

Project Manager:	*Amy Boehm*
Receipt Date & Time:	*30-Apr-19 at 11:48*
AP Project name:	*B3245*
Requested TAT:	*21 days*
Projected due date:	*21-May-19*
Matrix:	*Soil*
Phone#:	*910-794-1613*
Email Address:	*Amy.Boehm@sgs.com*

Company Contact:	*Chris Kramer*
Company:	*SLR International Corp*
Project Name & Site:	*Nord Door*
Project PO#:	*108.00228.00059*
QAAP/Contract #:	*n/a*
Requested Analysis:	*M1613B & M1668C*
Phone#:	*503-723-4423*
Email Address:	*ckramer@slrconsulting.com*

Client Smp ID	AP Smp ID	Sample Condition & Notes	Quantity	Size	Sampling Date	Sampling Time	Received Temp	Container #	Shipping #
GP-MW-11-SS	B3245_001	Soil - D/F & PCB	1	4oz Amber	25-Apr-19	15:10	0.9	1	7869 4161 1768
GP-MW-12-SS	B3245_002	Soil - D/F & PCB	1	4oz Amber	25-Apr-19	11:40	0.9	1	7869 4161 1768
GP-MW-12-SS-18-19	B3245_003	Soil - D/F	1	4oz Amber	25-Apr-19	11:18	0.9	1	7869 4161 1768
GP-MW-13-SS	B3245_004	Soil - D/F & PCB	2	4oz Amber	25-Apr-19	09:40	0.9	1	7869 4161 1768
GP-MW-14-SS	B3245_005	Soil - D/F & PCB	1	4oz Amber	25-Apr-19	14:15	0.9	1	7869 4161 1768
GP-MW-15-SS	B3245_006	Soil - PCB	1	4oz Amber	26-Apr-19	13:42	0.9	1	7869 4161 1768
GP-MW-16-SS	B3245_007	Soil - D/F & PCB	1	4oz Amber	26-Apr-19	13:15	0.9	1	7869 4161 1768
GP-MW-17-SS	B3245_008	Soil - D/F & PCB	1	4oz Amber	26-Apr-19	14:50	0.9	1	7869 4161 1768
GP-801-SS	B3245_009	Soil - D/F & PCB	1	4oz Amber	26-Apr-19	08:45	0.9	1	7869 4161 1768
GP-802-SS	B3245_010	Soil - D/F & PCB	1	4oz Amber	26-Apr-19	16:15	0.9	1	7869 4161 1768

Preservation Type: **Sample Seals:** No

Notes/Comments:

Samples received intact

Any un-extracted sample will be stored for 90 days from reporting date. Additional storage fees may apply for any samples stored longer than 90 days.

Received by: Ashley Owens *Logged in by: Ashley Owens* *QC'ed by:* AK 30 Apr 19

SGS CHAIN OF CUSTODY

B3245

PROJECT INFO

PROJECT: Nord Door

P.O. #: 108.00228.00059

QUOTE #:

SITE REF:

TURN AROUND TIME: Standard TAT

REPORT LEVEL: ☐ Level I ☐ Level II ☐ Level IV

SPECIAL DELIVERABLES:

☐ DoD ☐ EDD/Version:

☐ State of Origin:

SPECIAL INSTRUCTIONS / COMMENTS

SEND DOCUMENTATION / RESULTS TO

COMPANY: SLR

CONTACT: Chris Kramer

ADDRESS: 1800 Blankenship Rd, ste 440

PHONE: 903-723-4423 EMAIL: ckramer@slrconsulting.com

INVOICE TO (☑ CHECK IF SAME)

COMPANY:

CONTACT:

ADDRESS:

PHONE: EMAIL:

	SAMPLE ID / DESCRIPTION	DATE	TIME	QTY	MATRIX	PRESERVATIVE	ANALYSIS & METHOD: Dioxins/Furans	ANALYSIS & METHOD: PCBs								MS MSD	MS/ DUP	REMARKS
001	GP-MW-11-SS	4/25/19	1510	1	Soil		X	X										
002	GP-MW-12-SS	4/25/19	1140	1	Soil		X	X										
**003	GP-MW-12-SS-14-19	4/25/19	1118	1	Soil		X											~~Hold~~ **analyze for D/Fs per email AK 5/1/19
004	GP-MW-13-SS	4/25/19	0940	2	Soil		X	X										
005	GP-MW-14-SS	4/25/19	1415	1	Soil		X	X										
006	GP-MW-15-SS	4/26/19	1342	1	Soil			X										
007	GP-MW-16-SS	4/26/19	1315	1	Soil		X	X										
008	GP-MW-17-SS	4/26/19	1450	1	Soil		X	X										
009	GP-801-SS	4/26/19	0845	1	Soil		X	X										
010	GP-802-SS	4/26/19	1635	1	Soil		X	X										

COLLECTED/RELINQUISHED BY (1):	DATE: 4/29/19	TIME: 1400	RECEIVED BY:
RELINQUISHED BY (2):	DATE:	TIME:	RECEIVED BY:
RELINQUISHED BY (3):	DATE:	TIME:	RECEIVED BY:

RECEIVED BY LABORATORY: Ashley Owens DATE: 4/30/19 TIME: 11:48

COOLER SEAL: ☑ INTACT ☐ BROKEN ☐ ABSENT

CONTAINER SEALS: ☐ INTACT ☐ BROKEN ☑ ABSENT

CARRIER: FedEx TEMP: °C 0.9°

TRACKING #:

SGS NORTH AMERICA INC | ENVIRONMENT, HEALTH & SAFETY 5500 Business Drive Wilmington, NC 28405 910 350 1903 | 866 846 8290 www.us.sgs.com/environment

Analytical Resources, Incorporated
Analytical Chemists and Consultants

21 May 2019

Chris Kramer
SLR International Corporation
22118 20th Avenue SE G202
Bothell, WA 98021

RE: Former E.A, Nord

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
19E0097	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

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

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006

PJLA Testing
Accreditation # 66169

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 19E0097	Turn-around Requested: Standard TAT	Page: 1 of 1	
ARI Client Company: SLR	Phone: (425) 402-8800	Date: 5/6/19	Ice Present?
Client Contact: Chris Kramer	ckramer@slrconsulting.com	No. of Coolers: 1	Cooler Temps: 2.8
Client Project Name: Nord Door			
Client Project #: 108.00228.00059	Samplers: Steven Losleben		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: cPAHs by 8270-SIM LL	Notes/Comments
MW-11A-0519	5/3/19	1537	Water	2	X	
MW-11B-0519		1617			X	
MW-12-0519		~~1120~~ 1605			X	
MW-13-0519		1025			X	
MW-14-0519		1207			X	
MW-16-0519		1357			X	
MW-17-0519	↓	1444	↓	↓	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Steven Losleben	Printed Name: Erin Salle	Printed Name:	Printed Name:
	Company: SLR	Company: ARI	Company:	Company:
	Date & Time: 5/7/19 @ 1000	Date & Time: 5/7/19 1056	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-11A-0519	19E0097-01	Water	03-May-2019 15:37	07-May-2019 10:56
MW-11B-0519	19E0097-02	Water	03-May-2019 16:17	07-May-2019 10:56
MW-12-0519	19E0097-03	Water	03-May-2019 11:20	07-May-2019 10:56
MW-13-0519	19E0097-04	Water	03-May-2019 10:25	07-May-2019 10:56
MW-14-0519	19E0097-05	Water	03-May-2019 12:07	07-May-2019 10:56
MW-16-0519	19E0097-06	Water	03-May-2019 13:57	07-May-2019 10:56
MW-17-0519	19E0097-07	Water	03-May-2019 14:44	07-May-2019 10:56

4611 S. 134th Place, Suite 100 • Tukwila, WA 98168 • Ph: (206) 695-6200 • Fax: (206) 695-6202

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

Work Order Case Narrative

Sample receipt

Samples as listed on the preceding page were received May 7, 2019 under ARI work order 19E0097. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270D-SIM

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

WORK ORDER

19E0097

Client: SLR International Corporation
Project: Former E.A, Nord

Project Manager: Shelly Fishel
Project Number: [none]

Report To:
SLR International Corporation
Chris Kramer
22118 20th Avenue SE G202
Bothell, WA 98021
Phone: (503) 905-3205
Fax: -

Invoice To:
SLR International Corporation
Chris Kramer
22118 20th Avenue SE G202
Bothell, WA 98021
Phone :(503) 905-3205
Fax: -

Date Due:	21-May-2019 18:00 (10 day TAT)		
Received By:	Erin I. Salle	Date Received:	07-May-2019 10:56
Logged In By:	Erin I. Salle	Date Logged In:	08-May-2019 08:07

Samples Received at: **2.8°C**

Intact, properly signed and dated custody seals attached to outside of cooler(s)	No	Custody papers included with the cooler	Yes
Custody papers properly filled out (in, signed, analyses requested, etc)	Yes	Was a temperature blank included in the cooler	No
Was sufficient ice used (if appropriate)	Yes	All bottles sealed in individual plastic bags	No
All bottles arrived in good condition (unbroken)	Yes	All bottle labels complete and legible	Yes
Number of containers listed on COC match number received	Yes	Bottle labels and tags agree with COC	Yes
Correct bottles used for the requested analyses	Yes	All VOC vials free of air bubbles	No
Analyses/bottles require preservation (attach preservation sheet excluding VOC)	No	Sufficient amount of sample sent in each bottle	Yes
Sample split at ARI	No		

Analysis	Due	TAT	Expires	Comments

WORK ORDER

19E0097

Client: SLR International Corporation **Project Manager:** Shelly Fishel

Project: Former E.A, Nord **Project Number:** [none]

Analysis	Due	TAT	Expires	Comments
19E0097-01 MW-11A-0519 [Water] Sampled 03-May-2019 15:37 (GMT-08:00) Pacific Time (US & Canada)				
A = Glass NM, Amber, 500 mL *B = Glass NM, Amber, 500 mL*				
8270D-SIM PAH Low (0.01 ug/L - 0.5 u	21-May-2019 15:00	10	10-May-2019 15:37	
19E0097-02 MW-11B-0519 [Water] Sampled 03-May-2019 16:17 (GMT-08:00) Pacific Time (US & Canada)				
A = Glass NM, Amber, 500 mL *B = Glass NM, Amber, 500 mL*				
8270D-SIM PAH Low (0.01 ug/L - 0.5 u	21-May-2019 15:00	10	10-May-2019 16:17	
19E0097-03 MW-12-0519 [Water] Sampled 03-May-2019 11:20 (GMT-08:00) Pacific Time (US & Canada)				
A = Glass NM, Amber, 500 mL *B = Glass NM, Amber, 500 mL*				
8270D-SIM PAH Low (0.01 ug/L - 0.5 u	21-May-2019 15:00	10	10-May-2019 11:20	
19E0097-04 MW-13-0519 [Water] Sampled 03-May-2019 10:25 (GMT-08:00) Pacific Time (US & Canada)				
A = Glass NM, Amber, 500 mL *B = Glass NM, Amber, 500 mL*				
8270D-SIM PAH Low (0.01 ug/L - 0.5 u	21-May-2019 15:00	10	10-May-2019 10:25	
19E0097-05 MW-14-0519 [Water] Sampled 03-May-2019 12:07 (GMT-08:00) Pacific Time (US & Canada)				
A = Glass NM, Amber, 500 mL *B = Glass NM, Amber, 500 mL*				
8270D-SIM PAH Low (0.01 ug/L - 0.5 u	21-May-2019 15:00	10	10-May-2019 12:07	
19E0097-06 MW-16-0519 [Water] Sampled 03-May-2019 13:57 (GMT-08:00) Pacific Time (US & Canada)				
A = Glass NM, Amber, 500 mL *B = Glass NM, Amber, 500 mL*				
8270D-SIM PAH Low (0.01 ug/L - 0.5 u	21-May-2019 15:00	10	10-May-2019 13:57	
19E0097-07 MW-17-0519 [Water] Sampled 03-May-2019 14:44 (GMT-08:00) Pacific Time (US & Canada)				
A = Glass NM, Amber, 500 mL *B = Glass NM, Amber, 500 mL*				
8270D-SIM PAH Low (0.01 ug/L - 0.5 u	21-May-2019 15:00	10	10-May-2019 14:44	

Reviewed By Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: SLR

Project Name: Nord Door

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 19E0097

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1253 2.8 ____ ____ ____ ____ ____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D00520G

Cooler Accepted by: _____ Date: 5/7/19 Time: 1056

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: Garbage bag			
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: _____ Date: 5/8/19 Time: 0807 Labels checked by: JSW

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

MW-11A-0519

19E0097-01 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 05/03/2019 15:37

Instrument: NT11 Analyst: VTS — Analyzed: 05/14/2019 17:19

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 19E0097-01 A 01

Preparation Batch: BHE0199 — Sample Size: 500 mL

Prepared: 08-May-2019 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.0009	0.010	**0.001**	ug/L	J
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*68.7*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*76.4*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*81.0*	*%*	

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

MW-11B-0519

19E0097-02 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 05/03/2019 16:17

Instrument: NT11 Analyst: VTS — Analyzed: 05/14/2019 17:49

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 19E0097-02 A 01

Preparation Batch: BHE0199 — Sample Size: 500 mL

Prepared: 08-May-2019 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.0009	0.010	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*77.0*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*84.7*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*87.8*	*%*	

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

MW-12-0519

19E0097-03 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 05/03/2019 11:20

Instrument: NT11 Analyst: VTS — Analyzed: 05/14/2019 18:18

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 19E0097-03 A 01

Preparation Batch: BHE0199 — Sample Size: 500 mL

Prepared: 08-May-2019 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	**0.002**	ug/L	J
Chrysene	218-01-9	1	0.0009	0.010	**0.004**	ug/L	J
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	**0.002**	ug/L	J
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*79.9*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*79.0*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*102*	*%*	

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

MW-13-0519

19E0097-04 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 05/03/2019 10:25

Instrument: NT11 Analyst: VTS — Analyzed: 05/14/2019 18:48

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 19E0097-04 A 01

Preparation Batch: BHE0199 — Sample Size: 500 mL

Prepared: 08-May-2019 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	**0.019**	ug/L	
Chrysene	218-01-9	1	0.0009	0.010	**0.023**	ug/L	
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	**0.018**	ug/L	
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	**0.007**	ug/L	J
Benzo(a)pyrene	50-32-8	1	0.002	0.010	**0.014**	ug/L	
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	**0.010**	ug/L	J
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	**0.003**	ug/L	J
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*79.4*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*85.1*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*94.7*	*%*	

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SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

MW-13-0519

19E0097-04RE1 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 05/03/2019 10:25

Instrument: NT11 Analyst: VTS — Analyzed: 05/16/2019 19:34

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 19E0097-04RE1 A 01

Preparation Batch: BHE0199 — Sample Size: 500 mL

Prepared: 08-May-2019 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	**0.018**	ug/L	
Chrysene	218-01-9	1	0.0009	0.010	**0.022**	ug/L	
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	**0.016**	ug/L	
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	**0.007**	ug/L	J
Benzo(a)pyrene	50-32-8	1	0.002	0.010	**0.014**	ug/L	
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	**0.011**	ug/L	
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	**0.004**	ug/L	J
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*77.1*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*91.0*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*88.7*	*%*	

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SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

MW-14-0519

19E0097-05 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 05/03/2019 12:07

Instrument: NT11 Analyst: VTS — Analyzed: 05/14/2019 19:18

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 19E0097-05 A 01

Preparation Batch: BHE0199 — Sample Size: 500 mL

Prepared: 08-May-2019 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.0009	0.010	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*87.7*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*93.7*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*66.7*	*%*	

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

MW-14-0519

19E0097-05RE1 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 05/03/2019 12:07
Instrument: NT11 Analyst: VTS — Analyzed: 05/18/2019 12:57

Sample Preparation: Preparation Method: EPA 3510C SepF; Preparation Batch: BHE0199; Prepared: 08-May-2019; Sample Size: 500 mL; Final Volume: 0.5 mL; Extract ID: 19E0097-05RE1 A 01

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	**0.001**	ug/L	J
Chrysene	218-01-9	1	0.0009	0.010	**0.002**	ug/L	J
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*81.2*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*87.6*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*61.5*	*%*	

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

MW-16-0519

19E0097-06 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 05/03/2019 13:57
Instrument: NT11 Analyst: VTS — Analyzed: 05/14/2019 19:47

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 19E0097-06 A 01
Preparation Batch: BHE0199 — Sample Size: 500 mL
Prepared: 08-May-2019 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.0009	0.010	**0.001**	ug/L	J
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*85.5*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*94.9*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*94.1*	*%*	

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

MW-17-0519

19E0097-07 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 05/03/2019 14:44

Instrument: NT11 Analyst: VTS — Analyzed: 05/14/2019 20:17

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 19E0097-07 A 01

Preparation Batch: BHE0199 — Sample Size: 500 mL

Prepared: 08-May-2019 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.0009	0.010	ND	ug/L	U
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*85.6*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*81.5*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*92.7*	*%*	

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

Semivolatile Organic Compounds - SIM - Quality Control

Batch BHE0199 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BHE0199-BLK1)				Prepared: 08-May-2019 Analyzed: 14-May-2019 15:21							
Benzo(a)anthracene	ND	0.0008	0.010	ug/L							U
Chrysene	ND	0.0009	0.010	ug/L							U
Benzo(b)fluoranthene	ND	0.0005	0.010	ug/L							U
Benzo(k)fluoranthene	ND	0.003	0.010	ug/L							U
Benzo(a)pyrene	ND	0.002	0.010	ug/L							U
Indeno(1,2,3-cd)pyrene	0.002	0.001	0.010	ug/L							J
Dibenzo(a,h)anthracene	0.003	0.001	0.010	ug/L							J
Surrogate: 2-Methylnaphthalene-d10	0.235			ug/L	*0.300*		*78.4*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.271			ug/L	*0.300*		*90.4*	*29-120*			
Surrogate: Fluoranthene-d10	0.259			ug/L	*0.300*		*86.4*	*57-120*			
LCS (BHE0199-BS1)				Prepared: 08-May-2019 Analyzed: 14-May-2019 15:51							
Benzo(a)anthracene	0.265	0.0008	0.010	ug/L	0.300		88.5	42-120			
Chrysene	0.269	0.0009	0.010	ug/L	0.300		89.6	44-120			
Benzo(b)fluoranthene	0.256	0.0005	0.010	ug/L	0.300		85.5	44-120			
Benzo(k)fluoranthene	0.273	0.003	0.010	ug/L	0.300		91.1	50-120			
Benzo(a)pyrene	0.223	0.002	0.010	ug/L	0.300		74.4	35-120			
Indeno(1,2,3-cd)pyrene	0.269	0.001	0.010	ug/L	0.300		89.6	37-120			
Dibenzo(a,h)anthracene	0.265	0.001	0.010	ug/L	0.300		88.4	34-120			
Surrogate: 2-Methylnaphthalene-d10	0.249			ug/L	*0.300*		*83.2*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.280			ug/L	*0.300*		*93.3*	*29-120*			
Surrogate: Fluoranthene-d10	0.280			ug/L	*0.300*		*93.2*	*57-120*			

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

Certified Analyses included in this Report

Analyte	Certifications
EPA 8270D-SIM in Water	
Naphthalene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,CALAP
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Biphenyl	NELAP
Acenaphthylene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Dibenzofuran	ADEC,DoD-ELAP,NELAP,CALAP
Fluorene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Carbazole	NELAP
Fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(e)pyrene	NELAP
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Perylene	ADEC,NELAP,CALAP
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	01/31/2021
CALAP	California Department of Public Health CAELAP	2748	06/30/2019
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	01/01/2021
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2020
WADOE	WA Dept of Ecology	C558	06/30/2019
WA-DW	Ecology - Drinking Water	C558	06/30/2019

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: 108.00228.00059	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	21-May-2019 14:39

Notes and Definitions

*	Flagged value is not within established control limits.
J	Estimated concentration value detected below the reporting limit.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

15 May 2019

Chris Kramer
SLR International Corporation
22118 20th Avenue SE G202
Bothell, WA 98021

RE: Former E.A, Nord

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
19E0011	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

Cert# 100006

PJLA Testing
Accreditation # 66169

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 19E0011	Turn-around Requested: Standard TAT	Page: 1 of 1	
ARI Client Company: SLR	Phone:	Date: 4/29/19	Ice Present?
Client Contact: Chris Kramer ckramer@slrconsulting.com		No. of Coolers: 1	Cooler Temps: 2.6
Client Project Name: Nord Door			
Client Project #: 108.00228.00059	Samplers: Steven Losleben		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: cPAHs by 8270-SIM	Notes/Comments
GP-801-GW	4/26/19	0900	water	1	X	
GP-802-GW	4/26/19	1635	water	1	X	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Sarah Thompson	Printed Name: Erin Salle	Printed Name:	Printed Name:
	Company: SLR	Company: ARI	Company:	Company:
	Date & Time: 5/1/19 12:38	Date & Time: 5/1/19 1238	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: [none]	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	15-May-2019 11:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GP-801-GW	19E0011-01	Water	26-Apr-2019 09:00	01-May-2019 12:38
GP-802-GW	19E0011-02	Water	26-Apr-2019 16:35	01-May-2019 12:38

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SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: [none]	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	15-May-2019 11:25

Work Order Case Narrative

Sample receipt

Samples as listed on the preceding page were received May 1, 2019 under ARI work order 19E0011. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270D-SIM

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits except in sample 19E 0011-02 Dibenzo(a,h)antracene was out of control high and is flagged.

The method blank(s) were clean at the reporting limits.

The LCS percent recoveries were within control limits.

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 5/2/2019 8:03:07AM

WORK ORDER

19E0011

Client: SLR International Corporation
Project: Former E.A, Nord
Project Manager: Shelly Fishel
Project Number: [none]

Report To:
SLR International Corporation
Chris Kramer
22118 20th Avenue SE G202
Bothell, WA 98021
Phone: (503) 905-3205
Fax: -

Invoice To:
SLR International Corporation
Chris Kramer
22118 20th Avenue SE G202
Bothell, WA 98021
Phone :(503) 905-3205
Fax: -

Date Due: 15-May-2019 18:00 (10 day TAT)

Received By: Erin I. Salle
Logged In By: Erin I. Salle
Date Received: 01-May-2019 12:38
Date Logged In: 02-May-2019 07:58

Samples Received at: **2.6°C**

Intact, properly signed and dated custody seals attached to outside of cooler(s)	No	Custody papers included with the cooler	Yes
Custody papers properly filled out (in, signed, analyses requested, etc)	Yes	Was a temperature blank included in the cooler	No
Was sufficient ice used (if appropriate)	Yes	All bottles sealed in individual plastic bags	No
All bottles arrived in good condition (unbroken)	Yes	All bottle labels complete and legible	Yes
Number of containers listed on COC match number received	Yes	Bottle labels and tags agree with COC	Yes
Correct bottles used for the requested analyses	Yes	All VOC vials free of air bubbles	No
Analyses/bottles require preservation (attach preservation sheet excluding VOC)	No	Sufficient amount of sample sent in each bottle	Yes
Sample split at ARI	No		

Analysis	Due	TAT	Expires	Comments
19E0011-01 GP-801-GW [Water] Sampled 26-Apr-2019 09:00 (GMT-08:00) Pacific Time (US & Canada)				
A = Glass NM, Amber, 500 mL				
8270D-SIM PAH Low (0.01 ug/L - 0.5 u	15-May-2019 15:00	10	03-May-2019 09:00	
19E0011-02 GP-802-GW [Water] Sampled 26-Apr-2019 16:35 (GMT-08:00) Pacific Time (US & Canada)				
A = Glass NM, Amber, 500 mL				
8270D-SIM PAH Low (0.01 ug/L - 0.5 u	15-May-2019 15:00	10	03-May-2019 16:35	

Reviewed By

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: SLR Project Name: Nord Door

COC No(s): _____ NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 19E0011 Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 2.6

Time 1335

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: D00256S

Cooler Accepted by: _____ Date: 5/11/19 Time: 1238

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used?	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	YES	NO
How were bottles sealed in plastic bags?	Individually	Grouped	Not
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Were the sample(s) split by ARI? NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: _____ Date: 5/12/19 Time: 0758 Labels checked by: _____

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: [none]	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	15-May-2019 11:25

GP-801-GW

19E0011-01 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 04/26/2019 09:00
Instrument: NT11 Analyst: VTS — Analyzed: 05/09/2019 12:43

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 19E0011-01 A 01
Preparation Batch: BHE0086 — Sample Size: 500 mL
Prepared: 03-May-2019 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	**0.077**	ug/L	
Chrysene	218-01-9	1	0.0009	0.010	**0.132**	ug/L	
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	**0.090**	ug/L	
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	**0.052**	ug/L	
Benzo(a)pyrene	50-32-8	1	0.002	0.010	**0.106**	ug/L	
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	**0.074**	ug/L	
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	**0.017**	ug/L	
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*88.9*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*96.0*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*97.0*	*%*	

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: [none]	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	15-May-2019 11:25

GP-801-GW

19E0011-01RE1 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 04/26/2019 09:00
Instrument: NT11 Analyst: VTS — Analyzed: 05/09/2019 14:14

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 19E0011-01RE1 A 01
Preparation Batch: BHE0086 — Sample Size: 500 mL
Prepared: 03-May-2019 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	10	0.008	0.100	**0.104**	ug/L	D
Chrysene	218-01-9	10	0.009	0.100	**0.160**	ug/L	D
Benzo(b)fluoranthene	205-99-2	10	0.005	0.100	**0.099**	ug/L	J, D
Benzo(k)fluoranthene	207-08-9	10	0.032	0.100	**0.061**	ug/L	J, D
Benzo(a)pyrene	50-32-8	10	0.025	0.100	**0.122**	ug/L	D
Indeno(1,2,3-cd)pyrene	193-39-5	10	0.010	0.100	**0.123**	ug/L	D
Dibenzo(a,h)anthracene	53-70-3	10	0.013	0.100	**0.052**	ug/L	J, D
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*88.5*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*107*	*%*	
Surrogate: Fluoranthene-d10				*57-120 %*	*78.4*	*%*	

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SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: [none]	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	15-May-2019 11:25

GP-802-GW

19E0011-02 (Water)

Semivolatile Organic Compounds - SIM

Method: EPA 8270D-SIM — Sampled: 04/26/2019 16:35
Instrument: NT11 Analyst: VTS — Analyzed: 05/09/2019 13:13

Sample Preparation: Preparation Method: EPA 3510C SepF — Extract ID: 19E0011-02 A 01
Preparation Batch: BHE0086 — Sample Size: 500 mL
Prepared: 03-May-2019 — Final Volume: 0.5 mL

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Benzo(a)anthracene	56-55-3	1	0.0008	0.010	ND	ug/L	U
Chrysene	218-01-9	1	0.0009	0.010	**0.001**	ug/L	J
Benzo(b)fluoranthene	205-99-2	1	0.0005	0.010	ND	ug/L	U
Benzo(k)fluoranthene	207-08-9	1	0.003	0.010	ND	ug/L	U
Benzo(a)pyrene	50-32-8	1	0.002	0.010	ND	ug/L	U
Indeno(1,2,3-cd)pyrene	193-39-5	1	0.001	0.010	ND	ug/L	U
Dibenzo(a,h)anthracene	53-70-3	1	0.001	0.010	ND	ug/L	U
Surrogate: 2-Methylnaphthalene-d10				*42-120 %*	*94.7*	*%*	
Surrogate: Dibenzo[a,h]anthracene-d14				*29-120 %*	*127*	*%*	*
Surrogate: Fluoranthene-d10				*57-120 %*	*109*	*%*	

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: [none]	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	15-May-2019 11:25

Semivolatile Organic Compounds - SIM - Quality Control

Batch BHE0086 - EPA 3510C SepF

Instrument: NT11 Analyst: VTS

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BHE0086-BLK1)				Prepared: 03-May-2019 Analyzed: 09-May-2019 11:43							
Benzo(a)anthracene	ND	0.0008	0.010	ug/L							U
Chrysene	ND	0.0009	0.010	ug/L							U
Benzo(b)fluoranthene	ND	0.0005	0.010	ug/L							U
Benzo(k)fluoranthene	ND	0.003	0.010	ug/L							U
Benzo(a)pyrene	ND	0.002	0.010	ug/L							U
Indeno(1,2,3-cd)pyrene	ND	0.001	0.010	ug/L							U
Dibenzo(a,h)anthracene	ND	0.001	0.010	ug/L							U
Surrogate: 2-Methylnaphthalene-d10	0.266			ug/L	*0.300*		*88.6*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.309			ug/L	*0.300*		*103*	*29-120*			
Surrogate: Fluoranthene-d10	0.310			ug/L	*0.300*		*103*	*57-120*			
LCS (BHE0086-BS1)				Prepared: 03-May-2019 Analyzed: 09-May-2019 12:13							
Benzo(a)anthracene	0.288	0.0008	0.010	ug/L	0.300		96.1	42-120			
Chrysene	0.292	0.0009	0.010	ug/L	0.300		97.4	44-120			
Benzo(b)fluoranthene	0.287	0.0005	0.010	ug/L	0.300		95.8	44-120			
Benzo(k)fluoranthene	0.321	0.003	0.010	ug/L	0.300		107	50-120			
Benzo(a)pyrene	0.295	0.002	0.010	ug/L	0.300		98.2	35-120			
Indeno(1,2,3-cd)pyrene	0.305	0.001	0.010	ug/L	0.300		102	37-120			
Dibenzo(a,h)anthracene	0.315	0.001	0.010	ug/L	0.300		105	34-120			
Surrogate: 2-Methylnaphthalene-d10	0.276			ug/L	*0.300*		*92.0*	*42-120*			
Surrogate: Dibenzo[a,h]anthracene-d14	0.349			ug/L	*0.300*		*116*	*29-120*			
Surrogate: Fluoranthene-d10	0.313			ug/L	*0.300*		*104*	*57-120*			

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SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: [none]	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	15-May-2019 11:25

Certified Analyses included in this Report

Analyte	Certifications
EPA 8270D-SIM in Water	
Naphthalene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
2-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,CALAP
1-Methylnaphthalene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Biphenyl	NELAP
Acenaphthylene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Acenaphthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Dibenzofuran	ADEC,DoD-ELAP,NELAP,CALAP
Fluorene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Phenanthrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Carbazole	NELAP
Fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(a)anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Chrysene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(b)fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(k)fluoranthene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(j)fluoranthene	ADEC,DoD-ELAP,NELAP,WADOE
Benzo(e)pyrene	NELAP
Benzo(a)pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Perylene	ADEC,NELAP,CALAP
Indeno(1,2,3-cd)pyrene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Dibenzo(a,h)anthracene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE
Benzo(g,h,i)perylene	ADEC,DoD-ELAP,NELAP,CALAP,WADOE

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	01/31/2021
CALAP	California Department of Public Health CAELAP	2748	06/30/2019
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program	66169	01/01/2021
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2020
WADOE	WA Dept of Ecology	C558	06/30/2019
WA-DW	Ecology - Drinking Water	C558	06/30/2019

SLR International Corporation	Project: Former E.A, Nord	
22118 20th Avenue SE G202	Project Number: [none]	**Reported:**
Bothell WA, 98021	Project Manager: Chris Kramer	15-May-2019 11:25

Notes and Definitions

*	Flagged value is not within established control limits.
D	The reported value is from a dilution
J	Estimated concentration value detected below the reporting limit.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

APPENDIX C

Laboratory Analytical Data Review

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

SLR International Corp
1800 Blankenship Road, Suite 440
West Linn, OR 97068
ATTN: Mr. Chris Kramer
ckramer@slrconsulting.com

June 18, 2019

SUBJECT: NORD, Data Validation

Dear Mr. Kramer,

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on May 31, 2019. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #45192:

SDG #	Fraction
B3245, B3246 B3256	Polychlorinated Dioxins/Dibenzofurans, Polychlorinated Biphenyls as Congeners

The data validation was performed under Level IV validation guidelines. The analyses were validated using the following documents and variances, as applicable to each method:

- USEPA National Functional Guidelines for High Resolution Methods Data Review; April 2016
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014

Please feel free to contact us if you have any questions.

Sincerely,

Christina Rink

Christina Rink
crink@lab-data.com
Project Manager/Senior Chemist

Level IV

LDC #45192 (SLR International Corp. - Bothell, WA / NORD)

LDC	SDG#	DATE REC'D	(3) DATE DUE	PCB Cong. (1668C)		Dioxins (1613B)																											
Matrix:	Water/Soil			W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	B3245	05/31/19	06/21/19	0	9	0	9																										
B	B3246	05/31/19	06/21/19	2	0	-	-																										
C	B3256	05/31/19	06/21/19	6	0	-	-																										
Total	T/CR			8	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS/MSD, and DUPs

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: NORD

LDC Report Date: June 17, 2019

Parameters: Polychlorinated Dioxins/Dibenzofurans

Validation Level: Level IV

Laboratory: SGS North America, Inc.

Sample Delivery Group (SDG): B3245

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
GP-MW-11-SS	B3246-01	Soil	04/25/19
GP-MW-12-SS	B3246-02	Soil	04/25/19
GP-MW-12-SS-18-19	B3246-03	Soil	04/25/19
GP-MW-13-SS	B3246-04	Soil	04/25/19
GP-MW-14-SS	B3246-05	Soil	04/25/19
GP-MW-16-SS	B3246-07	Soil	04/26/19
GP-MW-17-SS	B3246-08	Soil	04/26/19
GP-801-SS	B3246-09	Soil	04/26/19
GP-802-SS	B3246-010	Soil	04/26/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with a modified outline of the USEPA National Functional Guidelines (NFG) for High Resolution Superfund Methods Data Review (April 2016). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polychlorinated Dioxins/Dibenzofurans by Environmental Protection Agency (EPA) Method 1613B

All sample results were subjected to Level IV data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered not detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required frequency.

Retention time windows were established for all homologues. The chromatographic resolution between 2,3,7,8-TCDD and peaks representing any other unlabeled TCDD isomer was less than or equal to 25%.

The static resolving power was less than or equal to 10,000 (10% valley definition) at m/z 330.9792 and greater than or equal to 8000 throughout the mass range.

III. Initial Calibration

A five point initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for unlabeled compounds and less than or equal to 30.0% for labeled compounds.

The ion abundance ratios for all PCDDs/PCDFs were within method and validation criteria.

The minimum S/N ratio was greater than or equal to 2.5 for each unlabeled compound and greater than or equal to 10 for each labeled compound.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 20.0% for unlabeled compounds and less than or equal to 30.0% for labeled compounds.

The ion abundance ratios for all PCDDs and PCDFs were within method and validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

V. Ongoing Precision Recovery

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Ongoing Precision Recovery

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits.

XI. Compound Quantitation

All compound quantitations were within validation criteria with the following exceptions:

Sample	Compound	Flag	A or P
All samples in SDG B3245	All compounds reported as estimated maximum possible concentration (EMPC).	J (all detects)	A

XII. Target Compound Identifications

All target compound identifications met validation criteria.

XIII. System Performance

The system performance was acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to compounds reported as EMPCs, data were qualified as estimated in nine samples.

No results were rejected in this SDG.

NORD
Polychlorinated Dioxins/Dibenzofurans - Data Qualification Summary - SDG B3245

Sample	Compound	Flag	A or P	Reason
GP-MW-11-SS GP-MW-12-SS GP-MW-12-SS-18-19 GP-MW-13-SS GP-MW-14-SS GP-MW-16-SS GP-MW-17-SS GP-801-SS GP-802-SS	All compounds reported as estimated maximum possible concentration (EMPC).	J (all detects)	A	Compound quantitation (EMPC)

NORD
Polychlorinated Dioxins/Dibenzofurans - Laboratory Blank Data Qualification Summary - SDG B3245

No Sample Data Qualified in this SDG

NORD
Polychlorinated Dioxins/Dibenzofurans - Field Blank Data Qualification Summary - SDG B3245

No Sample Data Qualified in this SDG

LDC #: 45192A21 **VALIDATION COMPLETENESS WORKSHEET** Date: 6/1/19
SDG #: B3245 Level IV Page: 1 of 1
Laboratory: SGS North America, Inc. Reviewer: M
2nd Reviewer:

METHOD: HRGC/HRMS Polychlorinated Dioxins/Dibenzofurans (EPA Method 1613B)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration/~~ICV~~	A	RSDs 20/35
IV.	Continuing calibration	A	CCL limits
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	A	OPR
IX.	Field duplicates	N	
X.	Labeled Compounds	A	
XI.	Compound quantitation RL/LOQ/LODs	SW	ML - EMPC - Jdts/A
XII.	Target compound identification	A	
XIII.	System performance	A	
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	GP-MW-11-SS	B3246-01	Soil	04/25/19
2	GP-MW-12-SS	B3246-02	Soil	04/25/19
3	GP-MW-12-SS-18-19	B3246-03	Soil	04/25/19
4	GP-MW-13-SS	B3246-04	Soil	04/25/19
5	GP-MW-14-SS	B3246-05	Soil	04/25/19
6	GP-MW-16-SS	B3246-07	Soil	04/26/19
7	GP-MW-17-SS	B3246-08	Soil	04/26/19
8	GP-801-SS	B3246-09	Soil	04/26/19
9	GP-802-SS	B3246-010	Soil	04/26/19
10				
11				

Notes:

	MB1 16666						

LDC #: 45192b21

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: AC
2nd Reviewer:

Method: HRGC/HRMS Dioxins/Dibenzofurans (EPA SW 846 Method 1613B)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Was PFK exact mass 380.9760 verified?	✓			
Were the retention time windows established for all homologues?	✓			
Was the chromatographic resolution between 2,3,7,8-TCDD and peaks representing any other unlabeled TCDD isomers ≤ 25% ?	✓			
Is the static resolving power at least 10,000 (10% valley definition)?	✓			
Was the mass resolution adequately check with PFK?	✓			
Was the presence of 1,2,8,9-TCDD and 1,3,4,6,8-PeCDF verified?	✓			
IIIa. Initial calibration				
Was the initial calibration performed at 5 concentration levels?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% for unlabeled compounds and ≤ 35% for unlabeled compounds?	✓			
Did all calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound and labeled compound ≥ 10?	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?		✓		
Were all concentrations for the unlabeled compounds and for labeled compounds within QC limits?			✓	
IV. Continuing calibration				
Was a continuing calibration performed at the beginning and end of each 12 hour period?	✓			
Were all concentrations for the unlabeled compounds and for labeled compounds within QC limits (Method 1613B, Table 6)?	✓			
Did all continuing calibration standards meet the Ion Abundance Ratio criteria?	✓			
V. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank performed for each matrix and whenever a sample extraction was performed?	✓			
Was there contamination in the method blanks?		✓		
VI. Field blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	

LDC #: 45192A21

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: JC
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
VIII. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
X. Labeled Compounds				
Were labeled compounds within the 25-150% criteria?	✓			
Was the minimum S/N ratio of all labeled compound peaks ≥ 10?	✓			
XI. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?			✓	
Were the correct labeled compound, quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓		✓	
Were compound quantitation and CRQLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. Target compound identification				
For 2,3,7,8 substituted congeners with associated labeled standards, were the retention times of the two quantitation peaks within -1 to 3 sec. of the RT of the labeled standard?	✓			
For 2,3,7,8 substituted congeners without associated labeled standards, were the relative retention times of the two quantitation peaks within 0.005 time units of the RRT measured in the routine calibration?	✓			
For non-2,3,7,8 substituted congeners, were the retention times of the two quantitation peaks within RT established in the performance check solution?	✓			
Did compound spectra contain all characteristic ions listed in the table attached?	✓			
Was the Ion Abundance Ratio for the two quantitation ions within criteria?	✓			
Was the signal to noise ratio for each target compound ≥2.5 and ≥10 for the labeled compound?	✓			
Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?	✓			
For PCDF identification, was any signal (S/N ≥ 2.5, at ± seconds RT) detected in the corresponding PCDPE channel?			✓	
Was an acceptable lock mass recorded and monitored?	✓			
XIII. System performance				
System performance was found to be acceptable.	✓			
XIV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

A. 2,3,7,8-TCDD	F. 1,2,3,4,6,7,8-HpCDD	K. 1,2,3,4,7,8-HxCDF	P. 1,2,3,4,7,8,9-HpCDF	U. Total HpCDD
B. 1,2,3,7,8-PeCDD	G. OCDD	L. 1,2,3,6,7,8-HxCDF	Q. OCDF	V. Total TCDF
C. 1,2,3,4,7,8-HxCDD	H. 2,3,7,8-TCDF	M. 2,3,4,6,7,8-HxCDF	R. Total TCDD	W. Total PeCDF
D. 1,2,3,6,7,8-HxCDD	I. 1,2,3,7,8-PeCDF	N. 1,2,3,7,8,9-HxCDF	S. Total PeCDD	X. Total HxCDF
E. 1,2,3,7,8,9-HxCDD	J. 2,3,4,7,8-PeCDF	O. 1,2,3,4,6,7,8-HpCDF	T. Total HxCDD	Y. Total HpCDF

Notes:_____

LDC #: 45192A21

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: JT
2nd Reviewer:

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$
average RRF = sum of the RRFs/number of standards
%RSD = 100 * (S/X)

A_x = Area of compound,
C_x = Concentration of compound,
S = Standard deviation of the RRFs,

A_{is} = Area of associated internal standard
C_{is} = Concentration of internal standard
X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (CS3 std)	Recalculated RRF (CS3 std)	Reported %RSD	Recalculated %RSD
1	1QAL	11/26/18	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.00	1.00	1.03	1.03	4.3	4.3
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.16	1.16	1.15	1.15	2.9	2.1
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	1.11	1.11	1.11	1.11	3.4	3.4
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	0.99	0.99	0.99	0.99	5.4	5.3
			OCDF (^{13}C-OCDF)	1.05	1.04	1.06	1.06	2.6	2.4
2			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)						
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)						
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)						
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)						
			OCDF (^{13}C-OCDF)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45192A21

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: SC
2nd Reviewer:

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported Conc (CC)	Recalculated Conc (CC)	Reported %D	Recalculated %D
1	190513B04	5/13/19	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)	1.00	10	10		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)	1.16	9.5	9.5		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)	1.11	48.9	48.8		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)	0.99	50.4	50.2		
			OCDF (^{13}C-OCDF)	1.05	98.5	98.4		
2	190513B13	5/13/19	2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)		10.5	10.6		
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)		10.1	10.1		
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)		52.1	52.0		
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)		51.2	50.9		
			OCDF (^{13}C-OCDF)	↓	101	101		
3			2,3,7,8-TCDF (^{13}C-2,3,7,8-TCDF)					
			2,3,7,8-TCDD (^{13}C-2,3,7,8-TCDD)					
			1,2,3,6,7,8-HxCDD (^{13}C-1,2,3,6,7,8-HxCDD)					
			1,2,3,4,6,7,8-HpCDD (^{13}C-1,2,4,6,7,8,-HpCDD)					
			OCDF (^{13}C-OCDF)					

Comments: Refer to Routine Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45192A21

VALIDATION FINDINGS WORKSHEET
Ongoing Precision and Recovery Results Verification

Reviewer: R
2nd Reviewer: [signature]

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

The percent recoveries (%R) of the Ongoing Precision and Recovery (OPR) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA

Where: SSC = Spiked sample concentration
SSCD = Duplicate Spiked sample concentration
SA = Spike added

RPD = | SSC- SSCDI * 2/(SSC+ SSCD)

OPR ID: OPR1

Compound	Spike Added (ng/mL)		Spiked Sample Concentration (ng/mL)		OPR Percent Recovery		OPRD Percent Recovery		OPR/OPRD RPD	
	OPR	OPRD	OPR	OPRD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
2,3,7,8-TCDD	10		10.2		NR	102				
1,2,3,7,8-PeCDD	50		50.3			101				
1,2,3,4,7,8-HxCDD	↓		55.3			111				
1,2,3,4,7,8,9-HpCDF	↓		50.7			101				
OCDF	100		106		↓	106				

LDC #: 45192A21

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Reviewer: R
2nd reviewer:

METHOD: HRGC/HRMS Dioxins/Dibenzofurans (EPA Method 1613B)

(Y) N N/A Were all reported results recalculated and verified for all level IV samples?
(Y) N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

RRF = Relative Response Factor (average) from the initial calibration

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

Example:

Sample I.D. 1 , F :

Conc. = $\frac{(1.14e7)(2000)(\quad)}{(1.29e7)(0.99)(16.35)(0.742)}$

= 147 pg/g

#	Sample ID	Compound	Reported Concentration (pg/g)	Calculated Concentration (pg/g)	Qualification
	1	F	149	147	-

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Nord

LDC Report Date: June 17, 2019

Parameters: Polychlorinated Biphenyls Congeners

Validation Level: Level IV

Laboratory: SGS North America, Inc.

Sample Delivery Group (SDG): B3245

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
GP-MW-11-SS	B3246-01	Soil	04/25/19
GP-MW-12-SS	B3246-02	Soil	04/25/19
GP-MW-13-SS	B3246-04	Soil	04/25/19
GP-MW-14-SS	B3246-05	Soil	04/25/19
GP-MW-15-SS	B3246-06	Soil	04/26/19
GP-MW-16-SS	B3246-07	Soil	04/26/19
GP-MW-17-SS	B3246-08	Soil	04/26/19
GP-801-SS	B3246-09	Soil	04/26/19
GP-802-SS	B3246-010	Soil	04/26/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with a modified outline of the USEPA National Functional Guidelines (NFG) for High Resolution Superfund Methods Data Review (April 2016). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polychlorinated Biphenyls Congeners by Environmental Protection Agency (EPA) Method 1668C

All sample results were subjected to Level IV data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required frequency.

Retention time windows were established for all congeners. The chromatographic resolution between the congeners PCB-23 and PCB-34 and congeners PCB-182 and PCB-187 was resolved with a valley of less than or equal to 40%.

The static resolving power was less than or equal to 10,000 (10% valley definition) at m/z 330.9792 and greater than or equal to 8000 throughout the mass range.

III. Initial Calibration and Initial Calibration Verification

A five point initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for unlabeled compounds and labeled compounds.

The ion abundance ratios for all compounds were within validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within QC limits.

The ion abundance ratios for all compounds were within validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Extraction Date	Compound	Concentration	Associated Samples
MB 16666	05/15/19	PCB-11 Total dichlorobiphenyl	2.68 pg/g 2.68 pg/g	All samples in SDG B3245

Sample concentrations were compared to concentrations detected in the laboratory blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated laboratory blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
GP-MW-11-SS	PCB-11 Total dichlorobiphenyl	2.49 pg/g 3.77 pg/g	2.49U pg/g 3.77J pg/g
GP-MW-12-SS	PCB-11 Total dichlorobiphenyl	4.09 pg/g 9.46 pg/g	4.09U pg/g 9.46J pg/g
GP-MW-13-SS	PCB-11 Total dichlorobiphenyl	4.88 pg/g 10.5 pg/g	4.88U pg/g 10.5J pg/g
GP-MW-14-SS	PCB-11	8.15 pg/g	8.15U pg/g
GP-MW-15-SS	PCB-11	8.38 pg/g	8.38U pg/g
GP-MW-16-SS	PCB-11	7.08 pg/g	7.08U pg/g
GP-MW-17-SS	PCB-11 Total dichlorobiphenyl	5.61 pg/g 9.92 pg/g	5.61U pg/g 9.92J pg/g
GP-801-SS	PCB-11 Total dichlorobiphenyl	4.47 pg/g 12.8 pg/g	4.47U pg/g 12.8J pg/g
GP-802-SS	PCB-11	7.43 pg/g	7.43U pg/g

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Ongoing Precision Recovery

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits.

XI. Compound Quantitation

All compound quantitations were within validation criteria with the following exceptions:

Sample	Compound	Flag	A or P
All samples in SDG B3245	All compounds reported as estimated maximum possible concentration (EMPC).	J (all detects)	A

XII. Target Compound Identification

All target compound identifications were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
GP-MW-11-SS	PCB-8 PCB-15 Total dichlorobiphenyl	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects) J (all detects)	P
GP-MW-12-SS	PCB-4 PCB-5 PCB-15 Total dichlorobiphenyl	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects) J (all detects) J (all detects)	P

Sample	Compound	Finding	Criteria	Flag	A or P
GP-MW-13-SS	PCB-4 Total dichlorobiphenyl	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects)	P
GP-MW-14-SS GP-MW-16-SS	PCB-4 PCB-6 PCB-13/12 Total dichlorobiphenyl	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects) J (all detects) J (all detects)	P
GP-MW-15-SS	PCB-4 PCB-6 PCB-14 PCB-13/12 Total dichlorobiphenyl	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	P
GP-MW-17-SS	PCB-4 PCB-8 PCB-15 Total dichlorobiphenyl	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects) J (all detects) J (all detects)	P
GP-801-SS	PCB-4 PCB-6 Total dichlorobiphenyl	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects) J (all detects)	P
GP-802-SS	PCB-10 PCB-5 Total dichlorobiphenyl	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects) J (all detects)	P

XIII. System Performance

The system performance was acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to compounds reported as EMPCs and single ion quantitation, data were qualified as estimated in nine samples.

Due to laboratory blank contamination, data were qualified as estimated or not detected in nine samples.

No results were rejected in this SDG.

Nord
Polychlorinated Biphenyls Congeners - Data Qualification Summary - SDG B3245

Sample	Compound	Flag	A or P	Reason
GP-MW-11-SS GP-MW-12-SS GP-MW-13-SS GP-MW-14-SS GP-MW-15-SS GP-MW-16-SS GP-MW-17-SS GP-801-SS GP-802-SS	All compounds reported as estimated maximum possible concentration (EMPC).	J (all detects)	A	Compound quantitation (EMPC)
GP-MW-11-SS	PCB-8 PCB-15 Total dichlorobiphenyl	J (all detects) J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)
GP-MW-12-SS	PCB-4 PCB-5 PCB-15 Total dichlorobiphenyl	J (all detects) J (all detects) J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)
GP-MW-13-SS	PCB-4 Total dichlorobiphenyl	J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)
GP-MW-14-SS GP-MW-16-SS	PCB-4 PCB-6 PCB-13/12 Total dichlorobiphenyl	J (all detects) J (all detects) J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)
GP-MW-15-SS	PCB-4 PCB-6 PCB-14 PCB-13/12 Total dichlorobiphenyl	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)
GP-MW-17-SS	PCB-4 PCB-8 PCB-15 Total dichlorobiphenyl	J (all detects) J (all detects) J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)
GP-801-SS	PCB-4 PCB-6 Total dichlorobiphenyl	J (all detects) J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)
GP-802-SS	PCB-10 PCB-5 Total dichlorobiphenyl	J (all detects) J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)

Nord
Polychlorinated Biphenyls Congeners - Laboratory Blank Data Qualification Summary - SDG B3245

Sample	Compound	Modified Final Concentration	A or P
GP-MW-11-SS	PCB-11 Total dichlorobiphenyl	2.49U pg/g 3.77J pg/g	A
GP-MW-12-SS	PCB-11 Total dichlorobiphenyl	4.09U pg/g 9.46J pg/g	A
GP-MW-13-SS	PCB-11 Total dichlorobiphenyl	4.88U pg/g 10.5J pg/g	A
GP-MW-14-SS	PCB-11	8.15U pg/g	A
GP-MW-15-SS	PCB-11	8.38U pg/g	A
GP-MW-16-SS	PCB-11	7.08U pg/g	A
GP-MW-17-SS	PCB-11 Total dichlorobiphenyl	5.61U pg/g 9.92J pg/g	A
GP-801-SS	PCB-11 Total dichlorobiphenyl	4.47U pg/g 12.8J pg/g	A
GP-802-SS	PCB-11	7.43U pg/g	A

Nord
Polychlorinated Biphenyls Congeners - Field Blank Data Qualification Summary - SDG B3245

No Sample Data Qualified in this SDG

LDC #: 45192A31 **VALIDATION COMPLETENESS WORKSHEET** Date: 6/11/19

SDG #: B3245 Level IV Page: 1 of 1

Laboratory: SGS North America, Inc.$ Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Polychlorinated Biphenyl Congeners (EPA Method 1668C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration/ICV	A	RSD ≤ 20
IV.	Continuing calibration	A	QC limits
V.	Laboratory Blanks	SW	
VI.	Field blanks	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	A	OPR
IX.	Field duplicates	N	
X.	Labeled Compounds	A	
XI.	Compound quantitation RL/LOQ/LODs	SW	Aw - EMPC - J a/s/A
XII.	Target compound identification	SW	
XIII.	System performance	A	
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	GP-MW-11-SS	B3246-01	Soil	04/25/19
2	GP-MW-12-SS	B3246-02	Soil	04/25/19
3	GP-MW-13-SS	B3246-04	Soil	04/25/19
4	GP-MW-14-SS	B3246-05	Soil	04/25/19
5	GP-MW-15-SS	B3246-06	Soil	04/26/19
6	GP-MW-16-SS	B3246-07	Soil	04/26/19
7	GP-MW-17-SS	B3246-08	Soil	04/26/19
8	GP-801-SS	B3246-09	Soil	04/26/19
9	GP-802-SS	B3246-010	Soil	04/26/19
10				
11				

Notes:

LDC #: 45192A31

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: R
2nd Reviewer:

Method: HRGC/HRMS Polychlorinated Biphenyls (EPA Method 1668C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Was PFK exact mass 330.9792 verified?	✓			
Were the retention time windows established for all homologues?	✓			
Was the chromatographic resolution (valley) between PCB 23 and PCB 34 and between PCB 182 and PCB 187 ≤ 40% ?	✓			
Is the static resolving power ≥10,000 at m/z 330.9792 and ≥ 8000 throughout the mass range?	✓			
Was the mass resolution adequately checked with PFK?	✓			
III. Initial calibration/Initial calibration verification				
Was the initial calibration performed at 5 concentration levels?	✓			
Were all percent relative standard deviations (%RSD) ≤20% for unlabeled and labeled compounds?	✓			
Did all calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound and internal standard ≥ 10?	✓			
Were all initial calibration verification (ICV) percent differences (%D) within QC limits for unlabeled and labeled compounds?		✓		
IV. Continuing calibration				
Was a continuing calibration performed at the beginning of each 12 hour period?	✓			
Were all percent differences (%D) ≤25% for unlabeled and percent recoveries (%R) for labeled compounds within 50-145%?	✓			
Did all routine calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound and internal standard ≥ 10?	✓			
V. Laboratory Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank performed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the blanks validation findings worksheet.	✓			
VI. Field blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				

LDC #: 45192A21

VALIDATION FINDINGS CHECKLIST

Reviewer: R
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
X. Labeled Compounds				
Were labeled compound recoveries within the QC criteria?	✓			
Was the minimum S/N ratio of all labeled compound peaks ≥ 10?	✓			
XI. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?			✓	
Were the labeled compound, quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. Target compound identification				
For polychlorinated biphenyl congeners with associated labeled standards, were the retention times of the two quantitation peaks within -1 to 3 sec. of the RT of the labeled standard?	✓			
For polychlorinated biphenyl congeners without associated labeled standards, were the relative retention times of the two quantitation peaks within 0.005 time units of the RRT measured in the routine calibration?	✓			
For other polychlorinated biphenyl congeners, were the retention times of the two quantitation peaks within RT established in the performance check solution?	✓			
Did compound spectra contain all characteristic ions listed in the table attached?	✓			
Was the Ion Abundance Ratio for the two quantitation ions within criteria?	✓			
Was the signal to noise ratio for each target compound and labeled standard ≥ 2.5?	✓			
Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?	✓			
Was an acceptable lock mass recorded and monitored?	✓			
XIII. System performance				
System performance was found to be acceptable.	✓			
XIV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 45192A31

VALIDATION FINDINGS WORKSHEET
Blanks

Page: 1 of 1
Reviewer:
2nd Reviewer:

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were all samples associated with a method blank?

(Y) N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?

(Y) N N/A Was the method blank contaminated? If yes, please see qualification below.

Blank extraction date: 5/15/19 **Blank analysis date:** 5/19/19

Conc. units: pg/g **Associated samples:** All Qual U, Total J

Compound	Blank ID 16666	Sample Identification								
	MB1B~~3245~~	1	2	3	4	5	6	7	8	9
PCB-11	2.68	2.49	4.09	4.88*	8.15	8.38	7.08	5.61	4.47	7.43
Total Di-CB	2.68	3.77	9.46	10.5*				9.92	12.8	

*EMPC

Blank extraction date:_______ **Blank analysis date:**_______

Conc. units:_______ **Associated samples:**_______

Compound	Blank ID	Sample Identification								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:
All contaminants within five times the method blank concentration were qualified as not detected, "U".

LDC #: 45192A31

VALIDATION FINDINGS WORKSHEET
Target Compound Identification

Reviewer: 2
2nd Reviewer: 2

METHOD: HRGC/HRMS Polychlorinated Biphenyls (EPA Method 1668C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Was the Ion Abundance Ratio for the two quantitation ions within criteria?
Y N N/A Was the signal to noise ratio for each target compound and labeled standard ≥ 2.5?
Y N N/A Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?

#	Date	Sample ID	Associated Compounds	Finding	Qualifications
		1	PCB-8,15	Congeners were quantitated using single ion mode. The	Jdets/P (+ Total Di-CB)
		2	PCB-4,6,15	second ion is not integrated or reported due to PFK	
		3	PCB-4	interference. Quantitation should be performed using the	
		4,6	PCB-4,6,13/12	area of the primary and secondary ions.	
		5	PCB-4,6,14,13/12		
		7	PCB-4,8,15		
		8	PCB-4,6		
		9	PCB-10,5		

LDC #: 45192A31

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: SR
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$ — A_x = Area of compound, A_{is} = Area of associated internal standard
average RRF = sum of the RRFs/number of standards — C_x = Concentration of compound, C_{is} = Concentration of internal standard
$\%RSD = 100 * (S/X)$ — S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported %RSD	Recalculated %RSD
1	10AL	1/4/19	PCB 77 (^{13}C-PCB 77)	1.02	1.02	0.98	0.98	6.0	5.9
			PCB 105 (^{13}C-PCB 105)	0.96	0.96	0.96	0.96	7.9	7.9
			PCB 167 (^{13}C-PCB 167)	1.02	1.02	1.04	1.04	5.5	5.7
			PCB 189 (^{13}C-PCB 189)	1.02	1.02	0.97	0.97	7.6	7.7
2			PCB 77 (^{13}C-PCB 77)						
			PCB 105 (^{13}C-PCB 105)						
			PCB 167 (^{13}C-PCB 167)						
			PCB 189 (^{13}C-PCB 189)						
3			PCB 77 (^{13}C-PCB 77)						
			PCB 105 (^{13}C-PCB 105)						
			PCB 167 (^{13}C-PCB 167)						
			PCB 189 (^{13}C-PCB 189)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45192A31

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	19051951	5/19/19	PCB 77 (^{13}C-PCB 77)	1.02	0.97	0.98	4.7	4.3
			PCB 105 (^{13}C-PCB 105)	0.96	0.92	0.92	3.6	4.2
			PCB 167 (^{13}C-PCB 167)	1.02	0.95	0.95	6.4	6.9
			PCB 189 (^{13}C-PCB 189)	1.02	0.96	0.97	5.1	5.2
2	19052050 3	5/20/19	PCB 77 (^{13}C-PCB 77)	1.02	0.99	0.99	3.0	2.6
			PCB 105 (^{13}C-PCB 105)	0.96	0.94	0.94	2.2	2.6
			PCB 167 (^{13}C-PCB 167)	1.02	1.00	1.01	1.0	1.4
			PCB 189 (^{13}C-PCB 189)	1.02	0.96	0.96	5.1	5.6
3			PCB 77 (^{13}C-PCB 77)					
			PCB 105 (^{13}C-PCB 105)					
			PCB 167 (^{13}C-PCB 167)					
			PCB 189 (^{13}C-PCB 189)					
4			PCB 77 (^{13}C-PCB 77)					
			PCB 105 (^{13}C-PCB 105)					
			PCB 167 (^{13}C-PCB 167)					
			PCB 189 (^{13}C-PCB 189)					

Comments: Refer to Routine Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45192A31

VALIDATION FINDINGS WORKSHEET
Ongoing Precision and Recovery Results Verification

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

The percent recoveries (%R) of the Ongoing Precision and Recovery (OPR) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA

Where: SSC = Spiked sample concentration
SSCD = Duplicate Spiked sample concentration
SA = Spike added

RPD = I SSC- SSCDI * 2/(SSC+ SSCD)

OPR ID: OPR1

Compound	Spike Added (pg/uL)		Spiked Sample Concentration (pg/uL)		OPR Percent Recovery		OPR D Percent Recovery		OPR/OPRD RPD	
	OPR	OPRD	OPR	OPRD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
PCB 15	50		49.1		98.2	98.2				
PCB 77	↓		48.6		97.2	97.2				
PCB 169			51.4		103	103				
PCB 206	↓		52.9		106	106				

LDC #: 45192A31

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

(Y) N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

RRF = Relative Response Factor (average) from the initial calibration

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

Example:

Sample I.D. 1, PCB-8:

Conc. = $\frac{(1.87e5)(2000)(\quad)}{(5.04e7)(1.11)(13.52)(0.742)}$

= 0.666 pg/g

#	Sample ID	Compound	Reported Concentration (pg/g)	Calculated Concentration (pg/g)	Qualification
	1	PCB-8	0.667	0.666	-

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Nord

LDC Report Date: June 17, 2019

Parameters: Polychlorinated Biphenyls Congeners

Validation Level: Level IV

Laboratory: SGS North America, Inc.

Sample Delivery Group (SDG): B3246

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
GP-801-GW	B3246-001	Water	04/26/19
GP-802-GW	B3246-002	Water	04/26/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with a modified outline of the USEPA National Functional Guidelines (NFG) for High Resolution Superfund Methods Data Review (April 2016). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polychlorinated Biphenyls Congeners by Environmental Protection Agency (EPA) Method 1668C

All sample results were subjected to Level IV data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required frequency.

Retention time windows were established for all congeners. The chromatographic resolution between the congeners PCB-23 and PCB-34 and congeners PCB-182 and PCB-187 was resolved with a valley of less than or equal to 40%.

The static resolving power was less than or equal to 10,000 (10% valley definition) at m/z 330.9792 and greater than or equal to 8000 throughout the mass range.

III. Initial Calibration and Initial Calibration Verification

A five point initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for unlabeled compounds and labeled compounds.

The ion abundance ratios for all compounds were within validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within QC limits.

The ion abundance ratios for all compounds were within validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Extraction Date	Compound	Concentration	Associated Samples
MB1 16671	05/08/19	PCB-11	13.3 pg/L	All samples in SDG B3246
		PCB-95	2.52 pg/L	
		PCB-113/90/101	3.31 pg/L	
		PCB-110	2.65 pg/L	
		PCB-118	2.41 pg/L	
		PCB-105	1.51 pg/L	
		PCB-147/149	2 pg/L	
		PCB-153/168	3.28 pg/L	
		PCB-163/138/129	3.25 pg/L	
		Total dichlorobiphenyl	13.3 pg/L	
		Total pentachlorobiphenyl	12.4 pg/L	
		Total hexachlorobiphenyl	8.53 pg/L	

Sample concentrations were compared to concentrations detected in the laboratory blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated laboratory blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
GP-801-GW	PCB-11	29.6 pg/L	29.6U pg/L
GP-802-GW	PCB-11	21.7 pg/L	21.7U pg/L
	PCB-95	3.28 pg/L	3.28U pg/L
	PCB-113/90/101	4.41 pg/L	4.41U pg/L
	PCB-110	4.82 pg/L	4.82U pg/L
	PCB-118	4.5 pg/L	4.5U pg/L
	PCB-105	1.27 pg/L	1.27U pg/L
	PCB-147/149	3.84 pg/L	3.84U pg/L
	PCB-153/168	4.97 pg/L	4.97U pg/L
	PCB-163/138/129	4.88 pg/L	4.88U pg/L
	Total dichlorobiphenyl	24 pg/L	24J pg/L
	Total pentachlorobiphenyl	18.3 pg/L	18.3J pg/L
	Total hexachlorobiphenyl	13.7 pg/L	13.7J pg/L

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Ongoing Precision Recovery

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits.

XI. Compound Quantitation

All compound quantitations were within validation criteria with the following exceptions:

Sample	Compound	Flag	A or P
All samples in SDG B3246	All compounds reported as estimated maximum possible concentration (EMPC).	J (all detects)	A

XII. Target Compound Identification

All target compound identifications were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
GP-801-GW	PCB-10 PCB-5	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects)	P
GP-802-GW	PCB-8	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects)	P

XIII. System Performance

The system performance was acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to compounds reported as EMPCs and single ion quantitation, data were qualified as estimated in two samples.

Due to laboratory blank contamination, data were qualified as estimated or not detected in two samples.

No results were rejected in this SDG.

Nord
Polychlorinated Biphenyls Congeners - Data Qualification Summary - SDG B3246

Sample	Compound	Flag	A or P	Reason
GP-801-GW GP-802-GW	All compounds reported as estimated maximum possible concentration (EMPC).	J (all detects)	A	Compound quantitation (EMPC)
GP-801-GW	PCB-10 PCB-5	J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)
GP-802-GW	PCB-8	J (all detects)	P	Target compound identification (single ion quantitation)

Nord
Polychlorinated Biphenyls Congeners - Laboratory Blank Data Qualification Summary - SDG B3246

Sample	Compound	Modified Final Concentration	A or P
GP-801-GW	PCB-11	29.6U pg/L	A
GP-802-GW	PCB-11 PCB-95 PCB-113/90/101 PCB-110 PCB-118 PCB-105 PCB-147/149 PCB-153/168 PCB-163/138/129 Total dichlorobiphenyl Total pentachlorobiphenyl Total hexachlorobiphenyl	21.7U pg/L 3.28U pg/L 4.41U pg/L 4.82U pg/L 4.5U pg/L 1.27U pg/L 3.84U pg/L 4.97U pg/L 4.88U pg/L 24J pg/L 18.3J pg/L 13.7J pg/L	A

Nord
Polychlorinated Biphenyls Congeners - Field Blank Data Qualification Summary - SDG B3246

No Sample Data Qualified in this SDG

LDC #: 45192B31 **VALIDATION COMPLETENESS WORKSHEET** Date: 6/14/19

SDG #: B3246 Level IV Page: 1 of 1

Laboratory: SGS North America, Inc.S Reviewer: K

2nd Reviewer:

METHOD: HRGC/HRMS Polychlorinated Biphenyl Congeners (EPA Method 1668C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration/~~ICV~~	A	RSD ≤ 20
IV.	Continuing calibration	A	QC limits
V.	Laboratory Blanks	SW	
VI.	Field blanks	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	A	OPR
IX.	Field duplicates	N	
X.	Labeled Compounds	A	
XI.	Compound quantitation RL/LOQ/LODs	SW	All - EMPC - Jqd A
XII.	Target compound identification	SW	
XIII.	System performance	A	
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	GP-801-GW	B3246-001	Water	04/26/19
2	GP-802-GW	B3246-002	Water	04/26/19
3				
4				
5				
6				
7				
8				
9				
10				

Notes:

	MB1 16671						

LDC #: 45192B31

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: N
2nd Reviewer:

Method: HRGC/HRMS Polychlorinated Biphenyls (EPA Method 1668C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Was PFK exact mass 330.9792 verified?	✓			
Were the retention time windows established for all homologues?	✓			
Was the chromatographic resolution (valley) between PCB 23 and PCB 34 and between PCB 182 and PCB 187 ≤ 40% ?	✓			
Is the static resolving power ≥10,000 at m/z 330.9792 and ≥ 8000 throughout the mass range?	✓			
Was the mass resolution adequately checked with PFK?	✓			
III. Initial calibration/Initial calibration verification				
Was the initial calibration performed at 5 concentration levels?	✓			
Were all percent relative standard deviations (%RSD) ≤20% for unlabeled and labeled compounds?	✓			
Did all calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound and internal standard ≥ 10?	✓			
Were all initial calibration verification (ICV) percent differences (%D) within QC limits for unlabeled and labeled compounds?			✓	
IV. Continuing calibration				
Was a continuing calibration performed at the beginning of each 12 hour period?	✓			
Were all percent differences (%D) ≤25% for unlabeled and percent recoveries (%R) for labeled compounds within 50-145%?	✓			
Did all routine calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound and internal standard ≥ 10?	✓			
V. Laboratory Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank performed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the blanks validation findings worksheet.	✓			
VI. Field blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				

LDC #: 45192B31

VALIDATION FINDINGS CHECKLIST

Reviewer: M
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
X. Labeled Compounds				
Were labeled compound recoveries within the QC criteria?	✓			
Was the minimum S/N ratio of all labeled compound peaks ≥ 10?	✓			
XI. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	~~✓~~		✓	
Were the labeled compound, quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. Target compound identification				
For polychlorinated biphenyl congeners with associated labeled standards, were the retention times of the two quantitation peaks within -1 to 3 sec. of the RT of the labeled standard?	✓			
For polychlorinated biphenyl congeners without associated labeled standards, were the relative retention times of the two quantitation peaks within 0.005 time units of the RRT measured in the routine calibration?	✓			
For other polychlorinated biphenyl congeners, were the retention times of the two quantitation peaks within RT established in the performance check solution?	✓			
Did compound spectra contain all characteristic ions listed in the table attached?	✓			
Was the Ion Abundance Ratio for the two quantitation ions within criteria?	✓			
Was the signal to noise ratio for each target compound and labeled standard ≥ 2.5?	✓			
Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?	✓			
Was an acceptable lock mass recorded and monitored?	✓			
XIII. System performance				
System performance was found to be acceptable.	✓			
XIV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 45192B31

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer:
2nd Reviewer:

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a method blank?

Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?

X N N/A Was the method blank contaminated? If yes, please see qualification below.

Blank extraction date: 5/8/19 **Blank analysis date:** 5/20/19

Conc. units: pg/L **Associated samples:** All Qualify U Total J

Compound	Blank ID	Sample Identification								
	MB1 16671	5X	1	2						
PCB-11	13.3*	66.5	29.6	21.7						
PCB-95	2.52*	12.6		3.28						
PCB-113/90/101	3.31*	16.55		4.41						
PCB-110	2.65*	13.25		4.82						
PCB-118	2.41	12.05		4.5						
PCB-105	1.51*	7.55		1.27						
PCB-147/149	2*	10		3.84						
PCB-153/168	3.28	16.4		4.97						
PCB-163/138/129	3.25	16.25		4.88						
Total Di-CB	13.3*	66.5		24/J						
Total Penta-CB	12.4*	62		18.3/J						
Total Hexa-CB	8.53*	42.65		13.7/J						

*EMPC

LDC #: 45792B31

VALIDATION FINDINGS WORKSHEET
Target Compound Identification

Page: 1 of 1
Reviewer: JL
2nd Reviewer: [signature]

METHOD: HRGC/HRMS Polychlorinated Biphenyls (EPA Method 1668C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Was the Ion Abundance Ratio for the two quantitation ions within criteria?
Y (N) N/A Was the signal to noise ratio for each target compound and labeled standard ≥ 2.5?
Y (N) N/A Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?

#	Date	Sample ID	Associated Compounds	Finding	Qualifications
		1	PCB - 10, 5	Congeners were quantitated using single ion mode. The	Jdets/P (+ Total Di-CB)
		2	PCB - 8	second ion is not integrated or reported due to PFK	↓
				interference. Quantitation should be performed using the	
				area of the primary and secondary ions.	

LDC #: 45192B31

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: SR
2nd Reviewer: [signature]

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$ — A_x = Area of compound, A_{is} = Area of associated internal standard
average RRF = sum of the RRFs/number of standards — C_x = Concentration of compound, C_{is} = Concentration of internal standard
$\%RSD = 100 * (S/X)$ — S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported %RSD	Recalculated %RSD
1	10AL	1/4/19	PCB 77 (^{13}C-PCB 77)	1.02	1.02	0.98	0.98	6.0	5.9
			PCB 105 (^{13}C-PCB 105)	0.96	0.96	0.96	0.96	7.9	7.9
			PCB 167 (^{13}C-PCB 167)	1.02	1.02	1.04	1.04	5.5	5.7
			PCB 189 (^{13}C-PCB 189)	1.02	1.02	0.97	0.97	7.6	7.7
2			PCB 77 (^{13}C-PCB 77)						
			PCB 105 (^{13}C-PCB 105)						
			PCB 167 (^{13}C-PCB 167)						
			PCB 189 (^{13}C-PCB 189)						
3			PCB 77 (^{13}C-PCB 77)						
			PCB 105 (^{13}C-PCB 105)						
			PCB 167 (^{13}C-PCB 167)						
			PCB 189 (^{13}C-PCB 189)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45192B31

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	190520503	5/20/19	PCB 77 (^{13}C-PCB 77)	1.02	0.99	0.99	3.0	2.6
			PCB 105 (^{13}C-PCB 105)	0.96	0.94	0.94	2.2	2.6
			PCB 167 (^{13}C-PCB 167)	1.02	1.00	1.01	1.0	1.4
			PCB 189 (^{13}C-PCB 189)	1.02	0.96	0.96	5.1	5.6
2			PCB 77 (^{13}C-PCB 77)					
			PCB 105 (^{13}C-PCB 105)					
			PCB 167 (^{13}C-PCB 167)					
			PCB 189 (^{13}C-PCB 189)					
3			PCB 77 (^{13}C-PCB 77)					
			PCB 105 (^{13}C-PCB 105)					
			PCB 167 (^{13}C-PCB 167)					
			PCB 189 (^{13}C-PCB 189)					
4			PCB 77 (^{13}C-PCB 77)					
			PCB 105 (^{13}C-PCB 105)					
			PCB 167 (^{13}C-PCB 167)					
			PCB 189 (^{13}C-PCB 189)					

Comments: Refer to Routine Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45912B31

VALIDATION FINDINGS WORKSHEET
Ongoing Precision and Recovery Results Verification

Page: 1 of 1
Reviewer: JC
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

The percent recoveries (%R) of the Ongoing Precision and Recovery (OPR) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA

Where: SSC = Spiked sample concentration
SSCD = Duplicate Spiked sample concentration
SA = Spike added

RPD = I SSC- SSCDI * 2/(SSC+ SSCD)

OPR ID: OPR1

Compound	Spike Added (pg/uL)		Spiked Sample Concentration (pg/uL)		OPR Percent Recovery		OPR D Percent Recovery		OPR/OPRD RPD	
	OPR	OPRD	OPR	OPRD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
PCB 15	50		51.2		102	102				
PCB 77	↓		50		100	100				
PCB 169			54.6		109	109				
PCB 206			53.8		108	108				

LDC #: 45192B31

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: [illegible]
2nd reviewer: [illegible]

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

RRF = Relative Response Factor (average) from the initial calibration

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

Example:

Sample I.D. 1, PCB-3:

Conc. = $\frac{(1.05e6)(2000)(\quad)}{(\quad)(\quad)(0.98)(\quad)}$

= 34.56 pg/L

#	Sample ID	Compound	Reported Concentration (pg/L)	Calculated Concentration (pg/L)	Qualification
	1	PCB-3	34.2	34.6	c

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Nord

LDC Report Date: June 17, 2019

Parameters: Polychlorinated Biphenyls Congeners

Validation Level: Level IV

Laboratory: SGS North America, Inc.

Sample Delivery Group (SDG): B3256

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
MW-12-0519	B3256-003	Water	05/03/19
MW-13-0519	B3256-004	Water	05/03/19
MW-14-0519	B3256-005	Water	05/03/19
MW-15-0519	B3256-006	Water	05/03/19
MW-16-0519	B3256-007	Water	05/03/19
MW-17-0519	B3256-008	Water	05/03/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with a modified outline of the USEPA National Functional Guidelines (NFG) for High Resolution Superfund Methods Data Review (April 2016). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polychlorinated Biphenyls Congeners by Environmental Protection Agency (EPA) Method 1668C

All sample results were subjected to Level IV data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. HRGC/HRMS Instrument Performance Check

Instrument performance was checked at the required frequency.

Retention time windows were established for all congeners. The chromatographic resolution between the congeners PCB-23 and PCB-34 and congeners PCB-182 and PCB-187 was resolved with a valley of less than or equal to 40%.

The static resolving power was less than or equal to 10,000 (10% valley definition) at m/z 330.9792 and greater than or equal to 8000 throughout the mass range.

III. Initial Calibration and Initial Calibration Verification

A five point initial calibration was performed as required by the method.

The percent relative standard deviations (%RSD) were less than or equal to 20.0% for unlabeled compounds and labeled compounds.

The ion abundance ratios for all compounds were within validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were within QC limits.

The ion abundance ratios for all compounds were within validation criteria.

The minimum S/N ratio was greater than or equal to 10 for each unlabeled compound and labeled compound.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Extraction Date	Compound	Concentration	Associated Samples
MB1 16680	05/15/19	PCB-11 PCB-153/168 PCB-163/138/129 Total dichlorobiphenyl Total hexachlorobiphenyl	10.2 pg/L 2.84 pg/L 2.77 pg/L 10.2 pg/L 5.61 pg/L	All samples in SDG B3256

Sample concentrations were compared to concentrations detected in the laboratory blanks. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated laboratory blanks with the following exceptions:

Sample	Compound	Reported Concentration	Modified Final Concentration
MW-12-0519	PCB-11	15.8 pg/L	15.8U pg/L
MW-13-0519	PCB-11	44.1 pg/L	44.1U pg/L
MW-14-0519	PCB-11	17.6 pg/L	17.6U pg/L
MW-15-0519	PCB-11 PCB-153/168 Total dichlorobiphenyl Total hexachlorobiphenyl	18.6 pg/L 3.99 pg/L 18.6 pg/L 9.33 pg/L	18.6U pg/L 3.99U pg/L 18.6U pg/L 9.33J pg/L
MW-16-0519	PCB-11 PCB-153/168 PCB-163/138/129 Total dichlorobiphenyl	21.2 pg/L 7.59 pg/L 11.6 pg/L 25.1 pg/L	21.2U pg/L 7.59U pg/L 11.6U pg/L 25.1J pg/L
MW-17-0519	PCB-11 PCB-153/168 PCB-163/138/129 Total dichlorobiphenyl Total hexachlorobiphenyl	14.9 pg/L 3.61 pg/L 3.24 pg/L 14.9 pg/L 11.2 pg/L	14.9U pg/L 3.61U pg/L 3.24U pg/L 14.9U pg/L 11.2J pg/L

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Matrix Spike/Matrix Spike Duplicates

The laboratory has indicated that there were no matrix spike (MS) and matrix spike duplicate (MSD) analyses specified for the samples in this SDG, and therefore matrix spike and matrix spike duplicate analyses were not performed for this SDG.

VIII. Ongoing Precision Recovery

Ongoing precision recovery (OPR) samples were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Labeled Compounds

All percent recoveries (%R) for labeled compounds used to quantitate target compounds were within QC limits with the following exceptions:

Sample	Labeled Compound	%R (Limits)	Affected Compound	Flag	A or P
MW-12-0519	13-PCB-15	161 (5-145)	PCB-9 PCB-7 PCB-6 PCB-5 PCB-8 PCB-14 PCB-11 PCB-13/12 PCB-15 Total dichlorobiphenyl	J (all detects) UJ (all non-detects)	P
MW-12-0519	13C-PCB-19	155 (5-145)	PCB-19 PCB-30/18 PCB-17 PCB-27 PCB-24 PCB-16 PCB-32 Total trichlorobiphenyl	J (all detects) UJ (all non-detects)	P

XI. Compound Quantitation

All compound quantitations met validation criteria.

XII. Target Compound Identification

All target compound identifications were within validation criteria with the following exceptions:

Sample	Compound	Finding	Criteria	Flag	A or P
MW-12-0519 MW-14-0519	PCB-10 PCB-9 PCB-7 PCB-13/12 Total dichlorobiphenyl	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	P
MW-13-0519	PCB-10 Total dichlorobiphenyl	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects)	P
MW-16-0519	PCB-9 Total dichlorobiphenyl	Results were quantitated using single ion mode. The area for the secondary ion trace was not integrated due to significantly elevated noise levels from PFK.	The quantitation should be performed using the area of the primary and secondary ions.	J (all detects) J (all detects)	P

XIII. System Performance

The system performance was acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method.

Due to labeled compounds %R and single ion quantitation, data were qualified as estimated in four samples.

Due to laboratory blank contamination, data were qualified as estimated or not detected in six samples.

No results were rejected in this SDG.

Nord
Polychlorinated Biphenyls Congeners - Data Qualification Summary - SDG B3256

Sample	Compound	Flag	A or P	Reason
MW-12-0519	PCB-9 PCB-7 PCB-6 PCB-5 PCB-8 PCB-14 PCB-11 PCB-13/12 PCB-15 Total dichlorobiphenyl PCB-19 PCB-30/18 PCB-17 PCB-27 PCB-24 PCB-16 PCB-32 Total trichlorobiphenyl	J (all detects) UJ (all non-detects)	P	Labeled compounds (%R)
MW-12-0519 MW-14-0519	PCB-10 PCB-9 PCB-7 PCB-13/12 Total dichlorobiphenyl	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)
MW-13-0519	PCB-10 Total dichlorobiphenyl	J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)
MW-16-0519	PCB-9 Total dichlorobiphenyl	J (all detects) J (all detects)	P	Target compound identification (single ion quantitation)

Nord
Polychlorinated Biphenyls Congeners - Laboratory Blank Data Qualification Summary - SDG B3256

Sample	Compound	Modified Final Concentration	A or P
MW-12-0519	PCB-11	15.8U pg/L	A
MW-13-0519	PCB-11	44.1U pg/L	A
MW-14-0519	PCB-11	17.6U pg/L	A
MW-15-0519	PCB-11 PCB-153/168 Total dichlorobiphenyl Total hexachlorobiphenyl	18.6U pg/L 3.99U pg/L 18.6U pg/L 9.33J pg/L	A

Sample	Compound	Modified Final Concentration	A or P
MW-16-0519	PCB-11 PCB-153/168 PCB-163/138/129 Total dichlorobiphenyl	21.2U pg/L 7.59U pg/L 11.6U pg/L 25.1J pg/L	A
MW-17-0519	PCB-11 PCB-153/168 PCB-163/138/129 Total dichlorobiphenyl Total hexachlorobiphenyl	14.9U pg/L 3.61U pg/L 3.24U pg/L 14.9U pg/L 11.2J pg/L	A

Nord
Polychlorinated Biphenyls Congeners - Field Blank Data Qualification Summary - SDG B3256

No Sample Data Qualified in this SDG

LDC #: 45192C31 **VALIDATION COMPLETENESS WORKSHEET** Date: 6/14/19
SDG #: B3256 Level IV Page: 1 of 1
Laboratory: SGS North America, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS Polychlorinated Biphenyl Congeners (EPA Method 1668C)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A, A	
II.	HRGC/HRMS Instrument performance check	A	
III.	Initial calibration~~/ICV~~	A	RSD ≤ 20
IV.	Continuing calibration	A	QC limits
V.	Laboratory Blanks	SW	
VI.	Field blanks	N	
VII.	Matrix spike/Matrix spike duplicates	N	
VIII.	Laboratory control samples	A	OPR
IX.	Field duplicates	N	
X.	Labeled Compounds	SW	
XI.	Compound quantitation RL/LOQ/LODs	SW	ML - EMPC - J and A
XII.	Target compound identification	SW	
XIII.	System performance	A	
XIV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	MW-12-0519	B3256-003	Water	05/03/19
2	MW-13-0519	B3256-004	Water	05/03/19
3	MW-14-0519	B3256-005	Water	05/03/19
4	MW-15-0519	B3256-006	Water	05/03/19
5	MW-16-0519	B3256-007	Water	05/03/19
6	MW-17-0519	B3256-008	Water	05/03/19
7				
8				
9				
10				

Notes:

	MB1 16680						

LDC #: 45192C31

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: N
2nd Reviewer:

Method: HRGC/HRMS Polychlorinated Biphenyls (EPA Method 1668C)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. GC/MS Instrument performance check				
Was PFK exact mass 330.9792 verified?	✓			
Were the retention time windows established for all homologues?	✓			
Was the chromatographic resolution (valley) between PCB 23 and PCB 34 and between PCB 182 and PCB 187 ≤ 40% ?	✓			
Is the static resolving power ≥10,000 at m/z 330.9792 and ≥ 8000 throughout the mass range?	✓			
Was the mass resolution adequately checked with PFK?	✓			
III. Initial calibration/Initial calibration verification				
Was the initial calibration performed at 5 concentration levels?	✓			
Were all percent relative standard deviations (%RSD) ≤20% for unlabeled and labeled compounds?	✓			
Did all calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound and internal standard ≥ 10?	✓			
Were all initial calibration verification (ICV) percent differences (%D) within QC limits for unlabeled and labeled compounds?			✓	
IV. Continuing calibration				
Was a continuing calibration performed at the beginning of each 12 hour period?	✓			
Were all percent differences (%D) ≤25% for unlabeled and percent recoveries (%R) for labeled compounds within 50-145%?	✓			
Did all routine calibration standards meet the Ion Abundance Ratio criteria?	✓			
Was the signal to noise ratio for each target compound and internal standard ≥ 10?	✓			
V. Laboratory Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was a method blank performed for each matrix and concentration?	✓			
Was there contamination in the method blanks? If yes, please see the blanks validation findings worksheet.	✓			
VI. Field blanks				
Were field blanks identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?		✓		
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
VIII. Laboratory control samples				

LDC #: 45192031

VALIDATION FINDINGS CHECKLIST

Reviewer: A
2nd Reviewer: A

Validation Area	Yes	No	NA	Findings/Comments
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
IX. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
X. Labeled Compounds				
Were labeled compound recoveries within the QC criteria?		✓		
Was the minimum S/N ratio of all labeled compound peaks ≥ 10?	✓			
XI. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?			✓	
Were the labeled compound, quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XII. Target compound identification				
For polychlorinated biphenyl congeners with associated labeled standards, were the retention times of the two quantitation peaks within -1 to 3 sec. of the RT of the labeled standard?	✓			
For polychlorinated biphenyl congeners without associated labeled standards, were the relative retention times of the two quantitation peaks within 0.005 time units of the RRT measured in the routine calibration?	✓			
For other polychlorinated biphenyl congeners, were the retention times of the two quantitation peaks within RT established in the performance check solution?	✓			
Did compound spectra contain all characteristic ions listed in the table attached?	✓			
Was the Ion Abundance Ratio for the two quantitation ions within criteria?	✓			
Was the signal to noise ratio for each target compound and labeled standard ≥ 2.5?	✓			
Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?	✓			
Was an acceptable lock mass recorded and monitored?	✓			
XIII. System performance				
System performance was found to be acceptable.	✓			
XIV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

LDC #: 45192C31

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668B)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all samples associated with a method blank?
Y N N/A Was a method blank performed for each matrix and whenever a sample extraction was performed?
Y N N/A Was the method blank contaminated? If yes, please see qualification below.

Blank extraction date: 5/15/19 **Blank analysis date:** 5/22/19
Conc. units: pg/L **Associated samples:** All Qualify U Total U,J

Compound	Blank ID	Sample Identification								
[redacted]	MB1 16680	5X	1	2	3	4	5	6		
PCB-11	10.2*	51	15.8	44.1	17.6	18.6	21.2	14.9		
PCB-153/168	2.84	14.2				3.99	7.59	3.61		
PCB-163/138/129	2.77*	13.85					11.6	3.24		
Total Di-CB	10.2*	51				18.6/U	25.1/J	14.9/U		
Total Hexa-CB	5.61*	28.05				9.33/J		11.2/J		

*EMPC

LDC #: 45192C31

VALIDATION FINDINGS WORKSHEET
Labeled Compounds

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
Y (N) N/A Were all labeled compound recoveries and ion abundance ratios (IAR) within the QC criteria?
(Y) N N/A Was the S/N ratio all labeled compound peaks ≥ 10?

#	Date	Lab ID/Reference	Labeled Compound	(% Recovery) Ion Abundance Ratio (Limit:)		Qualifications
		1 (dets/ND)	13C-PCB-15	161	(5-145)	J/UJ/P + Total Di-CB
			↓ 19	155	(↓)	↓ + Total Tri-CB
					( )	(see attached)
					( )	
					( )	
					( )	
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Analyte

Compound	Standard
PCB-1 2-MoCB	ES PCB-1
PCB-2 3-MoCB	ES PCB-3
PCB-3 4-MoCB	ES PCB-3
PCB-4 22'-DiCB	ES PCB-4
PCB-10 26-DiCB	ES PCB-4
PCB-9 25-DiCB	ES PCB-15
PCB-7 24-DiCB	ES PCB-15
PCB-6 23'-DiCB	ES PCB-15
PCB-5 23-DiCB	ES PCB-15
PCB-8 24'-DiCB	ES PCB-15
PCB-14 35-DiCB	ES PCB-15
PCB-11 33'-DiCB	ES PCB-15
PCB-13/12 34'/34-DiCB	ES PCB-15
PCB-15 44'-DiCB	ES PCB-15
PCB-19 22'6-TrCB	ES PCB-19
PCB-30/18 246/22'5-TrCB	ES PCB-19
PCB-17 22'4-TrCB	ES PCB-19
PCB-27 23'6-TrCB	ES PCB-19
PCB-24 236-TrCB	ES PCB-19
PCB-16 22'3-TrCB	ES PCB-19
PCB-32 24'6-TrCB	ES PCB-19
PCB-34 23'5'-TrCB	ES PCB-37
PCB-23 235-TrCB	ES PCB-37
PCB-26/29 23'5/245-TrCB	ES PCB-37
PCB-25 23'4-TrCB	ES PCB-37
PCB-31 24'5-TrCB	ES PCB-37
PCB-28/20 244'/233'-TrCB	ES PCB-37
PCB-21/33 234/23'4'-TrCB	ES PCB-37
PCB-22 234'-TrCB	ES PCB-37
PCB-36 33'5-TrCB	ES PCB-37
PCB-39 34'5-TrCB	ES PCB-37
PCB-38 345-TrCB	ES PCB-37
PCB-35 33'4-TrCB	ES PCB-37
PCB-37 344'-TrCB	ES PCB-37
PCB-54 22'66'-TeCB	ES PCB-54
PCB-77 33'44'-TeCB	ES PCB-77

Compound	Standard
PCB-50/53 22'46/22'56'-TeCE	ES PCB-81
PCB-45 22'36-TeCB	ES PCB-81
PCB-51 22'46'-TeCB	ES PCB-81
PCB-46 22'36'-TeCB	ES PCB-81
PCB-52 22'55'-TeCB	ES PCB-81
PCB-73 23'5'6-TeCB	ES PCB-81
PCB-43 22'35-TeCB	ES PCB-81
PCB-69/49 23'46/22'45'-TeCE	ES PCB-81
PCB-48 22'45-TeCB	ES PCB-81
PCB-44/47/65 ...-TeCB	ES PCB-81
PCB-59/62/75 ...-TeCB	ES PCB-81
PCB-42 22'34'-TeCB	ES PCB-81
PCB-41 22'34-TeCB	ES PCB-81
PCB-71/40 23'4'6/22'33'-TeCI	ES PCB-81
PCB-64 234'6-TeCB	ES PCB-81
PCB-72 23'55'-TeCB	ES PCB-81
PCB-68 23'45'-TeCB	ES PCB-81
PCB-57 233'5-TeCB	ES PCB-81
PCB-58 233'5'-TeCB	ES PCB-81
PCB-67 23'45-TeCB	ES PCB-81
PCB-63 234'5-TeCB	ES PCB-81
PCB-61/70/74/76 ...-TeCB	ES PCB-81
PCB-66 23'44'-TeCB	ES PCB-81
PCB-55 233'4-TeCB	ES PCB-81
PCB-56 233'4'-TeCB	ES PCB-81
PCB-60 2344'-TeCB	ES PCB-81
PCB-80 33'55'-TeCB	ES PCB-81
PCB-79 33'45'-TeCB	ES PCB-81
PCB-78 33'45-TeCB	ES PCB-81
PCB-81 344'5-TeCB	ES PCB-81
PCB-104 22'466'-PeCB	ES PCB-104
PCB-96 22'366'-PeCB	ES PCB-104
PCB-105 233'44'-PeCB	ES PCB-105
PCB-127 33'455'-PeCB	ES PCB-105
PCB-114 2344'5-PeCB	ES PCB-114
PCB-122 233'4'5'-PeCB	ES PCB-114

Compound	Standard
PCB-118 23'44'5-PeCB	ES PCB-118
PCB-103 22'45'6-PeCB	ES PCB-123
PCB-94 22'356'-PeCB	ES PCB-123
PCB-95 22'35'6-PeCB	ES PCB-123
PCB-100/93 22'44'6/22'356-P	ES PCB-123
PCB-102 22'456'-PeCB	ES PCB-123
PCB-98 22'34'6'-PeCB	ES PCB-123
PCB-88 22'346-PeCB	ES PCB-123
PCB-91 22'34'6-PeCB	ES PCB-123
PCB-84 22'33'6-PeCB	ES PCB-123
PCB-89 22'346'-PeCB	ES PCB-123
PCB-121 23'45'6-PeCB	ES PCB-123
PCB-92 22'355'-PeCB	ES PCB-123
PCB-113/90/101 ...-PeCB	ES PCB-123
PCB-83 22'33'5-PeCB	ES PCB-123
PCB-99 22'44'5-PeCB	ES PCB-123
PCB-112 233'56-PeCB	ES PCB-123
PCB-108/119/86/97/125...-Pe	ES PCB-123
PCB-117 234'56-PeCB	ES PCB-123
PCB-116/85 23456/22'344'-P	ES PCB-123
PCB-110 233'4'6-PeCB	ES PCB-123
PCB-115 2344'6-PeCB	ES PCB-123
PCB-82 22'33'4-PeCB	ES PCB-123
PCB-111 233'55'-PeCB	ES PCB-123
PCB-120 23'455'-PeCB	ES PCB-123
PCB-107/124 ...-PeCB	ES PCB-123
PCB-109 233'46-PeCB	ES PCB-123
PCB-106 233'45-PeCB	ES PCB-123
PCB-123 23'44'5'-PeCB	ES PCB-123
PCB-126 33'44'5-PeCB	ES PCB-126
PCB-155 22'44'66'-HxCB	ES PCB-155
PCB-152 22'3566'-HxCB	ES PCB-155
PCB-150 22'34'66'-HxCB	ES PCB-155
PCB-136 22'33'66'-HxCB	ES PCB-155
PCB-145 22'3466'-HxCB	ES PCB-155

Compound	Standard
PCB-148 22'34'56'-HxCB	ES PCB-153
PCB-151/135 ...-HxCB	ES PCB-153
PCB-154 22'44'56'-HxCB	ES PCB-153
PCB-144 22'345'6-HxCB	ES PCB-153
PCB-147/149 ...-HxCB	ES PCB-153
PCB-134 22'33'56-HxCB	ES PCB-153
PCB-143 22'3456'-HxCB	ES PCB-153
PCB-139/140 ...-HxCB	ES PCB-153
PCB-131 22'33'46-HxCB	ES PCB-153
PCB-142 22'3456-HxCB	ES PCB-153
PCB-132 22'33'46'-HxCB	ES PCB-153
PCB-133 22'33'55'-HxCB	ES PCB-153
PCB-165 233'55'6-HxCB	ES PCB-153
PCB-146 22'34'55'-HxCB	ES PCB-153
PCB-161 233'45'6-HxCB	ES PCB-153
PCB-153/168 ...-HxCB	ES PCB-153
PCB-141 22'3455'-HxCB	ES PCB-153
PCB-130 22'33'45'-HxCB	ES PCB-153
PCB-137 22'344'5-HxCB	ES PCB-153
PCB-164 233'4'5'6-HxCB	ES PCB-153
PCB-163/138/129 ...-HxCB	ES PCB-153
PCB-160 233'456-HxCB	ES PCB-153
PCB-158 233'44'6-HxCB	ES PCB-153
PCB-156/157 ...-HxCB	ES PCB-156/157
PCB-167 23'44'55'-HxCB	ES PCB-167
PCB-128/166 ...-HxCB	ES PCB-167
PCB-159 233'455'-HxCB	ES PCB-167
PCB-162 233'4'55'-HxCB	ES PCB-167
PCB-169 33'44'55'-HxCB	ES PCB-169
PCB-188 22'34'566'-HpCB	ES PCB-188
PCB-179 22'33'566'-HpCB	ES PCB-188
PCB-184 22'344'66'-HpCB	ES PCB-188
PCB-176 22'33'466'-HpCB	ES PCB-188
PCB-186 22'34566'-HpCB	ES PCB-188
PCB-178 22'33'55'6-HpCB	ES PCB-188

Compound	Standard
PCB-175 22'33'45'6-HpCB	ES PCB-180
PCB-187 22'34'55'6-HpCB	ES PCB-180
PCB-182 22'344'56'-HpCB	ES PCB-180
PCB-183 22'344'5'6-HpCB	ES PCB-180
PCB-185 22'3455'6-HpCB	ES PCB-180
PCB-174 22'33'456'-HpCB	ES PCB-180
PCB-177 22'33'45'6'-HpCB	ES PCB-180
PCB-181 22'344'56-HpCB	ES PCB-180
PCB-171/173 ...-HpCB	ES PCB-180
PCB-172 22'33'455'-HpCB	ES PCB-180
PCB-192 233'455'6-HpCB	ES PCB-180
PCB-180/193 ...-HpCB	ES PCB-180
PCB-191 233'44'5'6-HpCB	ES PCB-180
PCB-170 22'33'44'5-HpCB	ES PCB-170
PCB-190 233'44'56-HpCB	ES PCB-170
PCB-189 233'44'55'-HpCB	ES PCB-189
PCB-202 22'33'55'66'-OcCB	ES PCB-202
PCB-201 22'33'45'66'-OcCB	ES PCB-202
PCB-204 22'344'566'-OcCB	ES PCB-202
PCB-197 22'33'44'66'-OcCB	ES PCB-202
PCB-200 22'33'4566'-OcCB	ES PCB-202
PCB-198/199 ...-OcCB	ES PCB-202
PCB-196 22'33'44'56'-OcCB	ES PCB-202
PCB-203 22'344'55'6-OcCB	ES PCB-202
PCB-195 22'33'44'56-OcCB	ES PCB-205
PCB-194 22'33'44'55'-OcCB	ES PCB-205
PCB-205 233'44'55'6-OcCB	ES PCB-205
PCB-208 22'33'455'66'-NoCB	ES PCB-208
PCB-207 22'33'44'566'-NoCB	ES PCB-208
PCB-206 22'33'44'55'6-NoCB	ES PCB-206
PCB-209 DeCB	ES PCB-209

LDC #: 45192C31

VALIDATION FINDINGS WORKSHEET
Target Compound Identification

Reviewer: M
2nd Reviewer: [signature]

METHOD: HRGC/HRMS Polychlorinated Biphenyls (EPA Method 1668C)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Was the Ion Abundance Ratio for the two quantitation ions within criteria?
Y N N/A Was the signal to noise ratio for each target compound and labeled standard ≥ 2.5?
Y (N) N/A Does the maximum intensity of each specified characteristic ion coincide within ± 2 seconds (includes labeled standards)?

#	Date	Sample ID	Associated Compounds	Finding	Qualifications
		1, 3	PCB-10, 9, 7, 13/12	Congeners were quantitated using single ion mode. The	Jdets/P (+ Total Di-CB)
		2	10	second ion is not integrated or reported due to PFK	↓
		5	↓ 9	interference. Quantitation should be performed using the	
				area of the primary and secondary ions.	

LDC #: 45192C31

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewer: SR
2nd Reviewer: [signature]

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

The Relative Response Factor (RRF), average RRF, and percent relative standard deviation (%RSD) were recalculated for the compounds identified below using the following calculations:

$RRF = (A_x)(C_{is})/(A_{is})(C_x)$ — A_x = Area of compound, A_{is} = Area of associated internal standard
average RRF = sum of the RRFs/number of standards — C_x = Concentration of compound, C_{is} = Concentration of internal standard
$\%RSD = 100 * (S/X)$ — S = Standard deviation of the RRFs, X = Mean of the RRFs

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Reported Average RRF (initial)	Recalculated Average RRF (initial)	Reported RRF (50 std)	Recalculated RRF (50 std)	Reported %RSD	Recalculated %RSD
1	10AL	1/4/19	PCB 77 (^{13}C-PCB 77)	1.02	1.02	0.98	0.98	6.0	5.9
			PCB 105 (^{13}C-PCB 105)	0.96	0.96	0.96	0.96	7.9	7.9
			PCB 167 (^{13}C-PCB 167)	1.02	1.02	1.04	1.04	5.5	5.7
			PCB 189 (^{13}C-PCB 189)	1.02	1.02	0.97	0.97	7.6	7.7
2			PCB 77 (^{13}C-PCB 77)						
			PCB 105 (^{13}C-PCB 105)						
			PCB 167 (^{13}C-PCB 167)						
			PCB 189 (^{13}C-PCB 189)						
3			PCB 77 (^{13}C-PCB 77)						
			PCB 105 (^{13}C-PCB 105)						
			PCB 167 (^{13}C-PCB 167)						
			PCB 189 (^{13}C-PCB 189)						

Comments: Refer to Initial Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45192C3J

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer: SR
2nd Reviewer:

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
RRF = $(A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	190522S01	5/22/19	PCB 77 (^{13}C-PCB 77)	1.02	0.98	0.98	4.3	4.2
			PCB 105 (^{13}C-PCB 105)	0.96	0.96	0.96	0.3	0
			PCB 167 (^{13}C-PCB 167)	1.02	0.99	0.99	2.2	2.7
			PCB 189 (^{13}C-PCB 189)	1.02	0.93	0.94	8.0	8.3
2			PCB 77 (^{13}C-PCB 77)					
			PCB 105 (^{13}C-PCB 105)					
			PCB 167 (^{13}C-PCB 167)					
			PCB 189 (^{13}C-PCB 189)					
3			PCB 77 (^{13}C-PCB 77)					
			PCB 105 (^{13}C-PCB 105)					
			PCB 167 (^{13}C-PCB 167)					
			PCB 189 (^{13}C-PCB 189)					
4			PCB 77 (^{13}C-PCB 77)					
			PCB 105 (^{13}C-PCB 105)					
			PCB 167 (^{13}C-PCB 167)					
			PCB 189 (^{13}C-PCB 189)					

Comments: Refer to Routine Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45192C31

VALIDATION FINDINGS WORKSHEET
Ongoing Precision and Recovery Results Verification

Reviewer: SR
2nd Reviewer:

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

The percent recoveries (%R) of the Ongoing Precision and Recovery (OPR) were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * SSC/SA

Where: SSC = Spiked sample concentration
SSCD = Duplicate Spiked sample concentration
SA = Spike added

RPD = I SSC- SSCDI * 2/(SSC+ SSCD)

OPR ID: OPR1

Compound	Spike Added (pg/uL)		Spiked Sample Concentration (pg/uL)		OPR Percent Recovery		OPR D Percent Recovery		OPR/OPRD RPD	
	OPR	OPRD	OPR	OPRD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
PCB 15	50		50.4		101	101				
PCB 77	↓		50.5		101	101				
PCB 169			52.6		105	105				
PCB 206			55		110	110				

LDC #: 45192C31

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: R
2nd reviewer: C

METHOD: HRGC/HRMS PCB Congeners (EPA Method 1668C)

(Y) N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(DF)}{(A_{is})(RRF)(V_o)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

RRF = Relative Response Factor (average) from the initial calibration

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

Example:

Sample I.D. 1, PCB-15:

Conc. = $\frac{(1.92e6)(2000)(\quad)}{(6.00e7)(0.97)(0.96)(\quad)}$

= 68.7 pg/L

#	Sample ID	Compound	Reported Concentration (pg/L)	Calculated Concentration (pg/L)	Qualification
	1	PCB-15	68.6	68.7	-