DATA VALIDATION REPORT
Portland Harbor
Head of Swan Island Lagoon Sediment Sampling

Revision 1

Prepared for:

Pacific Groundwater Group
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Approved for Release:

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PROJECT NARRATIVE

Basis for the Data Validation

This report presents the results of Summary and Full Validation (EPA Stage 2A and EPA Stage 4) performed on sediment and quality control sample data for samples collected at the Head of Swan Island Lagoon at Portland Harbor. A complete list of samples is provided in the **Sample Index**.

Samples were analyzed by TestAmerica Laboratories, Inc. Fife, Washington, TestAmerica Laboratories, Inc., Knoxville, Tennessee, TestAmerica Laboratories, Inc. Sacramento, California, and ALS Environmental, Kelso, Washington. The analytical methods and EcoChem project chemists are listed below.

ANALYSIS	METHOD	PRIMARY REVIEW	SECONDARY REVIEW
PCB Congeners	EPA 1668	E. Clayton & R. Frans	C. Frans
Dioxins/Furans	EPA1613 SW8290		
PCB Aroclors	SW8082A		
Total Polycyclic Aromatic Hydrocarbons	SW8270D-SIM		
Total Solids	SM 2540 G & EPA 160.3		

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Head of Swan Island Lagoon Sediment Field Sampling Plan Portland Harbor Superfund Site* (Pacific Groundwater Group, October 22, 2018*); National Functional Guidelines for Organic Data Review* (USEPA 2008 & 2014); and *National Functional Guidelines for Inorganic Data Review* (USEPA 2010); *National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) & Chlorinated Dibenzofurans (CDFs) Data Review,* (USEPA September 2011); and USEPA *R10 Data Validation and Review Guidelines for Polychlorinated Dibenzo-p-Dioxin and Polychlorinated Dibenzofuran Data (PCDD/PCDF) Using Method 1613B and SW846 Method 8290A (USEPA May 2014)*.

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values are assigned an R, the data are to be rejected and should not be used for any site evaluation purposes. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced previously.

Data qualifier definitions, reason codes, and validation criteria are included as Appendix A. A Qualified Data Summary Table is included in Appendix B. Data Validation Worksheets will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted with this report.

Sample Index

Pacific Groundwater Group - Portland Harbor Head of Swan Island Sediment Sampling

							Conventional Tests					
SDG	Sample ID	Laboratory ID	PCB Aroclor	PCB Congener	PAHs	Dioxin	Grain Size	Total Solids	Density	Specific Gravity	TSS	TOC
J81308-2	E-9.02-SC-20to40-102318	580-81308-27	✓	✓		✓	✓	✓	✓	✓		✓
	E-9.02-SC-00to10-102318	580-81308-28	✓	✓		✓	✓	✓	✓	✓		✓
	E-9.02-SC-10to20-102318	580-81308-29	✓	✓		✓	✓	✓	✓	✓		✓
	E-9.02-SC-60to80-102318	580-81308-30	✓	✓		✓	✓	✓	✓	✓		✓
	D-8.90-SC-62to80-102318	580-81308-31	✓	✓		✓	✓	✓	✓	✓		✓
	E-9.02-SC-100to115-102318	580-81308-32	✓	✓		✓	✓	✓	✓	✓		✓
	E-9.02-SC-80to100-102318	580-81308-33	✓	✓		✓	✓	✓	✓	✓		✓
	E-9.02-SC-115to130-102318	580-81308-34	✓	✓		✓	✓	✓	✓	✓		✓
	E-9.02-SC-40to60-102318	580-81308-35	✓	✓		✓	✓	✓	✓	✓		✓
	D-9.09-SC-100to117-102318	580-81308-36	✓	✓		✓	✓	✓	✓	✓		✓
	D-9.09-SC-60to80-102318	580-81308-38	✓	✓		✓	✓	✓	✓	✓		✓
	D-9.09-SC-80to100-102318	580-81308-39	✓	✓		✓	✓	✓	✓	✓		✓
	D-9.09-SC-40to60-102318	580-81308-40	✓	✓		✓	✓	✓	✓	✓		✓
	D-9.09-SC-10to20-102318	580-81308-41	✓	✓		✓	✓	✓	✓	✓		✓
	D-9.09-SC-20to40-102318	580-81308-42	✓	✓		✓	✓	✓	✓	✓		✓
	511-20to40-102318	580-81308-43	✓	✓		✓	✓	✓	✓	✓		✓
	D-9.09-SC-00to10-102318	580-81308-44	✓	✓		✓	✓	✓	✓	✓		✓
	D-8.90-SC-40to62-102318	580-81308-46	✓	✓		✓	✓	✓	✓	✓		✓
	D-8.90-SC-00to10-102318	580-81308-47	✓	✓		✓	✓	✓	✓	✓		✓
	D-8.90-SC-20to40-102318	580-81308-48	✓	✓		✓	✓	✓	✓	✓		✓
	D-8.90-SC-10to20-102318	580-81308-49	✓	✓		✓	✓	✓	✓	✓		✓
	D-8.90-SC-103to120-102318	580-81308-50	✓	✓		✓	✓	✓	✓	✓		✓
	D-8.90-SC-80to103-102318	580-81308-51	✓	✓		✓	✓	✓	✓	✓		✓
	D-8.90-SC-120to140-102318	580-81308-52	✓	✓		✓	✓	✓	✓	✓		✓
	D-8.83-0to25-102418	580-81308-55	✓	✓		✓	✓	✓	✓	✓		✓
	D-8.90-0to27-102418	580-81308-56	✓	✓		✓	✓	✓	✓	✓		✓
	C-8.94-0to27-102418	580-81308-57	✓	✓		✓	✓	✓	✓	✓		✓
	E-8.99-0to28-102418	580-81308-58	✓	✓		✓	✓	✓	✓	✓		✓
	B-9.00-0to29-102418	580-81308-60	✓	✓		✓	✓	✓	✓	✓		✓
	611-102318	580-81308-61	✓	✓		✓					✓	✓
J81308-5	D-8.90-SC-140to160-102318	580-81308-53	✓	✓		✓	✓	✓	✓	✓		✓
J81440-1	E-9.02-0to26-102418	580-81440-1	✓	✓		✓	✓	✓	✓	✓		✓
	512-0to29-102418	580-81440-2	✓	✓		✓	✓	✓	✓	✓		✓
	A-9.03-0to26-102418	580-81440-3	✓	✓		✓	✓	✓	✓	✓		✓
	D-9.09-0to29-102418	580-81440-4	✓	✓		✓	✓	✓	✓	✓		✓
	G-9.15-0to18-102418	580-81440-5	✓	✓		✓	✓	✓	✓	✓		✓
	B-9.15-0to30-102418	580-81440-6	✓	✓		✓	✓	✓	✓	✓		✓
	612-102418	580-81440-7	✓	✓		✓					✓	✓

Sample Index

Pacific Groundwater Group - Portland Harbor Head of Swan Island Sediment Sampling

							Conventional Tests					
SDG	Sample ID	Laboratory ID	PCB Aroclor	PCB Congener	PAHs	Dioxin	Grain Size	Total Solids	Density	Specific Gravity	TSS	TOC
K1810410	D-9.09-SC-00TO10-102318	K1810410-001			✓			✓				
	D-9.09-SC-10TO20-102318	K1810410-002			✓			✓				
	D-9.09-SC-20TO40-102318	K1810410-003			✓			✓				
	D-9.09-SC-40TO60-102318	K1810410-004			✓			✓				
	D-9.09-SC-60TO80-102318	K1810410-005			✓			✓				
	D-9.09-SC-80TO100-102318	K1810410-006			✓			✓				
	D-9.09-SC-100TO117-102318	K1810410-007			✓			✓				
	D-9.09-SC-117TO121-102318	K1810410-008						✓				
	511-20TO40-102318	K1810410-009			✓			✓				
	D-8.90-SC-00TO10-102318	K1810410-010			✓			✓				
	D-8.90-SC-10TO20-102318	K1810410-011			✓			✓				
	D-8.90-SC-20TO40-102318	K1810410-012			✓			✓				
	D-8.90-SC-40TO62-102318	K1810410-013			✓			✓				
	D-8.90-SC-62TO80-102318	K1810410-014			✓			✓				
	D-8.90-SC-80TO103-102318	K1810410-015			✓			✓				
	D-8.90-SC-103TO120-102318	K1810410-016			✓			✓				
	D-8.90-SC-120TO140-102318	K1810410-017			✓			✓				
	D-8.90-SC-140TO160-102318	K1810410-018			✓			✓				
	D-8.90-SC-160TO164-102318	K1810410-019						✓				
	E-9.02-SC-00TO10-102318	K1810410-020			✓			✓				
	E-9.02-SC-10TO20-102318	K1810410-021			✓			✓				
	E-9.02-SC-20TO40-102318	K1810410-022			✓			✓				
	E-9.02-SC-40TO60-102318	K1810410-023			✓			✓				
	E-9.02-SC-60TO80-102318	K1810410-024			✓			✓				
	E-9.02-SC-80TO100-102318	K1810410-025			✓			✓				
	E-9.02-SC-100TO115-102318	K1810410-026			✓			✓				
	E-9.02-SC-115TO130-102318	K1810410-027			✓			✓				
	E-9.02-SC-130TO133-102318	K1810410-028						✓				
	611-102318	K1810410-029			✓			✓				
K1810430	E-8.99-0to28-102418	K1810430-001			✓			✓				
	C-8.94-0to27-102418	K1810430-002			✓			✓				
	D-8.90-0to27-102418	K1810430-003			✓			✓				
	D-8.83-0to25-102418	K1810430-004			✓			✓				
	E-9.02-0to26-102418	K1810430-005			✓			✓				
	B-9.00-0to29-102418	K1810430-006			✓			✓				
	512-0to29-102418	K1810430-007			✓			✓				
	D-9.09-0to29-102418	K1810430-008			✓			✓				
	A-9.03-0to26-102418	K1810430-009			✓			✓				

Sample Index

Pacific Groundwater Group - Portland Harbor Head of Swan Island Sediment Sampling

							Conventional Tests					
SDG	Sample ID	Laboratory ID	PCB Aroclor	PCB Congener	PAHs	Dioxin	Grain Size	Total Solids	Density	Specific Gravity	TSS	TOC
K1810430	B-9.15-0to30-102418	K1810430-010			✓			✓				
	G-9.15-0to18-102418	K1810430-011			✓			✓				
	612-102418	K1810430-012			✓							

DATA VALIDATION REPORT
Pacific Groundwater Group: PH Head of Swan Island Sediments
PCB Aroclors by EPA 8082A

This report documents the review of analytical data from the analysis of sediment and surface water samples and the associated laboratory quality control (QC) samples. Samples were analyzed by TestAmerica Laboratories, Inc., Tacoma, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
J81308-2	29 Sediment & 1 Surface Water	EPA Stage 2A EPA Stage 4 (batch 288730)
J81308-5	1 Sediment	EPA Stage 2A
J81440-1	6 Sediment & 1 Surface Water	EPA Stage 2A

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (100% verification) by comparing the EDD to the hardcopy laboratory data package. Ten percent (10%) of the laboratory QC results were also verified.

TECHNICAL DATA VALIDATION

This report documents the review of analytical QC requirements as listed in the following table.

1	Sample Receipt, Preservation, and Holding Times	✓	Laboratory Control Samples (LCS)
✓	Initial Calibration (ICAL)	1	Certified Reference Material
✓	Continuing Calibration (CCAL)	1	Field Duplicates
✓	Laboratory Blanks	✓	Target Analyte List
1	Field Blanks	1	Reporting Limits
2	Surrogate Compounds	2	Compound Identification
2	Internal Standards	✓	Reported Results
2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)	1	Calculation Verification (Full validation only)

1 Quality control results are discussed below, but no data were qualified.
2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, Holding Times

All SDGs: Although the project field sampling plan indicated a 14-day holding time for sediment sample extraction, the method allows a 1-year holding time. Some samples were extracted outside

the FSP holding time at 20-28 days. Because PCBs are persistent and stable compounds, the results were not impacted, and sample results were not qualified.

Field Blanks

Field blanks were evaluated for impact of any contaminant on the reported sample results. Action levels were established at five times (5x) the concentration reported in the field blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-6). No action is taken if the sample result is greater than the action level, or for non-detected results.

All SDGs: Samples 611-102318 and 612-102418 were identified as field blanks. Target analytes were not detected in these blank samples, no qualification was required.

Surrogate Compounds

The surrogate compounds tetrachloro-m-xylene (TCMX) and decachlorobiphenyl (DCBP) were added to all samples. With the following exceptions, all surrogate recovery values were within the laboratory control limits.

SDG	Sample ID	TCMX %R	DCBP %R	Action
J81308-2	E-9.02-SC-20to40-102318	38	43	J/UJ-13L
	E-9.02-SC-00to10-102318	30	27	
	E-9.02-SC-10to20-102318	35	42	
	E-9.02-SC-60to80-102318	45	37	
	D-8.90-SC-62to80-102318	42	46	
	E-9.02-SC-100to115-102318	57	41	
	E-9.02-SC-80to100-102318	41	55	
	E-9.02-SC-115to130-102318	-	40	
	E-9.02-SC-40to60-102318	30	42	
	D-9.09-SC-100to117-102318	49	35	
	D-9.09-SC-60to80-102318	41	54	
	D-9.09-SC-80to100-102318	39	51	
	D-9.09-SC-40to60-102318	--	40	
	D-9.09-SC-10to20-102318	55	34	
	D-9.09-SC-20to40-102318	50	36	
	511-20to40-102318	45	55	
	D-8.90-SC-20to40-102318	53	--	
	D-8.90-0to27-102418	54	--	
J81440-1	E-9.02-0to26-102418	51	--	
	A-9.03-0to26-102418	54	52	

Internal Standards

The internal standard compound 1-bromo-2-nitrobenzene (BNB) was added to all samples. With the following exception, all internal standard areas were within 50-200% of the calibration standard internal standard area.

SDG J81308-2: For Sample E-9.02-SC-00to10-102318, the internal standard area was recovered at greater than the upper control limit; the associated positive result was estimated (J-19).

Matrix Spikes/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate samples (MS/MSD) were analyzed at the appropriate frequency. No action is taken unless both the MS and MSD %R values are outside the control limits for MS/MSD %R outliers. Precision is indicated by the relative percent difference (RPD) between the MS and MSD values. Any RPD values outside the control limits indicate uncertainty in the measured results for the sample. Qualifiers were only issued to the parent sample.

When the MS/MSD %R values indicate a potential low bias, associated results are estimated (J/UJ-8). Only the associated positive results are estimated (J-8) if the %R values indicate a potential high bias. Associated positive results are estimated (J-9) if the RPD values indicate uncertainty.

SDG J81308-2: Sample D-9.09-SC-20to40-102318 was analyzed as the MS/MSD sample. The MS %R values for Aroclor 1016 and Aroclor 1260 were greater than the upper control limit and the MSD %R values were less than the lower control limits; the associated results in the parent sample were estimated (J/UJ-8). The RPD values for both Aroclor compounds were greater than the control limit; the result in the parent sample was estimated (J-9) for Aroclor 1260. Aroclor 1016 was not detected in the parent sample; no action was taken.

SDG J81440-1: Sample E-9.02-0to26-102418 was used for the MS/MSD samples. The MS/MSD %R values for Aroclor 1016 were greater than the upper control limit, however, a positive result was not detected in the parent sample; no data were qualified.

Sample B-9.15-0to30-102418 was also used for MS/MSD analysis. The MS/MSD %R values for Aroclor 1016 were greater than the upper control limit, however, a positive result was not detected in the parent sample; no data were qualified.

SDG J81308-5: Sample D-8.90-SC-140to160-10 was used for the MS/MSD samples. The MS/MSD %R values for Aroclor 1260 were greater than the upper control limit, however, a positive result was not detected in the parent sample; no data were qualified.

Certified Reference Material

No certified reference materials were submitted.

Field Duplicates

For sediment samples, the RPD control limit is 50% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the absolute difference between the sample and replicate must be

less than 2x the RL. No data were qualified based on field duplicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results.

SDG J81308-2: Samples D-9.09-SC-20to40-102318 and 511-20to40-102318 were submitted as field duplicates. Field precision was acceptable.

SDG J81440-1: Samples D-9.09-0to29-102418 and 512-0to29-102418 were submitted as field duplicates. Field precision was acceptable.

Reporting Limits

All SDGs: Reporting limits were elevated due to required dilutions and/or percent moisture adjustment and were greater than the FSP specified limits.

Compound Identification

As required by the method, the laboratory analyzed any samples with positive detections on a confirmatory column. The results from the two analytical columns were compared for agreement. An elevated RPD value may indicate the presence of an interference resulting in a high bias. When the RPD value was greater than or equal to 40% but less than 60% the reported value was estimated (J-3). If the RPD value was greater than 60%, the result was qualified as a tentative identification (NJ-3). Confirmation outliers resulting in data qualification are discussed below.

For the following samples, the second column confirmation RPD values were greater than 40% and were estimated (J/NJ-3):

SDG	Sample ID	Compound	RPD	Qualifier
J81308-2	E-9.02-SC-20to40-102318	PCB-1254	51	J-3
	E-9.02-SC-00to10-102318	PCB-1254	136	NJ-3
	E-9.02-SC-10to20-102318	PCB-1254	108	NJ-3
	E-9.02-SC-60to80-102318	PCB-1254	58	J-3
	D-8.90-SC-62to80-102318	PCB-1260	43	J-3

Calculation Verification

SDG J81308-2: Several results in batch 288730 of this SDG were verified by recalculation from the raw data. No calculation or transcription errors were found.

OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, LCS, and MS/MSD recoveries. With the exceptions noted above, precision was also acceptable as demonstrated by the MS/MSD and field duplicate RPD values.

Data were estimated due to internal standard, surrogate, and MS/MSD accuracy outliers, an MS/MSD precision outlier, and dual column confirmation RPD outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Pacific Groundwater Group: PH Head of Swan Island Sediments
Polynuclear Aromatic Hydrocarbon Compounds by EPA SW8270D-SIM

This report documents the review of analytical data from the analysis of sediment and surface water samples and the associated laboratory quality control (QC) samples. Samples were analyzed by ALS Environmental, Inc., Kelso, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
K1810410	25 Sediment & 1 Surface Water	EPA Stage 2A & EPA Stage 4 (batch KWG1805769)
K1810430	11 Sediment & 1 Surface Water	EPA Stage 2A

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (100% verification) by comparing the EDD to the hardcopy laboratory data package. Ten percent (10%) of the laboratory QC results were also verified.

TECHNICAL DATA VALIDATION

The quality control (QC) requirements that were reviewed are listed in the following table:

✓	Sample Receipt, Preservation, and Holding Times	1	Field Duplicates
✓	GC/MS Instrument Performance	✓	Target Analyte List
✓	Initial Calibration (ICAL)	✓	Internal Standards
2	Continuing Calibration (CCAL)	1	Certified Reference Material
2	Laboratory Blanks	1	Reporting Limits
1	Field Blanks	2	Reported Results
✓	Surrogate Compounds	✓	Compound Identification
✓	Laboratory Control Samples (LCS/LCSD)	1	Calculation Verification
2	Matrix Spike/Matrix Spike Duplicates (MS/MSD)		

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.
[1] Quality control results are discussed below, but no data were qualified.
[2] Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Continuing Calibration

A continuing calibration verification (CCAL) standard was analyzed at the required frequency. Relative response factors (RRF) were greater than or equal to 0.05 for all compounds except for poorly responding compounds with RRF values greater than or equal to 0.01. The percent difference (%D) values were less than or equal to 25% for all compounds except for poorly responding compounds were less than or equal to 40.0%. When the CCAL %D values indicate a potential low bias, associated results are estimated (J/UJ-5BL). Only the associated positive results are estimated (J-5BH) if the %D value indicates a potential high bias.

The following CCAL outliers required qualification:

SDG	CCAL Date	Compound	Potential Bias	Action
K1810410	11/12/18	Pyrene	Low	J/UJ-5BL
	11/27/18	Pyrene	Low	J/UJ-5BL
	11/28/18	Pyrene	Low	J-5BL

Laboratory Blanks

A method blank was analyzed at the required frequency of one per batch of 20 or fewer samples. Action levels were established at five times (5x) the concentration reported in the field blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). No action is taken if the sample result is greater than the action level, or for non-detected results.

SDG K1810410: For the water extraction batch, benzo(a)anthracene, phenanthrene, and naphthalene were detected. Results less than 5x action level were qualified as not detected (U-7).

For the soil extraction batch, KWG1805768, benzo(a)anthracene was detected. All associated sample results were greater than the 5x action level; no qualification was required.

For the soil extraction batch, KWG1805769, fluoranthene, anthracene, phenanthrene, fluorene, dibenzofuran, 2-methylnaphthalene, and naphthalene were detected. All associated sample results were greater than the 5x action level; no qualification was required.

SDG K1810430: For the water extraction batch, benzo(a)anthracene, pyrene, fluoranthene, phenanthrene, fluorene, dibenzofuran, acenaphthene, 2-methylnaphthalene, and naphthalene were detected. Results less than 5x action level were qualified as not detected (U-7).

For the soil extraction batch, benzo(a)anthracene was detected. All associated sample results were greater than the 5x action level; no qualification was required.

Field Blanks

Field blanks were evaluated for impact of any contaminant on the reported sample results. Action levels were established at five times (5x) the concentration reported in the field blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-6). No action is taken if the sample result is greater than the action level, or for non-detected results.

SDG K1810410: Sample 611-102318 was identified as a field blank. Several compounds were detected and following method blank evaluation, five (5) analytes remained. Results in the associated field samples were greater than the action limit and no qualification was required.

SDG K1810430: Sample 612-102418 was identified as a field blank. Several compounds were detected, however following method blank evaluation only acenaphthylene remained. Results in the associated field samples were greater than the action limit and no qualification was required.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) samples were analyzed at the appropriate frequency. No action is taken unless both the MS and MSD %R values are outside the control limits for MS/MSD %R outliers. Precision is evaluated using the RPD values calculated between the MS and MSD results. Any RPD values outside the control limits indicate uncertainty in the measured results for the sample. Qualifiers were only issued to the parent sample.

When the MS/MSD %R values indicate a potential low bias, associated results are estimated (J/UJ-8L). Only the associated positive results are estimated (J-8H) if the %R values indicate a potential high bias. Associated positive results are estimated (J-9) if the RPD values indicate uncertainty.

SDG	Parent Sample ID	Analyte	MS %R	MSD %R	RPD	Potential Bias	Action
K1810410	D-9.09-SC-20to40-102318	Naphthalene	62	51		Low	J-8L
		2-Methylnaphthalene	61	63	--	Low	J-8L
		Acenaphthylene	63	65	--	Low	J-8L
		Acenaphthene	63	64	--	Low	J-8L
		Dibenzofuran	64	62	--	Low	J-8L
		Benzo(k)fluoranthene	15	68	--	Low	J-8L
		Dibenz(a,h)anthracene	58	65	--	Low	J-8L
		Naphthalene	47	47	--	Low	J-8L
		2-Methylnaphthalene	58	56	--	Low	J-8L
		Acenaphthylene	65	58	--	Low	J-8L
		Dibenzofuran	68	61	--	Low	J-8L

SDG	Parent Sample ID	Analyte	MS %R	MSD %R	RPD	Potential Bias	Action
K1810430	E-9.02-0to26-102418	Naphthalene	48	47	--	Low	J-8L
		2-Methylnaphthalene	60	63	--	Low	J-8L
		Acenaphthylene	59	63	--	Low	J-8L
		Acenaphthene	58	64	--	Low	J-8L
		Dibenzofuran	61	66	--	Low	J-8L
		Benzo(k)fluoranthene	61	68	--	Low	J-8L
		Dibenz(a,h)anthracene	62	67	--	Low	J-8L
		Benzo(g,h,i)perylene	57	69	--	Low	J-8L

Field Duplicates

For sediment samples, the RPD control limit is 50% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the absolute difference between the sample and replicate must be less than 2x the RL. No data were qualified based on field duplicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results.

SDG K1801410: Samples D-9.09-SC-20to40-102318 and 511-20to40-102318 were submitted as field duplicates. Field precision was acceptable.

SDG K1801430: Samples B-9.00-0to29-102418 and 512-0to29-102418 were submitted as field duplicates. Field precision was acceptable.

Certified Reference Material

No certified reference materials were submitted.

Reporting Limits

All SDGs: Reporting limits were elevated due to required dilutions for one or more samples.

Reported Results

SDG K1810430: Several analytes were reported with an "X" flag indicating a result that may have a slight bias due to matrix interferences for Samples G-9.15-0to18-102418 and 612-102418. The "X" flagged results were qualified (J-14) to indicate a potential bias.

Calculation Verification

SDG K1810410: Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted previously, accuracy was acceptable as demonstrated by the surrogate, LCS, and MS/MSD recovery values. Precision was acceptable as demonstrated by the RPD values for the MS/MSD and field duplicate analyses.

Results were qualified as not detected at the reported concentrations due to method blank contamination. Results were estimated due to CCAL accuracy outliers, MS/MSD recovery outliers, and matrix interferences.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Pacific Groundwater Group: PH Head of Swan Island Sediments
Dioxin/Furan Compounds by EPA 1613B

This report documents the review of analytical data from the analysis of sediment and surface water samples and the associated laboratory quality control (QC) samples. Samples were analyzed by TestAmerica Laboratories, Inc., Sacramento, California. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
J81308-2	29 Sediment & 1 Surface Water	EPA Stage 2A & Stage 4 (batch 258637)
J81308-5	1 Sediment	EPA Stage 2A
J81440-1	6 Sediment & 1 Surface Water	EPA Stage 2A

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative. The laboratory reported more analytes in the report and the EDD than were requested. The laboratory resubmitted the reports and EDD files with the extra results removed.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (100% verification) by comparing the EDD to the hardcopy laboratory data package. Ten percent (10%) of the laboratory QC results were also verified.

TECHNICAL DATA VALIDATION

The quality control (QC) requirements that were reviewed are listed in the following table.

✓	Sample Receipt, Preservation, and Holding Times	1	Certified Reference Material
✓	System Performance and Resolution Checks	1	Field Duplicates
✓	Initial Calibration (ICAL)	✓	Target Analyte List
✓	Calibration Verification (CVER)	✓	Reporting Limits
2	Laboratory Blanks	2	Compound Identification
1	Field Blanks	✓	Compound Quantitation
✓	Labeled Compound Recovery	1	Reported Results
1	Matrix Spike/Matrix Spike Duplicates (MS/MSD)	1	Calculation Verification (Full Validation Only)
✓	Ongoing Precision and Recovery (OPR)		

✓Method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.
1 Quality control results are discussed below, but no data were qualified.
2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Laboratory Blanks

To assess the impact of any blank contaminant (excluding homologs) on the reported sample results, an action level is established at five times (5x) the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). No action is taken if the sample result is greater than the action level, or for non-detected results. The laboratory assigned EMPC-flags to values when a peak was detected but did not meet identification criteria. These values cannot be considered as positive identifications but are "estimated maximum possible concentrations". When these occurred in the method blank the results were considered as false positives. No action levels were established for these analytes.

Method blanks were analyzed at the appropriate frequency. Contaminant levels, associated samples, and action levels are documented in the data validation worksheets.

SDG J81308-2: For the water extraction batch, 2,3,7,8-TCDD and 1,2,3,7,8-PeCDD were detected; associated sample results less than the 5x action level were qualified as not detected (U-7) at the reported concentration.

For the soil extraction batches, 1,2,3,7,8-PeCDD was detected, however, the associated soil sample results were not detected or were greater than the 5x action level; no qualification was required.

Field Blanks

Field blanks were evaluated for impact of any contaminant on the reported sample results. Action levels were established at five times (5x) the concentration reported in the field blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-6). No action is taken if the sample result is greater than the action level, or for non-detected results.

SDGs J81308-2 & J81305-5: Sample 611-102318 was identified as a field blank. Following method blank evaluation, no detections remained, and no qualification was required.

SDG J81440-1: Sample 612-102418 was identified as a field blank. Several target analytes were observed that were reported as not meeting ion ratio criteria; no qualification was required.

Matrix Spike/Matrix Spike Duplicate

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Accuracy was assessed using labeled compound recoveries and laboratory control samples. This QC sample goes through the entire extraction process prior to analysis. Precision is evaluated using the field duplicate analyses.

Certified Reference Material

No certified reference material was analyzed.

Field Duplicates

For sediment samples, the RPD control limit is 50% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the absolute difference between the sample and replicate must be less than 2x the RL. No data were qualified based on field duplicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results.

SDG J81308-2: Samples D-9.09-SC-20to40-102318 and 511-20to40-102318 were submitted as field duplicates. Field precision was acceptable.

SDG J81440-1: Samples D-9.09-0to29-102418 and 512-0to29-102418 were submitted as field duplicates. Field precision was acceptable.

Compound Identification

The method requires the confirmation of 2,3,7,8-TCDF detects using an alternate GC column, however this compound was not an analyte of interest for this event, therefore confirmation was not required.

For several samples, the laboratory reported EMPC or "estimated maximum possible concentration" values for one or more of the target analytes. An EMPC value is reported when a peak was detected but did not meet identification criteria, as required by the method; therefore, the result cannot be considered as a positive identification for the analyte. To indicate that the reported result for an individual analyte is in effect an elevated detection limit, the EMPC values were qualified as not detected (U-25) for all compound results below the reporting limit and were estimated (J-25) for all compound results greater than the reporting limit.

Calculation Verification

SDG J81308-1: Calculation verifications were performed for batch 258637 in this sample delivery group (SDG). No calculation or transcription errors were found.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory performed the specified analytical method. Accuracy was acceptable, as demonstrated by the labeled compound and OPR recoveries. Precision was also acceptable as indicated by the field duplicate samples.

Data were qualified as not detected at the reported concentration due to method blank contamination. Data were qualified as not detected or estimated to indicate that EMPC values represent elevated detection limits.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Pacific Groundwater Group: PH Head of Swan Island Sediments
PCB Congeners by EPA 1668C

This report documents the review of analytical data from the analysis of sediment and surface water samples and the associated laboratory quality control (QC) samples. Samples were analyzed by TestAmerica Laboratories, Inc., Seattle, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
J81308-2	29 Sediment & 1 Surface Water	EPA Stage 2A & EPA Stage 4 (batch 140-25237)
J81308-5	1 Sediment	EPA Stage 2A
J81440-1	6 Sediment & 1 Surface Water	EPA Stage 2A

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (100% verification) by comparing the EDD to the hardcopy laboratory data package. Ten percent (10%) of the laboratory QC results were also verified.

TECHNICAL DATA VALIDATION

This report documents the review of analytical QC requirements as listed in the following table.

✓	Sample Receipt, Preservation, and Holding Times	1	Certified Reference Material
✓	Initial Calibration (ICAL)	1	Field Duplicates
✓	Calibration Verification (CVER)	✓	Target Analyte List
2	Laboratory Blanks	✓	Reporting Limits
2	Field Blanks	2	Compound Identification
2	Labeled Compound Recovery	2	Compound Quantitation
1	Matrix Spike/Matrix Spike Duplicates (MS/MSD)	1	Calculation Verification (Full Validation Only)
✓	Ongoing Precision and Recovery (OPR)		

1 Quality control results are discussed below, but no data were qualified.
2 Quality control outliers that impact the reported data were noted.
Data qualifiers were issued as discussed below.

Laboratory Blanks

To assess the impact of any blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). No action is taken if the sample result is greater than the action level, or for non-detected results. The laboratory assigned EMPC-flags to values when a peak was detected but did not meet identification criteria. These values cannot be considered as positive identifications but are "estimated maximum possible concentrations". When these occurred in the method blank the results were considered as false positives. No action levels were established for these analytes.

SDG J81308-2: For the water extraction batch, one hundred sixty-four (164) compounds were detected (excluding homologs and EMPC qualified results) in the laboratory method blank. Results in the associated sample less than the action levels were qualified as not detected (U-7) at the reported concentrations.

For the sediment extraction batch, 140-25200, forty-nine (49) compounds were detected (excluding homologs and EMPC qualified results) in the laboratory method blank. All results for the associated samples were greater than the action levels or were not detected; no data were qualified.

For the sediment extraction batch, 140-25237, sixteen (16) compounds were detected (excluding homologs and EMPC qualified results) in the laboratory method blank. All results for the associated samples were greater than the action levels or were not detected; no data were qualified.

SDG J81440-1: For the water extraction batch, seventy-six (76) compounds were detected (excluding homologs and EMPC qualified results) in the laboratory method blank. All results for the associated sample less than the 5x action level were qualified as not detected (U-7) at the reported concentrations.

For the sediment extraction batch, 140-25296, five (5) compounds were detected (excluding homologs and EMPC qualified results) in the laboratory method blank. All results for the associated samples were greater than the action levels or were not detected; no data were qualified.

SDG J81308-5: Eighty-five (85) compounds were detected (excluding homologs and EMPC qualified results) in the laboratory method blank. All results for the associated samples were greater than the action levels or were not detected; no data were qualified.

Field Blanks

Field blanks were evaluated for impact of any contaminant on the reported sample results. Action levels were established at five times (5x) the concentration reported in the field blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-6). No action is taken if the sample result is greater than the action level, or for non-detected results. Analytes reported as an "estimated maximum possible concentration" (EMPC) are considered false positives. No action levels were established for these analytes. Total homolog groups were also not evaluated.

SDG J81308-2 & J81308-5: Sample 611-102318 was identified as an equipment rinse blank sample. Forty-three (43) compounds were detected and following method blank evaluation fifteen (15) compounds remained. The results for PCB-11 were flagged as not detected (U-6) at the reported concentrations in thirteen (13) samples. The results for all other compounds detected were either not detected or greater than the action limits.

SDG J81440-1: Sample 612-102418 was identified as an equipment rinse blank sample. Sixty-five (65) compounds were detected and following method blank evaluation thirty-six (36) compounds remained. The results for PCB-11 and PCB-68 were flagged as not detected (U-6) at the reported concentration in Sample G-9.15-0to18-102418. The results in all other samples were either not detected or greater than the action limits.

Labeled Compound Recovery

The percent recovery (%R) values for labeled compounds were within the control limits of 30%-140% (40%-125% for monochlorobiphenyls) with the exceptions noted below:

SDG	Sample ID	Labeled Compound Outlier	Bias	Qualifiers
J81308-2	E-9.02-SC-00to10-102318	PCB-54L	Low	J/UJ-13L
	E-9.02-SC-10to20-102318	PCB-54L	Low	J/UJ-13L
	E-9.02-SC-60to80-102318	PCB-54L	Low	J/UJ-13L
	D-8.90-SC-62to80-102318	PCB-54L	Low	J/UJ-13L
	E-9.02-SC-100to115-102318	PCB-54L	Low	J/UJ-13L
J81308-2	E-9.02-SC-80to100-102318	PCB-54L	Low	J/UJ-13L
	E-9.02-SC-115to130-102318	PCB-54L	Low	J/UJ-13L
	E-9.02-SC-40to60-102318	PCB-54L	Low	J/UJ-13L
		PCB-19L	High	J-13H
	D-9.09-SC-100to117-102318	PCB-54L	Low	J/UJ-13L
	D-9.09-SC-80to100-102318	PCB-54L	Low	J/UJ-13L
	D-9.09-SC-40to60-102318	PCB-54L	Low	J/UJ-13L
	D-9.09-SC-20to40-102318	PCB-54L	Low	J/UJ-13L
	511-20to40-102318	PCB-54L	Low	J/UJ-13L
	D-9.09-SC-10to20-102318	PCB-54L	Low	J/UJ-13L
	D-8.90-SC-40to62-102318	PCB-54L	Low	J/UJ-13L
	D-8.90-SC-00to10-102318	PCB-54L	Low	J/UJ-13L
	D-8.90-SC-20to40-102318	PCB-54L	Low	J/UJ-13L
	D-8.90-SC-103to120-102318	PCB-19L	High	J-13H
	D-8.90-SC-120to140-102318	PCB-19L	High	J-13H

Matrix Spikes/Matrix Spike Duplicates

Matrix spike/matrix spike duplicates (MS/MSD) were not analyzed. Accuracy was assessed using labeled compound recoveries and the ongoing precision and recovery (OPR) sample.

Certified Reference Material

No certified reference materials were submitted.

Field Duplicates

For sediment samples, the FSP RPD control limit is 50% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the absolute difference between the sample and replicate must be less than 2x the RL. No data were qualified based on field duplicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results.

SDG	Parent Sample	Duplicate Sample	Compound	Evaluation
J81308-2	D-9.09-SC-20to40-102318	511-20to40-102318	PCB-100	81% RPD
			PCB-145	Difference > 2xRL
			PCB-153	Difference > 2xRL
			PCB-39	139% RPD
			PCB-54	51% RPD
			PCB-93	81% RPD
J81440-1	D-9.09-0to29-102418	512-0to29-102418	PCB-145	Difference > 2xRL
			PCB-182	163% RPD
			PCB-67	Difference > 2xRL

Compound Identification

For several samples, the laboratory reported EMPC or "estimated maximum possible concentration" values for one or more of the target analytes. An EMPC value is reported when a peak was detected but did not meet identification criteria, as required by the method; therefore, the result cannot be considered as a positive identification for the analyte. To indicate that the reported result for an individual analyte is in effect an elevated detection limit, the EMPC values were qualified as not detected (U-25) for all compound results below the reporting limit and were estimated (J-25) for all compound results greater than the reporting limit.

Compound Quantitation

SDG J81308-2: The laboratory case narrative indicated that several results were flagged "G" to indicate excessive instrument noise and/or matrix interferences; associated "G" flagged results were estimated (J/UJ-14) to indicate a potential bias.

Calculation Verification (Full validation only)

SDG J81308-2: Full validation (Level IV) was performed on batch 25237 in this SDG. No transcription or calculation errors were found.

OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the labeled compound and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries and precision was acceptable as demonstrated by the LCS/LCSD and field duplicate RPD values.

Data were estimated or flagged as not detected to indicate that EMPC values represent elevated detection limits and due to method blank contamination. Results were estimated due to matrix interferences and labeled compound recovery outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Pacific Groundwater Group: PH Head of Swan Island Sediments
Conventional Tests

This report documents the review of analytical data from the analysis of sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by TestAmerica Laboratories, Inc., Fife, Washington or by ALS Environmental, Inc., Kelso, Washington. Refer to the Sample Index for a complete list of samples.

SDG	Number of Samples and Matrix	Validation Level
J81308-2	29 Sediment & 1 Field Blank	EPA Stage 3 (sediments) & EPA Stage 2A
J81308-5	1 Sediment	EPA Stage 2A
J81440-1	6 Sediment & 1 Field Blank	EPA Stage 2A
K1810410	28 Sediment	EPA Stage 2A
K1810430	11 Sediment	EPA Stage 2A

The analytical tests that were performed are summarized below:

Laboratory	Parameter	Method
TestAmerica - Fife	Total Solids	ASTM D2216
	Grainsize	ASTM D422
	Total Organic Carbon (TOC)	EPA 9060/SM5310B
	Density/Specific Gravity	D854
ALS-Kelso	Total Solids	EPA 160.3

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (100% verification) by comparing the EDD to the hardcopy laboratory data package. Ten percent (10%) of the laboratory QC results were also verified.

TECHNICAL DATA VALIDATION

This report documents the review of analytical QC requirements as listed in the following table.

2	Sample Receipt, Preservation, and Holding Times	✓	Matrix Spikes (MS) and Matrix Spike Duplicates (MSD)
✓	Initial Calibration	✓	Laboratory Duplicates
✓	Calibration Verification	1	Field Duplicates
2	Laboratory Blanks	✓	Reporting Limits
1	Field Blanks	✓	Reported Results
1	Reference Materials	1	Calculation Verification (Full validation only)
✓	Laboratory Control Samples (LCS)		

✓Method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.
1 Quality control results are discussed below, but no data were qualified.
2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of ≤6°C. With the following exception noted below, the laboratory received the sample coolers within the advisory temperature range.

SDG J81308-2: All samples were analyzed past the 7-day holding time at 8-9 days. All results were estimated (J-1).

SDG J81440-1: All samples were analyzed past the 7-day holding time at 10 days. All results were estimated (J-1).

SDG K1810430: All samples were analyzed past the 7-day holding time at 37 days. All results were estimated (J-1).

SDG J81308-5: The sample was analyzed for percent solids past the 7-day holding time at 58 days and was analyzed past the 28-day holding time for TOC at 74 days. Both results were estimated (J-1).

Laboratory Blanks

To assess the impact of any blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). No action is taken if the sample result is greater than the action level, or for non-detected results.

Laboratory blanks were analyzed at the appropriate frequency. Contaminant levels, associated samples, and action levels are documented in the data validation worksheets.

SDG J81308-2: For the water batch, the method blank had a detected value for total organic carbon; the associated sample result was qualified (U-7).

SDG J81440-1: For the water batch, the method blank had a detected value for total organic carbon; the associated sample result was qualified (U-7).

Field Blanks

Field blanks were evaluated for impact of any contaminant on the reported sample results. Action levels were established at five times (5x) the concentration reported in the field blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-6). No action is taken if the sample result is greater than the action level, or for non-detected results.

SDGs J81308-2, J81308-5 & J81440-1: Samples 611-102318 and 612-102418 were identified as field blanks. Following method blank evaluation, no detections remained, and no qualification was required.

Reference Materials

No certified reference materials were submitted.

Field Duplicate

For sediment samples, the RPD control limit is 50% for results greater than 5x the reporting limit (RL) for TOC and solids and particle size percentages greater than 5% for grain size. For results less than 5x the RL, the absolute difference between the sample and replicate must be less than 2x the RL. No data were qualified based on field duplicate precision outliers. Users of the data should consider the impact of field precision outliers on the reported results.

SDG J81308-2: Samples D-9.09-SC-20to40-102318 and 511-20to40-102318 were submitted as field duplicates. Field precision was acceptable.

SDG J81440-1: Samples D-9.09-0to29-102418 and 512-0to29-102418 were submitted as field duplicates. The RPD for Fine Sand was greater than the control limit at 98%.

SDG K1801410: Samples D-9.09-SC-20to40-102318 and 511-20to40-102318 were submitted as field duplicates. Field precision was acceptable.

SDG K1801430: Samples B-9.00-0to29-102418 and 512-0to29-102418 were submitted as field duplicates. Field precision was acceptable.

Calculation Verification

SDG J81308-2: Several results were verified by recalculation from the raw data. No calculation or transcription errors were found.

OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample and matrix spike recoveries. Precision was also acceptable as demonstrated by the laboratory and field duplicate RPD values.

Results were qualified as not detected at the reported concentrations due to method blank contamination and results were estimated based on holding time outliers.

All data, as qualified, are acceptable for use.

ECOCHEM
Data Quality

APPENDIX A

DATA QUALIFIER DEFINITIONS
REASON CODES
AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

The following is an EcoChem qualifier that may also be assigned during the data review process:

DNR	Do not report; a more appropriate result is reported from another analysis or dilution.

DATA QUALIFIER REASON CODES

Group	Code	Reason for Qualification
Sample Handling	1	Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times
Instrument Performance	24	Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass)
	5A	Initial Calibration (RF, %RSD, r^2)
	5B	Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L)[1] where appropriate
	5C	Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L)[1] where appropriate
Blank Contamination	6	Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.)
	7	Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L)[1] for negative instrument blanks
Precision and Accuracy	8	Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L)[1] where appropriate
	9	Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate)
	10	Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L)[1] where appropriate
	12	Reference Material Use bias flags (H,L)[1] where appropriate
	13	Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L)[1] where appropriate
Interferences	16	ICP/ICP-MS Serial Dilution Percent Difference
	17	ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L)[1] where appropriate
	19	Internal Standard Performance (i.e., area, retention time, recovery)
	22	Elevated Detection Limit due to Interference (i.e., chemical and/or matrix)
	23	Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides)
Identification and Quantitation	2	Chromatographic pattern in sample does not match pattern of calibration standard
	3	2nd column confirmation (RPD or %D)
	4	Tentatively Identified Compound (TIC) (associated with NJ only)
	20	Calibration Range or Linear Range Exceeded
	25	Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.)
Miscellaneous	11	A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only)
	14	Other (See DV report for details)
	26	Method QC information not provided

[1] H = high bias indicated
L = low bias indicated

PCB Aroclors by GC
(Based on Organic NFG 2008 and SW-846 Method 8082A)

QC Element	Acceptance Criteria (NFG)	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Sample					
Cooler/Storage Temperature Preservation	4°C ± 2°C Tissue/sediments (may be frozen -20°C)	NFG [1] Method [2]	**If required by project:** J (pos)/UJ (ND) if greater than 6° C	1	Use Professional Judgment (PJ) to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C [3]
Holding Time	**Extraction Aqueous:** 7 days from collection **Extraction Solid:** 14 days from collection **Exraction Tissue/Sediment (frozen):** 1 year **Analysis (all matrices)**: 40 days from extraction	NFG [1] Method [2]	**If required by project:** J (pos)/UJ (ND) if ext/analyzed > HT J (pos)/R (ND) if gross exceedance (> 2x HT)	1	Use PJ to qualify for holding time outlier. ***Current SW846 does not have an extraction holding time limit.*** [3] Gross exceedance > 2x HT, as per NFG 1999
Instrument Performance					
Retention Times	Surrogates: TCMX (± 0.05); DCB (± 0.10) Aroclors (± 0.07)	NFG [1]	NJ (pos)/R (ND) results for analytes with RT shifts	24	
Initial Calibration	Minimum 5 point with RSD ≤ 20% OR correlation coefficient (r-value) ≥ 0.995 OR Minimum 6-point with co-efficient of determination (r2-value) ≥ 0.99	NFG [1] Method [4]	J (pos) if %RSD greater than 20% OR r-value < 0.995 OR r^2-value < 0.99	5A	Refer to TM-01 for additional information. Use bias flags (H,L)[5] where appropriate
Initial Calibration Verification (ICV)	No NFG criteria. Project specific.	Project	J (pos) if > UCL J (pos)/UJ (ND) if < LCL	5B	Use bias flags (H,L) where appropriate
Continuing Calibration (Prior to each 12 hr. shift)	%D ± 20%	Method [2]	If > 20% (high bias): J (pos) If <20% (low bias: J (pos)/UJ (ND)	5B	Refer to TM-01 for additional information. Use bias flags (H,L) where appropriate
Blank Contamination					
Method Blank (MB)	MB: One per matrix per batch of (of ≤ 20 samples) No detected compounds > RL	NFG [1] Method [2]	U (pos) if result is less than appropriate 5X action level.	7	**Hierarchy of blank review:** **#1 - Review MB and IB, qualify as needed** **#2 - Review FB , qualify as needed** Note: Actions as per NFG 1999 Note: IB not required by method
Field Blank (FB)	FB: frequency as per QAPP No detected compounds > RL	NFG [1] Method [2]	U (pos) if result is less than appropriate 5X action level.	6	
Instrument Blanks (IB)	Analyzed at the beginning and end of every 12 hour sequence No analyte > CRQL	NFG [1]	U (pos) if result is less than appropriate 5X action level.	7	

PCB Aroclors by GC
(Based on Organic NFG 2008 and SW-846 Method 8082A)

QC Element	Acceptance Criteria (NFG)	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Precision and Accuracy					
MS/MSD (recovery)	One set per matrix per batch (of ≤ 20 samples) AR1016 and AR1260: %R = 29% - 135%, or project limits	NFG (1) Method (2)	Qualify parent only unless other QC indicates systematic problems. J (pos) if both %R > upper control limit (UCL) J (pos)/UJ (ND) if both %R < lower control limit (LCL) J (pos)/R (ND) if both %R < 10%	8	No action if only one spike %R is outside criteria. No action if native analyte conc. > 5x the amount spiked. Use bias flags (H,L) where appropriate. Actions apply to all Aroclors in parent sample.
MS/MSD (RPD)	One set per matrix per batch (of ≤ 20 samples) AR1016: RPD < 15%, AR1260: RPD < 20% or project limits	NFG (1) Method (2)	Qualify parent only unless other QC indicates systematic problems. J (pos) if RPD > control limit	9	No action if parent is ND.
LCS	One per lab batch (of ≤ 20 samples) AR1016 and AR1260: %R = 50% - 150%, or project limits	NFG (1)	J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10%	10	Use bias flags (H,L) where appropriate. Actions apply to all Aroclors in associated samples.
LCS/LCSD (RPD)	if analyzed use MS/MSD RPD criteria	NFG (1)	J (pos) assoc. compound in all samples	9	LCSD not required by method or NFG
Precision and Accuracy					
Surrogates	TCMX and DCBP added to every sample %R = 30% - 150% or project limits	NFG (1) Method (2)	J (pos) if either %R > UCL J (pos)/UJ (ND) if either %R < LCL J (pos)/R (ND) if either %R < 10%	13	If %R < 10% (sample dilution is a factor), use PJ Use bias flags (H,L) where appropriate
Internal Standards (if used)	Acceptable Range: IS area = 50% to 200% of CCAL area RT within 30 seconds of CC RT	Method (2)	J (pos) if area > 200% J (pos)/UJ (ND) if area < 50% J (pos)/R (ND) if area < 25% RT > 30 seconds, narrate	19	
Field Duplicates	**Solids:** RPD < 50% OR difference < 2X RL (for results < 5X RL) **Aqueous:** RPD < 35% OR difference < 1X RL (for results < 5X RL)	EcoChem	J (pos)/UJ (ND) Qualify only parent and field duplicate samples	9	use project limits if specified

PCB Aroclors by GC
(Based on Organic NFG 2008 and SW-846 Method 8082A)

QC Element	Acceptance Criteria (NFG)	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Compound Identification/Quantification					
Quantitation/ Identification	Between two columns: RPD < 40% or %D < 25% Within Retention Time Windows on both columns.	NFG [1] Method [2]	J (pos) if RPD = 40% - 60% (25% - 60% for %D) NJ (pos) if > 60% R (pos) if RTW criterion not met	3	See TM-08 for additional info.
Calibration Range	on column concentration < high calibration standard	NFG [1] Method [2]	J (pos) if conc > high standard and sample was not diluted	20	
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	Standard reporting policy	Use "DNR" to flag results that will not be reported.	11	TM-04 Rev. 1 for additional info.
Sample Clean-up					
GPC/Sulfur/ Florisil/Acid	No criteria - cleanups are optional	NFG [1] Method [2]	Use Professional Judgment	14	special cleanups may be required for project cleanup standards may be associated with GPC/florisil cleanups

[1] National Functional Guidelines for Organic Data Review, June, 2008
[2] Polychlorinated Biphenyls (PCBs) by Gas Chromatography USEPA Method SW846 8082A, Feb 2007, Rev. 1
[3] SW846, Chapter 4, Organic Analytes
[4] Determinative Chromatographic Separations , Method 8000C , March 2003, Rev.3
[5] "H" = high bias indicated; "L" = low bias indicated

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8270D)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Sample Handling					
Cooler/Storage Temperature Preservation	4°C±2°C sediment/tissues may require storage at -20°C	NFG (1) Method (3)	**If required by project:** J (pos)/UJ (ND) if greater than 6° C	1	Use **PJ** for temp outliers; see **TM20** Current SW846 criterion is ≤ 6° C (3)
Holding Time	**Extraction Aqueous:** 7 days from collection **Extraction Solid:** 14 days from collection **Analysis (all matrices)**: 40 days from extraction Holding time may be extended to 1 year for frozen sediments/tissues	NFG (1) Method (3)	J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT)	1	Gross exceedance = > 2x HT, as per 1999 NFG
Instrument Performance					
Tuning	DFTPP Beginning of each 12 hour period Use method or project acceptance criteria	NFG (1) Method (3)	R (pos/ND) all analytes in all samples associated with the tune	24	
Initial Calibration **Sensitivity**	RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders *	NFG (1) Method (3)	Use **PJ** to qualify J (pos)/UJ (ND)	5A	**TM-06** EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance **PJ** - no action if response is stable (ICAL RSD and CCAL %D acceptable)
Initial Calibration **Stability**	Minimum 5 standards %RSD ≤ 20.0% except: %RSD ≤ 40.0% poor responders * **or** co-efficient of determination (r^2) > 0.99	NFG (1) Method (3)	J (pos) if %RSD > limit **or** r^2 value <0.99	5A	
Initial Calibration Verification Check	Prepared from second source; analyze after each ICAL Percent recovery limits = 70-130%	Method (3)	J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL	5A (H,L)[4]	QAPP may have overriding accuracy limits.

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8270D)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Instrument Performance (continued)					
Continuing Calibration **Sensitivity**	RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders *	NFG [1] Method [3]	Use **PJ** to qualify J (pos)/UJ (ND)	5B	see ICAL RRF guidance
Continuing Calibration **Stability**	Prior to sample analysis and every 12 hours %D ≤ 25% except: %D ≤ 40.0% poor responders *	NFG [1] Method [3]	J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias)	5B (H,L)[4]	
Blank Contamination					
Method Blank (MB)	MB: One per matrix per batch of (of ≤ 20 samples) No detected compounds > MDL	NFG [2] Method [3]	U(pos) if result is < 5X or 10X action level	7	10X action level applies to phthalates only. 5X for all other target analytes **Hierarchy of blank review:** **#1 - Review MB, qualify as needed** **#2 - Review FB , qualify as needed** **Note: Actions as per 1999 NFG**
	No TICs present		R (pos) TICs using 10X rule	7	
Field Blank (FB)	No detected compounds > MDL	NFG [2] Method [3]	U (pos) if result is < 5X or 10X action level	6	
Precision and Accuracy					
LCS/LCSD (recovery)	One per matrix per batch (of ≤ 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits	Method [3]	J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10%	10 (H,L)[4]	No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits. Qualify all associated samples.
LCS/LCSD (RPD)	If LCSD analyzed RPD < lab limits	Method [3]	J (pos)	9	Qualify all associated samples. QAPP may have overriding precision limits.

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8270D)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Precision and Accuracy (continued)					
Reference Material (RM, SRM, or CRM)	Result ±20% of the 95% confidence interval of the true value for analytes	EcoChem standard policy	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	12 (H,L)[4]	QAPP may have overriding accuracy limits. Some manufacturers have different RM control limits
MS/MSD (recovery)	One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits	NFG (1) Method (3)	J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias	8 (H,L)[4]	No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only.
MS/MSD (RPD)	One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits	NFG (1) Method (2)	J (pos) in parent sample if RPD > CL	9	Qualify parent sample only
Surrogates	Minimum of 3 acid & 3 base/neutral (B/N) compounds added to all samples Within method control limits	NFG (1) Method (3)	J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10%	13 (H,L)[4]	Qualify all compounds in associated fraction. Do not qualify if only 1 acid and/or 1 B/N surrogate is out, unless <10%. If 1 surrogate outlier < 10% then J (pos)/R (ND)
Internal Standards	Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT	NFG (1) Method (3)	J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use **PJ**	19	Qualify compounds quantified using particular internal standard
Field Duplicates	**Solids:** RPD < 50% OR difference < 2X RL (for results < 5X RL) **Aqueous:** RPD < 35% OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	J (pos)/UJ (ND) Qualify only parent and field duplicate samples	9	Use project limits if specified

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8270D)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Compound Identification and Quantitation and Calculation					
Retention times and relative ion intensities	RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample	NFG [(1)] Method [(3)]	U (pos) if identification criteria not met	25	
TICs	Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification	NFG [(1)] Method [(3)]	NJ the TIC unless: R (pos) common laboratory contaminants	4	
Calibration Range	Results greater than highest calibration standard	EcoChem standard policy	Qualify J (pos)	20	If result from dilution analysis is not reported.
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	**TM-04** EcoChem Policy for Rejection/Selection Process for Multiple Results

[1] National Functional Guidelines for Organic Data Review, June, 2008
[2] National Functional Guidelines for Organic Data Review, October, 1999
[3] Method SW846 8270D Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), Revision 4, February 2007.
[4] NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

(pos): Positive Result(s)
(ND): Non-detects

* "Poor responder" compounds: acetophenone, atrazine, benzaldehyde, 1,1'-biphenyl, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, caprolactam, carbazole, 4-chloroaniline, diethylphthalate, di-n-butylphthalate, 3-3'-dichlorobenzidine, dimethylphthalate, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, di-n-octylphthalate, hexachlorobutadiene, hexachlorocyclopentadiene, 2-nitroaniline, 3-nitroaniline, 4-nitroaniline, 4-nitrophenol, N-nitrosodiphenylamine, 2,2'-oxybis-(1-chloropropane), 1,2,4,5-tetrachlorobenzene use a 0.010 RRF criterion.

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Sample Handling					
Cooler/Storage Temperature Preservation	Waters/Solids ≤ 6°C & in the dark Tissues <-10°C & in the dark **Preservation Aqueous:** If Cl_2 is present Thiosulfate must be added and if pH > 9 it must be adjusted to 7 - 9	NFG [1] Method[2]	J(pos)/R(ND) if thiosulfate not added if Cl_2 present; J(pos)/UJ(ND) if pH not adjusted J(pos)/UJ(ND) if temp > 20°C	1	**EcoChem PJ, see TM-05**
Holding Time	**If properly stored, 1 year or:** **Extraction (all matrices):** 30 days from collection **Analysis (all matrices)**: 45 days from extraction	NFG [1] Method[2]	If not properly stored or HT exceedance: J(pos)/UJ(ND)	1	**EcoChem PJ, see TM-05** Gross exceedance = > 1 year 2011 NFG **Note:** Under CWA, SDWA, and RCRA the HT for H2O is 7 days.
Instrument Performance					
Mass Resolution (Tuning)	PFK (Perfluorokerosene) ≥10,000 resolving power at m/z 304.9824. Exact mass of m/z 380.9760 w/in 5 ppm of theoretical value (380.97410 to 380.97790) . Analyzed prior to ICAL and at the start and end of each 12 hr. shift.	NFG [1] Method [2]	R(pos/ND) all analytes in all samples associated with the tune	24	Notify PM
Windows Defining Mix	Peaks for first and last eluters must be within established retention time windows for each selector group (chlorination level)	NFG [1] Method [2]	If peaks are not completely within windows (clipped): If natives are ok, J(pos)/UJ(ND) homologs (Totals) If natives are affected, R all results for that selector group	24	Notify PM
Column Performance Mix	Both mixes must be analyzed before ICAL and CCAL Valley < 25% (valley = (x/y)*100%) where x = ht. of TCDD (or TCDF) & y = baseline to bottom of valley For all isomers eluting near the 2378-TCDD (TCDF) peak (TCDD only for 8290)	NFG [1] Method [2]	J(pos) if valley > 25%	24	**EcoChem PJ, see TM-05, Rev. 2**; Note: TCDF is evaluated only if second column confirmation is performed
Initial Calibration **Sensitivity**	S/N ratio > 10 for all native and labeled compounds in CS1 std.	NFG [1] Method [2]	If <10, elevate Det. Limit or R(ND)	5A	
Initial Calibration **Selectivity**	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	NFG [1] Method [2]	If 2 or more ion ratios are out for one compound in ICAL, J(pos)	5A	**EcoChem PJ, see TM-05, Rev. 2**

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Instrument Performance (continued)					
Initial Calibration (Minimum 5 stds.) **Stability**	%RSD < 20% for native compounds %RSD <30% for labeled compounds (%RSD < 35% for labeled compounds under 1613b)	NFG [1] Method [2]	J(pos) natives if %RSD > 20%	5A	
	Absolute RT of $^{13}C_{12}$-1234-TCDD >25 min on DB5 & >15 min on DB-225	NFG [1] Method [2]	Narrate, no action		**EcoChem PJ, see TM-05, Rev. 2**
Continuing Calibration (Prior to each 12 hr. shift) **Sensitivity**	S/N ratio for CS3 standard > 10	NFG [1] Method [2]	If <10, elevate Det. Limit or R(ND)	5B	
Continuing Calibration (Prior to each 12 hr. shift) **Selectivity**	Ion Abundance ratios within QC limits (Table 8 of method 8290) (Table 9 of method 1613B)	NFG [1] Method [2]	For congener with ion ratio outlier, J(pos) natives in all samples associated with CCAL. No action for labeled congener ion ratio outliers.	25	**EcoChem PJ, see TM-05**
Continuing Calibration (Prior to each 12 hr. shift) **Stability**	%D+/-20% for native compounds %D +/-30% for labeled compounds **(Must meet limits in Table 6, Method 1613B)** If %D in the closing CCAL are within 25%/35%, the mean RF from the two CCAL may be used to calculate samples **(Section 8.3.2.4 of 8290)**.	NFG [1] Method [2]	**Labeled compounds:** Narrate, no action. **Native compounds:** 1613: J(pos)/UJ(ND)if %D is outside Table 6 limits J(pos)/R(ND) if %D is +/-75% of Table 6 limits 8290: J(pos)/UJ(ND) if %D = 20% - 75% J(pos)/R(ND) if %D > 75%	5B (H,L)[3]	
	Absolute RT of $^{13}C_{12}$-1234-TCDD and $^{13}C_{12}$-123789-HxCDD should be ± 15 seconds of ICAL RRT for all other compounds must meet criteria listed in Table 2 Method 1316.	NFG [1] Method [2]	Narrate, no action	5B	**EcoChem PJ, see TM-05**
Blank Contamination					
Method Blank (MB)	MB: One per matrix per batch of (of ≤ 20 samples) No detected compounds > RL	NFG [1] Method [2]	U(pos) if result is < 5X action level.	7	**Hierarchy of blank review:** **#1 - Review MB, qualify as needed** **#2 - Review FB , qualify as needed**
Field Blank (FB)	FB: frequency as per QAPP No detected compounds > RL		U(pos) if result is < 5X action level.	6	

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Precision and Accuracy					
MS/MSD (recovery)	**MS/MSD not typically required for HRMS analyses.** If lab analyzes MS/MSD then one set per matrix per batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos) if both %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias **PJ if only one %R outlier**	8 (H,L)[3]	No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only unless other QC indicates systematic problems.
MS/MSD (RPD)	**MS/MSD not typically required for HRMS analyses.** If lab analyzes MS/MSD then one set per matrix per batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos) in parent sample if RPD > CL	9	Qualify parent sample only.
LCS (or OPR)	One per lab batch (of ≤ 20 samples) Use most current laboratory control limits **or** Limits from Table 6 of 1613B	NFG [1] Method [2]	J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R < 10% - very low bias	10 (H,L)[3]	No action if only one spike %R is outside criteria, when LCSD is analyzed. Qualify all associated samples.
LCS/LCSD (RPD)	**LCSD not typically required for HRMS analyses.** One set per matrix and batch of 20 samples RPD < 35%	Method [2] Ecochem standard policy	J(pos) assoc. compound in all samples if RPD > CL	9	Qualify all associated samples.
Lab Duplicate (RPD)	**Lab Dup not typically required for HRMS analyses.** One per lab batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos)/UJ(ND) if RPD > CL	9	
Labeled Compounds (Internal Standards)	Added to all samples %R = 40% - 135% in all samples 8290 %R must meet limits in Table 7 Method 1613B	NFG [1] Method [2]	J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R < 10% - very low bias	13 (H,L)[3]	
Field Duplicates	Solids: RPD <50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Narrate and qualify if required by project	9	**Use professional judgment**

Dioxin/Furan Analysis by HRMS
(Based on Dioxin NFG 2011 and Methods EPA 1613B and SW-846 8290)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Compound ID and Calculation					
Quantitation/ Identification	All ions for each isomer must maximize within ± 2 seconds. S/N ratio >2.5 Ion ratios must meet criteria listed in Table 8 Method 8290, or Table 9 of 1613B; RRTs w/in limits in Table 2 of 1613B	NFG [1] Method [2]	Narrate in report; qualify if necessary NJ(pos) for retention time outliers. U(pos) for ion ratio outliers.	25	**EcoChem PJ, see TM-05**
EMPC (estimated maximum possible concentration)	If quantitation identification criteria are not met, laboratory should report an EMPC value.	NFG [1] Method [2]	If laboratory correctly reported an EMPC value, qualify the native compound U(pos) to indicate that the value is a detection limit and qualify total homolog groups J (pos)	25	**Use professional judgment See TM-18**
Interferences	Interferences from chlorodiphenyl ether compounds	NFG [1] Method [2]	J(pos)/UJ(ND) if present	23	**See TM-16**
	Lock masses must not deviate ± 20% from values in Table 8 of 1613B	Method [2]	J(pos)/UJ(ND) if present	24	**See TM-17**
Second Column Confirmation	All 2,3,7,8-TCDF hits must be confirmed on a DB-225 (or equiv) column. All QC criteria must also be met for the confirmation analysis.	NFG [1] Method [2]	Report the DB-225 value. If not performed use PJ.	3	DNR-11 DB5 result if both results from both columns are reported. **EcoChem PJ, see TM-05**
Calculation Check	Check 10% of field & QC sample results	EcoChem standard policy	Contact laboratory for resolution and/or corrective action	na	Full data validation only.
Electronic Data Deliverable (EDD)					
Verification of EDD to hardcopy data	EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages.		Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues).	na	EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action.
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	Standard reporting policy	Use "DNR" to flag results that will not be reported.	11	

(pos) - positive (detected) results; (ND) - not detected results

[1] National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) & Chlorinated Dibenzofurans (CDFs) Data Review, September 2011

[2] Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by High-Resolution Gas Chromatography/High-Resolution Mass Spectrometry (HRGC/HRMS), USEPA SW-846, Method 8290

[2] EPA Method 1613, Rev.B, Tetra-through Octa-Chlorinated Dioxins and Furans by Isotope Dilution HRGS/HRMS, October 1994

[3] NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

PCB Congener Analysis by HRMS
(Based on EPA DV Guidance[1] and Method EPA 1668C)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Sample Handling					
Cooler/Storage Temperature Preservation	Waters/Solids ≤ 6°C & in the dark Tissues <-10°C & in the dark **Preservation Aqueous:** If Cl_2 is present Thiosulfate must be added and if needed adjust pH to 2 - 3 (drinking water requirement)	EPA (1) Method (2)	J(pos)/R(ND) if thiosulfate not added if Cl_2 present and J(pos)/UJ(ND) if pH not adjusted; J(pos)/UJ(ND) if temp > 20°C	1	Note: EPA DV guidance documents use < 4°C, method uses ≤ 6°C. Info in EcoChem TM-05 also generally applies.
Holding Time	If properly stored, 1 year prior to extraction. If extracts properly stored (< -10°C & in dark), 1 year from extraction to analysis.	EPA (1) Method (2)	If not properly stored or HT exceeded: J(pos)/UJ(ND)	1	May **be dictated by QAPP** Info in EcoChem TM-05 also generally applies
Instrument Performance					
Mass Resolution (Tuning)	≥10,000 resolving power at m/z 330.9792 <5 ppm deviation from each m/z listed in **Table 7** of method. Analyzed prior to ICAL and at the beginning and end of each 12 hr. shift	EPA (1) Method (2)	R all analytes in all samples associated with a failed tune	24	PFK (Perfluorokerosene) tuning compound
Column Resolution	Mix of all 209 PCBs run prior to each ICAL/12 hours RT of PCB209 must be > 55 min PCB156 & 157 must coelute w/in 2 sec PCB34 & 23 and PCB187 & 182 must be resolved where ((x/y)*100%) < 40% x = ht of valley and y = ht of shortest peak RRT of all congeners must fall within the range in **Table 2** of the method	EPA (1) Method (2)	If criteria are not met, review sample chromatograms to determine if sample results are negatively impacted. If so, discuss with client for possible reanalyses, or J(pos) all data.	24	Criteria are for SPB-octyl column. If different column used, see Section 6.9.1.2 of method. Appendix A provides info for DB-1 column
Initial Calibration **Sensitivity**	S/N ratio > 10 for all native and labeled congeners in CS1 std.	EPA (1) Method (2)	If <10, elevate Det. Limit or R(ND)	5A	
Initial Calibration **Selectivity**	Ion Abundance ratios within QC limits (**Table 8** of Method 1668C)	EPA (1) Method (2)	If ion ratios are out for a given congener in 2 or more standards in ICAL, J(pos) results for that congener in all samples	5A	Professional judgement. The info in EcoChem TM-05 also generally applies
Initial Calibration (Minimum 5 stds.) **Stability**	%RSD < 20% for congeners listed in **Table 3** of method RRT of all congeners must meet **Table 2** of method	EPA (1) Method (2)	J(pos) natives if %RSD > 20% RRT outliers: narrate, no action	5A	RRT outliers: professional judgement. The info in EcoChem TM-05 also generally applies
Continuing Calibration (Prior to each 12 hr. shift) **Sensitivity**	S/N ratio for CS3 standard > 10	EPA (1) Method (2)	If <10, elevate Det. Limit to lowest calibration or R(ND)	5B	
Continuing Calibration (Prior to each 12 hr. shift) **Selectivity**	Ion Abundance ratios within QC limits (**Table 8** of Method 1668C)	EPA (1) Method (2)	No action if %D acceptable, review sample ion ratios, U(pos) if ion ratio outside limits	5B	Professional judgement. The info in EcoChem TM-05 also generally applies.

PCB Congener Analysis by HRMS
(Based on EPA DV Guidance[1] and Method EPA 1668C)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Continuing Calibration (Prior to each 12 hr. shift) **Stability**	Recoveries must meet VER% limits in **Table 6,** Method 1668C	EPA [(1)] Method [(2)]	**Labeled congeners:** Narrate, no action. **Native congeners:** J(pos)/UJ(ND) for low bias J(pos) for high bias	5B (H,L)[3]	
	Absolute RT of all Labeled congeners and Window Defining Congeners must be +/- 15 sec of RT in ICAL RRT of all congeners must be within range in **Table 2** of method	EPA [(1)] Method [(2)]	Narrate, no action	5B	Professional judgement. The info in EcoChem TM-05 also generally applies
Blank Contamination					
Method Blank (MB)	MB: One per matrix per batch of (of ≤ 20 samples) No detected congeners	EPA [(1)] Method [(2)]	U(pos) if sample result is < 5X blank concentration	7	**Heirarchy of blank review:** **#1 - Review MB, quaify as needed** **#2 - Review FB , qualify as needed** EMPC values in blanks as considered to be non-detects
Field Blank (FB)	FB: frequency as per QAPP No detected congeners		U(pos) if sample result is < 5X blank concentration	6	
Precision and Accuracy					
MS/MSD (recovery)	**MS/MSD not typically required for HRMS analyses.** If lab analyzes MS/MSD then one set per matrix per batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos) if both %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias **PJ if only one %R outlier**	8 (H,L)[3]	No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only unless other QC indicates systematic problems.
MS/MSD (RPD)	**MS/MSD not typically required for HRMS analyses.** If lab analyzes MS/MSD then one set per matrix per batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos) in parent sample if RPD > CL	9	Qualify parent sample only.
LCS (or OPR)	One per lab batch (of ≤ 20 samples) %R must meet limits in **Table 6** Method 1668C	EPA [(1)] Method [(2)]	J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R < 10% - very low bias	10 (H,L)[3]	No action if only one spike %R is outside criteria, when LCSD is analyzed. Qualify all associated samples.
LCS/LCSD (RPD)	**LCS/LCSD not typically required for HRMS analyses.** If lab analyzes LCS/LCSD then one set per matrix and batch of 20 samples RPD < 35%	EcoChem standard policy	J(pos) assoc. congener in all samples if RPD > CL	9	Qualify all associated samples.
Lab Duplicate (RPD) (if required)	**Lab Dup not typically required for HRMS analyses.** One per lab batch (of ≤ 20 samples) Use most current laboratory control limits	EcoChem standard policy	J(pos)/UJ(ND) if RPD > CL	9	Optional element. Qualify parent sample only.

PCB Congener Analysis by HRMS
(Based on EPA DV Guidance[1] and Method EPA 1668C)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Labeled congeners (Internal Standards)	Added to all samples %R must meet limits in **Table 6** Method 1668C	EPA [(1)] Method [(2)]	J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R <5% - very low bias J(pos)/UJ(ND) if %R between 5-10% for two or more labeled compounds in a substitution group (ie, mono, -di-, trichlorinated)- very low bias	13 (H,L)[3]	See next tab for labled congener associations as per **Table 2** Method 1668
Field Duplicates	Solids: RPD <50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Narrate and qualify if required by project **(EcoChem PJ)**	9	**RPD values may be dictated by QAPP** 35% and 50% are EcoChem defaults
Compound ID and Calculation					
Quantitation/ Identification	All ions for each isomer must maximize within +/- 2 seconds. S/N ratio >2.5 Ion ratios must meet criteria listed in **Table 8** of 1668C; RRTs w/in limits in **Table 2** of 1668C	EPA [(1)] Method [(2)]	Narrate in report; qualify if necessary NJ(pos) for retention time outliers. U(pos) for ion ratio outliers.	25	The info in EcoChem TM-05 also generally applies
EMPC (estimated maximum possible concentration)	If quantitation identification criteria are not met, laboratory should report an EMPC value.	EPA [(1)] Method [(2)]	If laboratory correctly reported an EMPC value, qualify the native congener U to indicate that the value is an elevated detection limit and qualify total homolog groups J(+)	25	**Use professional judgment.** **See TM-18**
Interferences	Lock masses must not deviate +/- 20% from values in **Table 7** of 1668C	Method [(2)]	J(pos)/UJ(ND) if present	24	**Use professional judgment.** **See TM-17**
Calibration Range	Results greater than highest calibration standard	EcoChem standard policy	Qualify J (pos)	20	If result from dilution analysis is not reported.
Calculation Check	Check 10% of field & QC sample results	EcoChem standard policy	Contact laboratory for resolution and/or corrective action	na	Full data validation only.
Electronic Data Deliverable (EDD)					
Verification of EDD to hardcopy data	EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages.		Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues).	na	EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action.
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	Standard reporting policy	Use "DNR" to flag results that will not be reported.	11	

[1] USEPA Region 2 Data Validation, Standard Operating Procedure for EPA Method 1668A, Revision 1, September 2008
USEPA Region 3 Interim Guidelines for the Validation of Data Generated Using Method 1668 PCB Congener Data, Revision 0, April 2004
USEPA Region 10 SOP For the Validation of Method 1668 Toxic, Dioxin-like, PCB Data, Revision 1, December 1995
[2] EPA Method 1668, Rev.C, Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS, April 2010
[3] "H" = high bias indicated; "L" = low bias indicated

(pos): Positive Result(s)
(ND): Non-detects

Conventional Methods with Instrument Calibrations (i.e., Ion Chromatography, Total Organic Carbon)
(Based on Inorganic NFG 2010 and EPA methods)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Sample Handling					
Cooler/Storage Temperature Preservation	Cooler temperature: 4°C±2°C Preservation: Analyte/Method Specific	NFG [(1)] Method [(2)]	J (pos)/UJ (ND) if preservation requirements not met	1	Use **PJ** to qualify for cooler temp outliers.
Holding Time	Analyte/Method Specific	NFG [(1)] Method [(2)]	J (pos)/UJ (ND) if holding time exceeded	1	
Instrument Performance					
Initial Calibration (ICAL)	blank + multiple standards as per method requirements r ≥ 0.995	NFG [(1)] Method [(2)]	J (pos)/UJ (ND) for r < 0.995	5A	
Initial Calibration Verification (ICV)	Independent source analyzed immediately after calibration %R method specific	NFG [(1)] Method [(2)]	J (pos)/UJ (ND) if %R < lower control limit (LCL) J (pos) if %R > upper control limit (UCL)	5A (H,L)[3]	Qualify all samples in run
Continuing Calibration Verification (CCV)	Immediately following ICV, every 10 samples, and end of run %R method specific	NFG [(1)] Method [(2)]	J(pos)/UJ(ND) if %R < LCL J(pos) if %R > UCL	5B (H,L)[3]	Qualify samples bracketed by CCV outliers
Blank Contamination					
Method Blank (MB)	One per matrix per batch of (of ≤ 20 samples) Blank conc < MDL	NFG [(1)] Method [(2)]	U (pos) if result is < 5X method blank concentration	7	Refer to **TM-02** for additional information. Blank Evaluation based on NFG 1994

Conventional Methods with Instrument Calibrations (i.e., Ion Chromatography, Total Organic Carbon)
(Based on Inorganic NFG 2010 and EPA methods)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Instrument Blanks (ICB/CCB)	After each ICV & CCV | blank concentration | < MDL	NFG [(1)] Method [(2)]	Action level is 5x absolute value of blank conc. For positive blanks: U (pos) results < action level For negative blanks: J (pos)/UJ (ND) results < action level	Pos Blanks: 7 Neg Blanks: 7L[3]	Use blanks bracketing samples for Qualification Refer to **TM-02** for additional information. **Hierarchy of blank review:** **#1 - Review MB, quaify as needed** **#2 - Review IB , qualify as needed** **#3 - Review FB , qualify as needed**
Field Blank (FB)	Blank conc < MDL	EcoChem standard policy	U (pos) if result is < 5x action level, as per analyte.	6	Qualify in associated field samples only. Refer to **TM-02** for additional information.
Precision and Accuracy					
Laboratory Control Sample (LCS)	One per matrix per batch (of ≤ 20 samples) %R within Method control limits (or Laboratory control limtis if none specified in method)	NFG [(1)] Method [(2)]	J (pos)/UJ (ND) if %R < LCL J (pos) if %R > UCL	10 (H,L)[3]	Qualify all samples in batch QAPP may have overriding accuracy limits.
Reference Materials (RM, CRM, SRM)	Result ±20% of the 95% confidence interval of the true value for analytes	EcoChem standard policy	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	12 (H,L)[3]	QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits

Conventional Methods with Instrument Calibrations (i.e., Ion Chromatography, Total Organic Carbon)
(Based on Inorganic NFG 2010 and EPA methods)

QC Element	Acceptance Criteria	Source of Criteria	Action for Non-Conformance	Reason Code	Discussion and Comments
Matrix Spike/ Matrix Spike Duplicate (MS/MSD)	Where applicable to method; MSD may not be required One per matrix per batch (of ≤ 20 samples) For samples <4x spike level, %R within method control limits (or Laboratory control limtis if none specified in method)	NFG [1] Method [2]	J (pos)/UJ (ND) if %R < LCL J (pos) if %R > UCL	8 (H,L)3	Qualify all samples in batch No action if native analyte concentration ≥ 4x spike added. Qualify all samples in batch. QAPP may have overriding accuracy limits.
Laboratory Duplicate (or MS/MSD)	One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL	NFG [1] Method [2]	J (pos)/UJ (ND) if RPD > 20% or if difference > control limit	9	Qualify all samples in batch. QAPP may have overriding precision limits.
Field Duplicate	Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Qualify only parent and field duplicate samples J (pos)/UJ (ND)	9	QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision.
Compound Quantitation					
Linear Range	Sample concentrations less than highest calibration standard	NFG [1] Method [2]	If result exceeds linear range & sample was not diluted J (pos)	20	
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	**TM-04** EcoChem Policy for Rejection/Selection Process for Multiple Results

[1] National Functional Guidelines for Inorganic Superfund Data Review, January 2010.
[2] SW846 or EPA Standard Methods
[3] "H" = high bias indicated; "L" = low bias indicated

(pos): Positive Result
(ND): Not Detected

Conventional Methods by Gravimetric Analysis
(i.e., Total Solids, Total Dissolved Solids, Total Suspended Solids, Grain Size)
(Based on Inorganic NFG 2010 and EPA methods)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
Sample Handling					
Cooler/Storage Temperature Preservation	Cooler temperature: 4°C±2°C Preservation: Analyte/Method Specific	Method [(1)] NFG[(2)]	J (pos)/UJ (ND) if preservation requirements not met	1	Use **PJ** to qualify for cooler temp outliers.
Holding Time	Analyte/Method Specific	Method NFG[(2)]	J (pos)/UJ (ND) if holding time exceeded	1	
Blank Contamination					
Method Blank (MB)	If required by method,one per matrix per batch of (of ≤ 20 samples) Blank conc < MDL	NFG [(1)] Method [(2)]	U (pos) if result is < 5X method blank concentration	7	Refer to **TM-02** for additional information. Blank Evaluation based on NFG 1994
Precision and Accuracy					
LCS (If appropriate to method)	One per matrix per batch (of ≤ 20 samples) %R between 80-120%	Method [(2)]	J (pos)/R (ND) if %R <50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120%	10 (H,L)[3]	Qualify all samples in batch QAPP may have overriding accuracy limits.
Reference Material (RM, SRM, or CRM)	Result ±20% of the 95% confidence interval of the true value for analytes	EcoChem standard policy	J (pos)/UJ (ND) if < LCL J (pos) if > UCL	12 (H,L)[3]	QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits

Conventional Methods by Gravimetric Analysis
(i.e., Total Solids, Total Dissolved Solids, Total Suspended Solids, Grain Size)
(Based on Inorganic NFG 2010 and EPA methods)

QC Element	EcoChem Acceptance Criteria	Source of Criteria	EcoChem Action for Non-Conformance	Reason Code	Discussion and Comments
Laboratory Duplicate	One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL	NFG [1] Method [2]	J (pos)/UJ (ND) if RPD > 20% For Grain Size, no action if results for fraction are less than 5%	9	Qualify all samples in batch, except Grain Size - qualify parent only. QAPP may have overriding precision limits.
Field Duplicate	Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL)	EcoChem standard policy	Qualify only parent and field duplicate samples J (pos)/UJ (ND)	9	QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision.
Compound Quantitation					
Dilutions, Re-extractions and/or Reanalyses	Report only one result per analyte per sample	EcoChem standard policy	Use "DNR" to flag results that will not be reported.	11	

[1] National Functional Guidelines for Inorganic Superfund Data Review, January 2010.
[2] SW846 or EPA Standard Methods
[3] "H" = high bias indicated; "L" = low bias indicated

(pos): Positive Result
(ND): Not Detected

ECOCHEM
Data Quality

APPENDIX B

QUALIFIED DATA SUMMARY TABLE

Qualified Data Summary Table

Pacific Groundwater Group - Portland Harbor Head of Swan Island Sediment Sampling

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
K1810410	D-8.90-SC-40TO62-102318	K1810410-013	SW8270D-SIM	PYRENE	200	ug/kg	D	J	5BL
K1810410	D-8.90-SC-80TO103-102318	K1810410-015	SW8270D-SIM	PYRENE	160	ug/kg	D	J	5BL
K1810410	D-8.90-SC-20TO40-102318	K1810410-012	SW8270D-SIM	PYRENE	240	ug/kg	D	J	5BL
K1810410	D-8.90-SC-62TO80-102318	K1810410-014	SW8270D-SIM	PYRENE	110	ug/kg	D	J	5BL
K1810410	D-8.90-SC-103TO120-	K1810410-016	SW8270D-SIM	PYRENE	220	ug/kg	D	J	5BL
K1810410	D-8.90-SC-120TO140-	K1810410-017	SW8270D-SIM	PYRENE	200	ug/kg	D	J	5BL
K1810410	D-8.90-SC-140TO160-	K1810410-018	SW8270D-SIM	PYRENE	200	ug/kg	D	J	5BL
K1810410	E-9.02-SC-00TO10-102318	K1810410-020	SW8270D-SIM	PYRENE	80	ug/kg	D	J	5BL
K1810410	E-9.02-SC-10TO20-102318	K1810410-021	SW8270D-SIM	PYRENE	160	ug/kg	D	J	5BL
K1810410	E-9.02-SC-20TO40-102318	K1810410-022	SW8270D-SIM	PYRENE	1600	ug/kg	D	J	5BL
K1810410	E-9.02-SC-40TO60-102318	K1810410-023	SW8270D-SIM	PYRENE	190	ug/kg	D	J	5BL
K1810410	E-9.02-SC-60TO80-102318	K1810410-024	SW8270D-SIM	PYRENE	240	ug/kg	D	J	5BL
K1810410	E-9.02-SC-80TO100-102318	K1810410-025	SW8270D-SIM	NAPHTHALENE	58	ug/kg	D	J	8L
K1810410	E-9.02-SC-80TO100-102318	K1810410-025	SW8270D-SIM	2-METHYLNAPHTHALENE	32	ug/kg	D	J	8L
K1810410	E-9.02-SC-80TO100-102318	K1810410-025	SW8270D-SIM	ACENAPHTHYLENE	19	ug/kg	D	J	8L
K1810410	E-9.02-SC-80TO100-102318	K1810410-025	SW8270D-SIM	DIBENZOFURAN	24	ug/kg	D	J	8L
K1810410	E-9.02-SC-80TO100-102318	K1810410-025	SW8270D-SIM	PYRENE	300	ug/kg	D	J	5BL
K1810410	E-9.02-SC-100TO115-102318	K1810410-026	SW8270D-SIM	PYRENE	160	ug/kg	D	J	5BL
K1810410	E-9.02-SC-115TO130-102318	K1810410-027	SW8270D-SIM	PYRENE	150	ug/kg	D	J	5BL
K1810410	KWG1805768-LB	KWG1805768-4	SW8270D-SIM	PYRENE		ug/kg	U	UJ	5BL
K1810410	KWG1805769-LB	KWG1805769-4	SW8270D-SIM	PYRENE		ug/kg	U	UJ	5BL
K1810410	611-102318	K1810410-029	SW8270D-SIM	NAPHTHALENE	0.007	ug/l	J	U	7
K1810410	611-102318	K1810410-029	SW8270D-SIM	PHENANTHRENE	0.005	ug/l	J	U	7
K1810410	611-102318	K1810410-029	SW8270D-SIM	Benzo(a)anthracene	0.002	ug/l	J	U	7
K1810410	D-9.09-SC-00TO10-102318	K1810410-001	SW8270D-SIM	PYRENE	110	ug/kg	D	J	5BL
K1810410	D-9.09-SC-10TO20-102318	K1810410-002	SW8270D-SIM	PYRENE	170	ug/kg	D	J	5BL
K1810410	D-9.09-SC-20TO40-102318	K1810410-003	SW8270D-SIM	NAPHTHALENE	39	ug/kg		J	8L
K1810410	D-9.09-SC-20TO40-102318	K1810410-003	SW8270D-SIM	2-METHYLNAPHTHALENE	18	ug/kg		J	8L

Qualified Data Summary Table

Pacific Groundwater Group - Portland Harbor Head of Swan Island Sediment Sampling

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
K1810410	D-9.09-SC-20TO40-102318	K1810410-003	SW8270D-SIM	ACENAPHTHYLENE	14	ug/kg		J	8L
K1810410	D-9.09-SC-20TO40-102318	K1810410-003	SW8270D-SIM	ACENAPHTHENE	12	ug/kg		J	8L
K1810410	D-9.09-SC-20TO40-102318	K1810410-003	SW8270D-SIM	DIBENZOFURAN	13	ug/kg		J	8L
K1810410	D-9.09-SC-20TO40-102318	K1810410-003	SW8270D-SIM	PYRENE	150	ug/kg	D	J	5BL
K1810410	D-9.09-SC-20TO40-102318	K1810410-003	SW8270D-SIM	BENZO(k)FLUORANTHENE	35	ug/kg	D	J	8L
K1810410	D-9.09-SC-20TO40-102318	K1810410-003	SW8270D-SIM	Dibenzo(a,h)anthracene	14	ug/kg	D	J	8L
K1810410	D-9.09-SC-40TO60-102318	K1810410-004	SW8270D-SIM	PYRENE	460	ug/kg	D	J	5BL
K1810410	D-9.09-SC-60TO80-102318	K1810410-005	SW8270D-SIM	PYRENE	410	ug/kg	D	J	5BL
K1810410	D-9.09-SC-80TO100-102318	K1810410-006	SW8270D-SIM	PYRENE	210	ug/kg	D	J	5BL
K1810410	D-9.09-SC-100TO117-	K1810410-007	SW8270D-SIM	PYRENE	260	ug/kg	D	J	5BL
K1810410	511-20TO40-102318	K1810410-009	SW8270D-SIM	PYRENE	170	ug/kg	D	J	5BL
K1810410	D-8.90-SC-00TO10-102318	K1810410-010	SW8270D-SIM	PYRENE	120	ug/kg	D	J	5BL
K1810410	D-8.90-SC-10TO20-102318	K1810410-011	SW8270D-SIM	PYRENE	400	ug/kg	D	J	5BL
K1810430	E-8.99-0to28-102418	K1810430-001	E160.3	TOTAL SOLIDS	28.5	percent		J	1
K1810430	C-8.94-0to27-102418	K1810430-002	E160.3	TOTAL SOLIDS	30.2	percent		J	1
K1810430	D-8.90-0to27-102418	K1810430-003	E160.3	TOTAL SOLIDS	34.7	percent		J	1
K1810430	D-8.83-0to25-102418	K1810430-004	E160.3	TOTAL SOLIDS	34.7	percent		J	1
K1810430	E-9.02-0to26-102418	K1810430-005	E160.3	TOTAL SOLIDS	35	percent		J	1
K1810430	612-102418	K1810430-012	SW8270D-SIM	NAPHTHALENE	0.008	ug/l	J	U	7
K1810430	612-102418	K1810430-012	SW8270D-SIM	2-METHYLNAPHTHALENE	0.006	ug/l	J	U	7
K1810430	612-102418	K1810430-012	SW8270D-SIM	ACENAPHTHYLENE	0.007	ug/l	JX	J	14
K1810430	B-9.00-0to29-102418	K1810430-006	E160.3	TOTAL SOLIDS	27.7	percent		J	1
K1810430	512-0to29-102418	K1810430-007	E160.3	TOTAL SOLIDS	27.3	percent		J	1
K1810430	D-9.09-0to29-102418	K1810430-008	E160.3	TOTAL SOLIDS	32.2	percent		J	1
K1810430	A-9.03-0to26-102418	K1810430-009	E160.3	TOTAL SOLIDS	28.8	percent		J	1
K1810430	B-9.15-0to30-102418	K1810430-010	E160.3	TOTAL SOLIDS	46.5	percent		J	1
K1810430	G-9.15-0to18-102418	K1810430-011	E160.3	TOTAL SOLIDS	74.1	percent		J	1
K1810430	E-9.02-0to26-102418	K1810430-005	SW8270D-SIM	BENZO(k)FLUORANTHENE	64	ug/kg	D	J	8L

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
K1810430	E-9.02-0to26-102418	K1810430-005	SW8270D-SIM	Dibenzo(a,h)anthracene	20	ug/kg	D	J	8L
K1810430	E-9.02-0to26-102418	K1810430-005	SW8270D-SIM	Benzo(g,h,i)perylene	110	ug/kg	D	J	8L
K1810430	E-9.02-0to26-102418	K1810430-005	SW8270D-SIM	NAPHTHALENE	41	ug/kg	D	J	8L
K1810430	E-9.02-0to26-102418	K1810430-005	SW8270D-SIM	2-METHYLNAPHTHALENE	20	ug/kg	D	J	8L
K1810430	E-9.02-0to26-102418	K1810430-005	SW8270D-SIM	ACENAPHTHYLENE	17	ug/kg	D	J	8L
K1810430	E-9.02-0to26-102418	K1810430-005	SW8270D-SIM	ACENAPHTHENE	23	ug/kg	D	J	8L
K1810430	E-9.02-0to26-102418	K1810430-005	SW8270D-SIM	DIBENZOFURAN	12	ug/kg	D	J	8L
K1810430	G-9.15-0to18-102418	K1810430-011	SW8270D-SIM	ACENAPHTHYLENE	4.1	ug/kg	JDX	J	14
K1810430	G-9.15-0to18-102418	K1810430-011	SW8270D-SIM	DIBENZOFURAN	2.6	ug/kg	JDX	J	14
K1810430	612-102418	K1810430-012	SW8270D-SIM	ACENAPHTHENE	0.002	ug/l	J	U	7
K1810430	612-102418	K1810430-012	SW8270D-SIM	DIBENZOFURAN	0.005	ug/l	J	U	7
K1810430	612-102418	K1810430-012	SW8270D-SIM	FLUORENE	0.003	ug/l	J	U	7
K1810430	612-102418	K1810430-012	SW8270D-SIM	PHENANTHRENE	0.011	ug/l	J	U	7
K1810430	612-102418	K1810430-012	SW8270D-SIM	FLUORANTHENE	0.003	ug/l	J	U	7
K1810430	612-102418	K1810430-012	SW8270D-SIM	PYRENE	0.002	ug/l	J	U	7
K1810430	612-102418	K1810430-012	SW8270D-SIM	Benzo(a)anthracene	0.002	ug/l	J	U	7
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-4	0.059	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-94	0.042	ng/g	q	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	Total Octachlorobiphenyls	3.9	ng/g	q	J	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	Total Pentachlorobiphenyls	15	ng/g	qB	J	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	Total Trichlorobiphenyls	1.3	ng/g	qB	J	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	Total Tetrachlorobiphenyls	6.4	ng/g	qB	J	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-124	0.052	ng/g	JqC10	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-126	0.007	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-120	0.021	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-114	0.027	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-12	0.016	ng/g	JqC	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-46	0.084	ng/g	q	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-39	0.012	ng/g	Jq	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-9	0.015	ng/g	Jq	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	Total Octachlorobiphenyls	6	ng/g	q	J	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-145	0.011	ng/g	Jq	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-150	0.033	ng/g	q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-122	0.046	ng/g	q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-12	0.04	ng/g	JCq	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-200	0.15	ng/g	q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-191	0.097	ng/g	q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-24	0.009	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	D2216	Total Solids	27	%		J	1
580-81440-1	E-9.02-0to26-102418	580-81440-1	D2216	Total Solids	34.1	%		J	1
580-81440-1	E-9.02-0to26-102418	580-81440-1	SW8082A	PCB-1260	29	ug/kg	F1	J	13L
580-81440-1	E-9.02-0to26-102418	580-81440-1	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81440-1	E-9.02-0to26-102418	580-81440-1	SW8082A	PCB-1016		ug/kg	UF1	UJ	13L
580-81440-1	E-9.02-0to26-102418	580-81440-1	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81440-1	E-9.02-0to26-102418	580-81440-1	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81440-1	E-9.02-0to26-102418	580-81440-1	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81440-1	E-9.02-0to26-102418	580-81440-1	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81440-1	E-9.02-0to26-102418	580-81440-1	CWA1613B	Total TCDD	0.013	ug/kg	q	J	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	CWA1613B	Total PeCDD	0.019	ug/kg	q	J	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	CWA1613B	Total PeCDF	0.036	ug/kg	qB	J	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-63	0.021	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-35	0.006	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-29	0.032	ng/g	JqC26	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	Polychlorinated biphenyls, Total	72	ng/g	qB	J	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-148	0.027	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-152	0.013	ng/g	Jq	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-108	0.052	ng/g	JqC	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-11	0.1	ng/g	q	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-123	0.023	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-26	0.032	ng/g	JqC	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-205	0.046	ng/g	q	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-167	0.15	ng/g	qB	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-54	0.026	ng/g	Jq	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-67	0.025	ng/g	Jq	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-62	0.15	ng/g	C59q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-59	0.15	ng/g	Cq	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-58	0.018	ng/g	Jq	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-6	0.074	ng/g	q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-60	0.12	ng/g	q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-32	0.21	ng/g	q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	Total Pentachlorobiphenyls	34	ng/g	Bq	J	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	Total Trichlorobiphenyls	4.6	ng/g	Bq	J	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	Total Tetrachlorobiphenyls	15	ng/g	Bq	J	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	Polychlorinated biphenyls, Total	130	ng/g	Bq	J	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	Total Dichlorobiphenyls	0.84	ng/g	q	J	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	Total Hexachlorobiphenyls	42	ng/g	Bq	J	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	Total Heptachlorobiphenyls	24	ng/g	q	J	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-75	0.15	ng/g	C59q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-7	0.016	ng/g	Jq	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-13	0.04	ng/g	JC12q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-131	0.061	ng/g	q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-162	0.015	ng/g	Jq	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-16	0.14	ng/g	q	U	25
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-188	0.011	ng/g	Jq	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81440-1	E-9.02-0to26-102418	580-81440-1	E1668A	PCB-181	0.02	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	CWA1613B	Total TCDD	0.012	ug/kg	q	J	25
580-81440-1	512-0to29-102418	580-81440-2	CWA1613B	Total PeCDD	0.017	ug/kg	q	J	25
580-81440-1	512-0to29-102418	580-81440-2	CWA1613B	Total PeCDF	0.035	ug/kg	qB	J	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-55	0.01	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	Total Dichlorobiphenyls	0.32	ng/g	q	J	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	Total Hexachlorobiphenyls	27	ng/g	qB	J	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-79	0.012	ng/g	Jq	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-13	0.016	ng/g	JqC12	U	25
580-81440-1	512-0to29-102418	580-81440-2	E1668A	PCB-159	0.049	ng/g	q	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	D2216	Total Solids	28.6	%		J	1
580-81440-1	A-9.03-0to26-102418	580-81440-3	SW8082A	PCB-1260	32	ug/kg	J	J	13L
580-81440-1	A-9.03-0to26-102418	580-81440-3	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81440-1	A-9.03-0to26-102418	580-81440-3	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81440-1	A-9.03-0to26-102418	580-81440-3	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81440-1	A-9.03-0to26-102418	580-81440-3	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81440-1	A-9.03-0to26-102418	580-81440-3	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81440-1	A-9.03-0to26-102418	580-81440-3	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81440-1	A-9.03-0to26-102418	580-81440-3	CWA1613B	Total TCDD	0.014	ug/kg	q	J	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	CWA1613B	Total PeCDD	0.024	ug/kg	q	J	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	CWA1613B	Total PeCDF	0.088	ug/kg	qB	J	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	CWA1613B	2,3,7,8-TCDD	0.001	ug/kg	Jq	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-54	0.06	ng/g	q	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-55	0.007	ng/g	Jq	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-6	0.048	ng/g	q	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-43	0.048	ng/g	JqC	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-4	0.11	ng/g	q	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-96	0.041	ng/g	q	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-9	0.015	ng/g	Jq	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	Total Pentachlorobiphenyls	21	ng/g	qB	J	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	Total Trichlorobiphenyls	1.9	ng/g	qB	J	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	Total Tetrachlorobiphenyls	8.1	ng/g	qB	J	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	Polychlorinated biphenyls, Total	98	ng/g	qB	J	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	Total Dichlorobiphenyls	0.61	ng/g	q	J	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	Total Hexachlorobiphenyls	36	ng/g	qB	J	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	Total Heptachlorobiphenyls	23	ng/g	q	J	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-73	0.048	ng/g	JqC43	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-68	0.018	ng/g	Jq	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-7	0.014	ng/g	Jq	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-79	0.01	ng/g	Jq	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-148	0.038	ng/g	q	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-11	0.097	ng/g	q	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-10	0.007	ng/g	Jq	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-16	0.07	ng/g	q	U	25
580-81440-1	A-9.03-0to26-102418	580-81440-3	E1668A	PCB-175	0.086	ng/g	q	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	D2216	Total Solids	31	%		J	1
580-81440-1	D-9.09-0to29-102418	580-81440-4	CWA1613B	Total TCDD	0.015	ug/kg	q	J	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	CWA1613B	Total PeCDF	0.035	ug/kg	qB	J	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	CWA1613B	Total PeCDD	0.017	ug/kg	q	J	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	Total Dichlorobiphenyls	0.4	ng/g	q	J	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	Total Heptachlorobiphenyls	22	ng/g	q	J	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	Polychlorinated biphenyls, Total	92	ng/g	qB	J	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	Total Hexachlorobiphenyls	36	ng/g	qB	J	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	Total Monochlorobiphenyls	0.074	ng/g	q	J	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-79	0.011	ng/g	Jq	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-55	0.013	ng/g	Jq	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-58	0.006	ng/g	Jq	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-7	0.006	ng/g	Jq	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	Total Pentachlorobiphenyls	19	ng/g	qB	J	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-114	0.028	ng/g	Jq	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-12	0.023	ng/g	JqC	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-1	0.02	ng/g	Jq	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-108	0.068	ng/g	qC	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-145	0.004	ng/g	Jq	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	Total Trichlorobiphenyls	1.4	ng/g	SqB	J	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	Total Tetrachlorobiphenyls	6.5	ng/g	qB	J	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-124	0.068	ng/g	qC10	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-13	0.023	ng/g	JqC12	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-182	0.034	ng/g	q	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-152	0.01	ng/g	Jq	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-150	0.034	ng/g	q	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-16	0.032	ng/g	q	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-3	0.019	ng/g	Jq	U	25
580-81440-1	D-9.09-0to29-102418	580-81440-4	E1668A	PCB-2	0.035	ng/g	q	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	D2216	Total Solids	76.7	%		J	1
580-81440-1	G-9.15-0to18-102418	580-81440-5	CWA1613B	Total TCDD	4E-04	ug/kg	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	CWA1613B	Total PeCDF	0.003	ug/kg	JqB	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	CWA1613B	Total PeCDD	0.002	ug/kg	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	CWA1613B	2,3,7,8-TCDD	2E-04	ug/kg	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	CWA1613B	2,3,4,7,8-PeCDF	2E-04	ug/kg	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-55	0.003	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-48	0.022	ng/g	q	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-60	0.014	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-35	0.003	ng/g	Jq	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-3	0.002	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-46	0.01	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-67	0.003	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-93	0.018	ng/g	JCq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-9	0.002	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-98	0.02	ng/g	JCq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	Total Octachlorobiphenyls	0.87	ng/g	q	J	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	Total Pentachlorobiphenyls	4.2	ng/g	Bq	J	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	Total Trichlorobiphenyls	0.45	ng/g	Bq	J	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	Total Tetrachlorobiphenyls	1.3	ng/g	Bq	J	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	Total Monochlorobiphenyls	0.01	ng/g	Jq	J	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	Polychlorinated biphenyls, Total	16	ng/g	Bq	J	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	Total Dichlorobiphenyls	0.12	ng/g	q	J	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	Total Hexachlorobiphenyls	6.1	ng/g	Bq	J	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-68	0.003	ng/g	J	U	6
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-7	0.002	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-79	0.004	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-8	0.015	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-139	0.02	ng/g	JCq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-140	0.02	ng/g	JC139	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-144	0.02	ng/g	q	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-13	0.004	ng/g	JC12q	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-148	0.003	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-145	0.002	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-152	0.002	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-15	0.014	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-150	0.002	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-11	0.064	ng/g		U	6

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-100	0.018	ng/g	JC93q	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-1	0.003	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-102	0.02	ng/g	JC98q	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-120	0.003	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-12	0.004	ng/g	JCq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-2	0.005	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-19	0.021	ng/g	q	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-197	0.008	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-24	0.001	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-25	0.007	ng/g	Jq	U	25
580-81440-1	G-9.15-0to18-102418	580-81440-5	E1668A	PCB-205	0.009	ng/g	Jq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	D2216	Total Solids	45.2	%		J	1
580-81440-1	B-9.15-0to30-102418	580-81440-6	CWA1613B	Total TCDD	0.009	ug/kg	q	J	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	CWA1613B	Total PeCDD	0.015	ug/kg	q	J	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-94	0.031	ng/g	q	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-93	0.1	ng/g	Cq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-9	0.02	ng/g	Jq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-55	0.022	ng/g	q	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-5	0.006	ng/g	Jq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-54	0.024	ng/g	q	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-7	0.016	ng/g	Jq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-73	0.044	ng/g	C43q	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	Polychlorinated biphenyls, Total	110	ng/g	Bq	J	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-10	0.007	ng/g	Jq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-100	0.1	ng/g	C93q	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-137	0.2	ng/g	q	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	Total Trichlorobiphenyls	5.5	ng/g	Bq	J	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	Total Tetrachlorobiphenyls	17	ng/g	Bq	J	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	Total Hexachlorobiphenyls	34	ng/g	Bq	J	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	Total Heptachlorobiphenyls	17	ng/g	q	J	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	Total Dichlorobiphenyls	0.88	ng/g	q	J	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	Total Pentachlorobiphenyls	28	ng/g	Bq	J	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-126	0.011	ng/g	Jq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-169	0.019	ng/g	Jq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-181	0.012	ng/g	Jq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-145	0.004	ng/g	Jq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-14	0.003	ng/g	Jq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-154	0.18	ng/g	q	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-152	0.005	ng/g	Jq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-43	0.044	ng/g	Cq	U	25
580-81440-1	B-9.15-0to30-102418	580-81440-6	E1668A	PCB-39	0.015	ng/g	Jq	U	25
580-81440-1	612-102418	580-81440-7	SM5310B	Total Organic Carbon	0.47	mg/L	JB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-35	1E-03	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-33	0.003	ng/L	JBC21	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-44	0.022	ng/L	JCBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-52	0.006	ng/L	JB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-51	0.004	ng/L	JC45B	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-50	0.001	ng/L	JCq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-53	0.001	ng/L	JC50q	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-47	0.022	ng/L	JBC44	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-45	0.004	ng/L	JCBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-32	0.002	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-20	0.004	ng/L	JCBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-203	0.005	ng/L	JB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-209	0.005	ng/L	JB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-28	0.004	ng/L	JBC20	U	25

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580-81440-1	612-102418	580-81440-7	E1668A	PCB-29	0.001	ng/L	JC26B	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-31	0.003	ng/L	JB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-30	0.004	ng/L	JC18B	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-3	0.002	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-22	0.003	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-21	0.003	ng/L	JCBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-26	0.001	ng/L	JCBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-90	0.011	ng/L	JCB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-91	0.002	ng/L	JC88B	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-83	0.003	ng/L	JCBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-88	0.002	ng/L	JCBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-87	0.005	ng/L	JBC86	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-86	0.005	ng/L	JCB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	Total Monochlorobiphenyls	0.008	ng/L	JBq	J	25
580-81440-1	612-102418	580-81440-7	E1668A	Total Hexachlorobiphenyls	0.15	ng/L	JBq	J	25
580-81440-1	612-102418	580-81440-7	E1668A	Total Trichlorobiphenyls	0.025	ng/L	JBq	J	25
580-81440-1	612-102418	580-81440-7	E1668A	Total Tetrachlorobiphenyls	0.052	ng/L	JBq	J	25
580-81440-1	612-102418	580-81440-7	E1668A	Total Pentachlorobiphenyls	0.047	ng/L	JBq	J	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-97	0.005	ng/L	JBC86	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-99	0.003	ng/L	JC83B	U	25
580-81440-1	612-102418	580-81440-7	E1668A	Total Heptachlorobiphenyls	0.16	ng/L	Bq	J	25
580-81440-1	612-102418	580-81440-7	E1668A	Total Dichlorobiphenyls	0.026	ng/L	JBq	J	25
580-81440-1	612-102418	580-81440-7	E1668A	Polychlorinated biphenyls, Total	0.48	ng/L	Bq	J	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-65	0.022	ng/L	JBC44	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-66	0.003	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-77	0.001	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-8	0.004	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-2	0.004	ng/L	JB	U	7

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580-81440-1	612-102418	580-81440-7	E1668A	PCB-13	0.003	ng/L	JC12q	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-136	0.003	ng/L	Jq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-125	0.005	ng/L	JBC86	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-129	0.037	ng/L	JCB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-146	0.005	ng/L	JB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-144	8E-04	ng/L	Jq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-138	0.037	ng/L	JBC12	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-141	0.006	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-1	0.002	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-110	0.007	ng/L	JCB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-109	0.005	ng/L	JBC86	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-101	0.011	ng/L	JBC90	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-119	0.005	ng/L	JBC86	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-118	0.004	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-12	0.003	ng/L	JCq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-113	0.011	ng/L	JBC90	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-115	0.007	ng/L	JBC11	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-187	0.019	ng/L	JB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-18	0.004	ng/L	JCB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-19	0.002	ng/L	Jq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-192	0.002	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-190	0.004	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-191	0.001	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-158	0.004	ng/L	JB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-157	0.004	ng/L	JC156	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-160	0.037	ng/L	JBC12	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-16	0.002	ng/L	Jq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-153	0.033	ng/L	JCB	U	7

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81440-1	612-102418	580-81440-7	E1668A	PCB-156	0.004	ng/L	JCB	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-17	0.001	ng/L	Jq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-170	0.019	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-172	0.004	ng/L	JBq	U	25
580-81440-1	612-102418	580-81440-7	E1668A	PCB-163	0.037	ng/L	JBC12	U	7
580-81440-1	612-102418	580-81440-7	E1668A	PCB-168	0.033	ng/L	JBC15	U	7
580-81440-1	612-102418	580-81440-7	CWA1613B	2,3,7,8-TCDD	7.4	pg/L	Jq	U	25
580-81440-1	612-102418	580-81440-7	CWA1613B	Total TCDD	7.4	pg/L	Jq	U	25
580-81440-1	612-102418	580-81440-7	CWA1613B	Total PeCDD	5.7	pg/L	Jq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-7	0.035	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-12	0.076	ng/g	JCBq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-112	0.085	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-169	0.1	ng/g	Bq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	CWA1613B	Total PeCDD	0.026	ug/kg	q	J	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	CWA1613B	Total TCDD	0.011	ug/kg	q	J	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	Total Dichlorobiphenyls	1.9	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	Polychlorinated biphenyls, Total	440	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-67	0.089	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	PCB-54	0.023	ng/g	Jq	UJ	13L,25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	PCB-5	0.008	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	PCB-9	0.028	ng/g	q	U	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	Total Hexachlorobiphenyls	53	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	Total Trichlorobiphenyls	11	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	Total Tetrachlorobiphenyls	33	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	Total Pentachlorobiphenyls	60	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	Total Dichlorobiphenyls	1.4	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	Polychlorinated biphenyls, Total	200	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	PCB-7	0.032	ng/g	q	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	PCB-126	0.023	ng/g	JBq	U	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	PCB-150	0.063	ng/g	q	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-131	0.21	ng/g	q	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-126	0.033	ng/g	JBq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-13	0.076	ng/g	JC12B	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-11	0.061	ng/g	JB	U	6
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-100	0.47	ng/g	C93B	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-10	0.014	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-188	0.038	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-2	0.022	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-162	0.05	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	PCB-24	0.018	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	PCB-11	0.15	ng/g	Bq	U	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	E1668A	PCB-10	0.009	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	CWA1613B	Total PeCDF	0.034	ug/kg	q	J	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	CWA1613B	Total PeCDD	0.026	ug/kg	q	J	25
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	CWA1613B	Total TCDD	0.009	ug/kg	q	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	SW8082A	PCB-1254	16	ug/kg		NJ	3,13L
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	SW8082A	PCB-1260		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	D2216	Total Solids	44	%		J	1
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-43	0.066	ng/g	Cq	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-54	0.013	ng/g	Jq	UJ	13L,25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-5	0.005	ng/g	Jq	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-34	0.021	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-24	0.015	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-9	0.02	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-85	0.54	ng/g	CBq	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	Total Hexachlorobiphenyls	44	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	Total Trichlorobiphenyls	7.7	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	Total Tetrachlorobiphenyls	27	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	Total Pentachlorobiphenyls	43	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-98	0.21	ng/g	Cq	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	Total Dichlorobiphenyls	1.1	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	Polychlorinated biphenyls, Total	150	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-7	0.021	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-73	0.066	ng/g	C43q	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-72	0.14	ng/g	q	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-77	0.25	ng/g	Bq	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-131		ng/g	UG	UJ	14
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-150	0.058	ng/g	q	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-10	0.008	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-102	0.21	ng/g	C98q	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-122	0.065	ng/g	q	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-123	0.062	ng/g	Bq	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-120	0.071	ng/g	q	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-116	0.54	ng/g	C85B	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	E1668A	PCB-117	0.54	ng/g	C85B	U	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	CWA1613B	Total PeCDF	0.023	ug/kg	q	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	CWA1613B	Total PeCDD	0.021	ug/kg	Bq	J	25
580-81308-2	E-9.02-SC-10to20-102318	580-81308-29	CWA1613B	Total TCDD	0.009	ug/kg	q	J	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	SW8082A	PCB-1254	38	ug/kg		J	3,13L

Qualified Data Summary Table

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	SW8082A	PCB-1260		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	D2216	Total Solids	55.3	%		J	1
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-54	0.006	ng/g	JSq	UJ	13L,25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-9	0.037	ng/g	q	U	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	Total Hexachlorobiphenyls	76	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	Total Octachlorobiphenyls	12	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	Total Tetrachlorobiphenyls	36	ng/g	SBq	J	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	Total Pentachlorobiphenyls	65	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	Total Dichlorobiphenyls	1.4	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	Polychlorinated biphenyls, Total	250	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-7	0.032	ng/g	q	U	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-202	0.61	ng/g	Bq	U	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-130	1.1	ng/g	G	J	14
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-131		ng/g	UG	UJ	14
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-126	0.034	ng/g	Bq	U	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-13	0.054	ng/g	C12B	U	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-11	0.03	ng/g	JB	U	6
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-10	0.015	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-12	0.054	ng/g	CBq	U	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-197	0.097	ng/g	q	U	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	E1668A	PCB-159	0.11	ng/g	Bq	U	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	CWA1613B	Total PeCDF	0.031	ug/kg	q	J	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	CWA1613B	Total PeCDD	0.015	ug/kg	q	J	25

Qualified Data Summary Table

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	CWA1613B	Total TCDD	0.006	ug/kg	q	J	25
580-81308-2	E-9.02-SC-60to80-102318	580-81308-30	CWA1613B	2,3,4,7,8-PeCDF	0.002	ug/kg	Jq	U	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	SW8082A	PCB-1260	37	ug/kg		J	3,13L
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	D2216	Total Solids	53.1	%		J	1
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	SW8082A	PCB-1260		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	SW8082A	PCB-1254	56	ug/kg		J	3,13L
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	D2216	Total Solids	48.8	%		J	1
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	SW8082A	PCB-1254	23	ug/kg	*	NJ	3,13L,19
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	SW8082A	PCB-1248		ug/kg	U*	UJ	13L
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	SW8082A	PCB-1260		ug/kg	U*	UJ	13L
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	SW8082A	PCB-1242		ug/kg	U*	UJ	13L
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	SW8082A	PCB-1016		ug/kg	U*	UJ	13L
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	SW8082A	PCB-1232		ug/kg	U*	UJ	13L
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	SW8082A	PCB-1221		ug/kg	U*	UJ	13L
580-81308-2	E-9.02-SC-00to10-102318	580-81308-28	D2216	Total Solids	40.2	%		J	1
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-4	0.23	ng/g	q	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-55	0.12	ng/g	Bq	U	25

Qualified Data Summary Table

Pacific Groundwater Group - Portland Harbor Head of Swan Island Sediment Sampling

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-5	0.015	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-58	0.064	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-9	0.053	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-94	0.17	ng/g	q	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	PCB-93	0.47	ng/g	CBq	U	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	Total Monochlorobiphenyls	0.2	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	Total Hexachlorobiphenyls	130	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	Total Tetrachlorobiphenyls	63	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	Total Pentachlorobiphenyls	130	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-20to40-102318	580-81308-27	E1668A	Total Heptachlorobiphenyls	75	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-54	0.009	ng/g	JSq	UJ	13L,25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-54L	0.18	ng/g	S*q	U	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-55	0.052	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-5	0.012	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-24	0.028	ng/g	q	U	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-9	0.046	ng/g	q	U	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	Total Trichlorobiphenyls	15	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	Total Tetrachlorobiphenyls	41	ng/g	SBq	J	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	Total Pentachlorobiphenyls	67	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-96	0.064	ng/g	q	U	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	Total Dichlorobiphenyls	1.5	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	Polychlorinated biphenyls, Total	280	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-7	0.031	ng/g	q	U	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-131		ng/g	UG	UJ	14
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-126	0.025	ng/g	Bq	U	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-11	0.027	ng/g	JB	U	6
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	E1668A	PCB-19	0.16	ng/g	q	U	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	CWA1613B	Total PeCDF	0.038	ug/kg	q	J	25

Qualified Data Summary Table

Pacific Groundwater Group - Portland Harbor Head of Swan Island Sediment Sampling

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	CWA1613B	Total PeCDD	0.02	ug/kg	q	J	25
580-81308-2	D-8.90-SC-62to80-102318	580-81308-31	CWA1613B	Total TCDD	0.007	ug/kg	q	J	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	D2216	Total Solids	57.4	%		J	1
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	SW8082A	PCB-1260	81	ug/kg		J	13L
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-54		ng/g	U	UJ	13L
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-35	0.021	ng/g	q	U	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-208	0.18	ng/g	G	J	14
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-207		ng/g	UG	UJ	14
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-206	0.93	ng/g	GB	J	14
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-24	0.032	ng/g	q	U	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	Total Nonachlorobiphenyls	1.1	ng/g	GB	J	14
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	Total Hexachlorobiphenyls	80	ng/g	qB	J	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	Total Trichlorobiphenyls	19	ng/g	qB	J	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	Total Pentachlorobiphenyls	60	ng/g	qB	J	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-98	0.31	ng/g	qC	U	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-96	0.067	ng/g	q	U	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	Polychlorinated biphenyls, Total	270	ng/g	qB	J	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-137	0.26	ng/g	qB	U	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-126	0.11	ng/g	qB	U	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-11	0.022	ng/g	JB	U	6
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-102	0.31	ng/g	qC98	U	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	E1668A	PCB-154	0.43	ng/g	qB	U	25

Qualified Data Summary Table

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	CWA1613B	Total PeCDF	0.033	ug/kg	q	J	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	CWA1613B	Total PeCDD	0.018	ug/kg	q	J	25
580-81308-2	E-9.02-SC-100to115-102318	580-81308-32	CWA1613B	Total TCDD	0.008	ug/kg	q	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	D2216	Total Solids	55.4	%		J	1
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	SW8082A	PCB-1260	96	ug/kg		J	13L
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	CWA1613B	Total PeCDD	0.023	ug/kg	Bq	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	CWA1613B	Total PeCDF	0.053	ug/kg	q	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	CWA1613B	Total TCDD	0.012	ug/kg	Bq	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-54		ng/g	U	UJ	13L
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-71	3.4	ng/g	BqC4	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-40	3.4	ng/g	CBq	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-41	3.4	ng/g	BqC4	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-5	0.017	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	Total Trichlorobiphenyls	27	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-11	0.019	ng/g	JBq	U	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	Total Tetrachlorobiphenyls	57	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	Total Hexachlorobiphenyls	92	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	Total Pentachlorobiphenyls	74	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	Total Octachlorobiphenyls	16	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	Total Dichlorobiphenyls	2.6	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	Polychlorinated biphenyls, Total	330	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-148	0.1	ng/g	q	U	25

Qualified Data Summary Table

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-167	0.38	ng/g	Bq	U	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-122	0.11	ng/g	q	U	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-123	0.07	ng/g	Bq	U	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-114	0.11	ng/g	q	U	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-197	0.14	ng/g	q	U	25
580-81308-2	E-9.02-SC-80to100-102318	580-81308-33	E1668A	PCB-24	0.046	ng/g	q	U	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	D2216	Total Solids	57.6	%		J	1
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	SW8082A	PCB-1260	71	ug/kg		J	13L
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	CWA1613B	Total PeCDD	0.019	ug/kg	Bq	J	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	CWA1613B	Total TCDD	0.009	ug/kg	Bq	J	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	CWA1613B	Total PeCDF	0.033	ug/kg	q	J	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-54	0.007	ng/g	Jq	UJ	13L,25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-58	0.057	ng/g	q	UJ	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-24	0.024	ng/g	q	U	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-9	0.038	ng/g	q	U	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	Total Trichlorobiphenyls	13	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	Total Tetrachlorobiphenyls	34	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	Total Pentachlorobiphenyls	54	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	Polychlorinated biphenyls, Total	230	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	Total Hexachlorobiphenyls	71	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	Total Heptachlorobiphenyls	47	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	Total Dichlorobiphenyls	1.3	ng/g	Bq	J	25

Qualified Data Summary Table

Pacific Groundwater Group - Portland Harbor Head of Swan Island Sediment Sampling

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-7	0.028	ng/g	q	U	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-13	0.055	ng/g	C12B	U	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-150	0.054	ng/g	q	U	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-11	0.022	ng/g	JB	U	6
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-10	0.014	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-12	0.055	ng/g	CBq	U	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-123	0.065	ng/g	Bq	U	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-126	0.016	ng/g	JBq	U	25
580-81308-2	E-9.02-SC-115to130-102318	580-81308-34	E1668A	PCB-182	0.079	ng/g	Bq	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	D2216	Total Solids	49.6	%		J	1
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	SW8082A	PCB-1260	51	ug/kg		J	13L
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	CWA1613B	Total PeCDD	0.029	ug/kg	Bq	J	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	CWA1613B	Total TCDD	0.014	ug/kg	Bq	J	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	CWA1613B	Total PeCDF	0.06	ug/kg	q	J	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	CWA1613B	2,3,4,7,8-PeCDF	0.002	ug/kg	Jq	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-5	0.011	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-43	0.12	ng/g	Cq	UJ	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-54		ng/g	U	UJ	13L
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-29	0.35	ng/g	C26B	J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-28	2.8	ng/g	BC20	J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-31	2.1	ng/g	B	J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-30	1.8	ng/g	C18B	J	13H

Qualified Data Summary Table

Pacific Groundwater Group - Portland Harbor Head of Swan Island Sediment Sampling

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-24	0.014	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-22	0.68	ng/g		J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-27	0.1	ng/g	q	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-26	0.35	ng/g	CB	J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-25	0.21	ng/g		J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-32	0.42	ng/g	SB	J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-39	0.033	ng/g		J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-35	0.04	ng/g		J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-34	0.038	ng/g	q	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-33	1.2	ng/g	C21	J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-9	0.028	ng/g	q	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-89	0.078	ng/g	q	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	Total Trichlorobiphenyls	12	ng/g	SBq	J	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	Total Tetrachlorobiphenyls	40	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	Total Pentachlorobiphenyls	63	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	Polychlorinated biphenyls, Total	240	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	Total Heptachlorobiphenyls	40	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	Total Dichlorobiphenyls	1.2	ng/g	Bq	J	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-7	0.028	ng/g	q	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-73	0.12	ng/g	C43q	UJ	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-68	0.086	ng/g	q	UJ	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-13	0.058	ng/g	C12B	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-11	0.055	ng/g	B	U	6
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-10	0.009	ng/g	Jq	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-12	0.058	ng/g	CBq	U	25
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-19	0.14	ng/g		J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-21	1.2	ng/g	C	J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-20	2.8	ng/g	CB	J	13H

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-17	0.99	ng/g	B	J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-16	0.6	ng/g	B	J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-18	1.8	ng/g	CB	J	13H
580-81308-2	E-9.02-SC-40to60-102318	580-81308-35	E1668A	PCB-182	0.078	ng/g	Bq	U	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	D2216	Total Solids	57.7	%		J	1
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	SW8082A	PCB-1260	61	ug/kg		J	13L
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	CWA1613B	1,2,3,7,8-PeCDD	0.002	ug/kg	JBq	U	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	CWA1613B	Total PeCDD	0.016	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	CWA1613B	Total TCDD	0.009	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	PCB-54L	0.16	ng/g	qS*	U	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	PCB-54	0.009	ng/g	JqS	UJ	13L,25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	PCB-9	0.039	ng/g	q	U	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	Total Octachlorobiphenyls	11	ng/g	qB	J	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	Total Tetrachlorobiphenyls	38	ng/g	qB	J	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	Polychlorinated biphenyls, Total	240	ng/g	qB	J	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	Total Hexachlorobiphenyls	72	ng/g	qB	J	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	Total Dichlorobiphenyls	1.6	ng/g	qB	J	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	PCB-7	0.033	ng/g	q	U	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	PCB-79	0.061	ng/g	q	UJ	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	PCB-154	0.49	ng/g	qB	U	25
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	PCB-11	0.029	ng/g	JB	U	6
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	PCB-10	0.009	ng/g	Jq	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-9.09-SC-100to117-102318	580-81308-36	E1668A	PCB-197	0.096	ng/g	q	U	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	D2216	Total Solids	53.3	%		J	1
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	SW8082A	PCB-1260	110	ug/kg		J	13L
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	CWA1613B	Total PeCDD	0.023	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	CWA1613B	Total TCDD	0.011	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	CWA1613B	Total PeCDF	0.062	ug/kg	q	J	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-3	0.061	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-24	0.047	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	Total Monochlorobiphenyls	0.15	ng/g	qB	J	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	Total Trichlorobiphenyls	20	ng/g	qB	J	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	Total Tetrachlorobiphenyls	77	ng/g	qB	J	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	Total Pentachlorobiphenyls	120	ng/g	qB	J	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	Polychlorinated biphenyls, Total	440	ng/g	qB	J	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	Total Hexachlorobiphenyls	130	ng/g	qB	J	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-82	1.2	ng/g	qB	U	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-79	0.1	ng/g	q	U	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-152	0.045	ng/g	JqB	U	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-155	0.022	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-145	0.021	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-11	0.06	ng/g	JB	U	6
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-120	0.19	ng/g	q	U	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-126	0.029	ng/g	JqB	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-2	0.02	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-167	0.6	ng/g	qB	U	25
580-81308-2	D-9.09-SC-60to80-102318	580-81308-38	E1668A	PCB-16	0.9	ng/g	qB	U	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	D2216	Total Solids	54.4	%		J	1
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	SW8082A	PCB-1260	55	ug/kg		J	13L
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	CWA1613B	Total PeCDD	0.011	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	CWA1613B	Total TCDD	0.007	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	PCB-5	0.015	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	PCB-43	0.096	ng/g	qC	UJ	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	PCB-54L	0.18	ng/g	qS*	U	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	PCB-54	0.008	ng/g	JqS	UJ	13L,25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	Total Tetrachlorobiphenyls	34	ng/g	qSB	J	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	Polychlorinated biphenyls, Total	230	ng/g	qB	J	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	Total Hexachlorobiphenyls	67	ng/g	qB	J	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	Total Dichlorobiphenyls	1.4	ng/g	qB	J	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	PCB-73	0.096	ng/g	qC43	UJ	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	PCB-79	0.06	ng/g	q	UJ	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	PCB-13	0.054	ng/g	qC12	U	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	PCB-154	0.53	ng/g	qB	U	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	PCB-11	0.037	ng/g	JB	U	6
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	PCB-10	0.013	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-80to100-102318	580-81308-39	E1668A	PCB-12	0.054	ng/g	qCB	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	D2216	Total Solids	50.1	%		J	1
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	SW8082A	PCB-1260	16	ug/kg	J	J	13L
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	CWA1613B	Total PeCDD	0.024	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	CWA1613B	Total TCDD	0.012	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	CWA1613B	Total PeCDF	0.073	ug/kg	q	J	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	CWA1613B	2,3,7,8-TCDD	0.002	ug/kg	q	J	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-5	0.013	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-54L	0.18	ng/g	qS*	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-54		ng/g	U	UJ	13L
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-58	0.049	ng/g	q	UJ	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-24	0.016	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-9	0.04	ng/g	q	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	Total Trichlorobiphenyls	15	ng/g	qSB	J	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	Total Tetrachlorobiphenyls	35	ng/g	qB	J	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	Total Pentachlorobiphenyls	47	ng/g	qB	J	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	Polychlorinated biphenyls, Total	210	ng/g	qB	J	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-98	0.22	ng/g	qC	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	Total Hexachlorobiphenyls	61	ng/g	qB	J	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	Total Heptachlorobiphenyls	38	ng/g	qB	J	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	Total Dichlorobiphenyls	1.5	ng/g	qB	J	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-7	0.033	ng/g	q	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-132	3.7	ng/g	GB	J	14

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-133	0.41	ng/g	G	J	14
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-130	0.81	ng/g	G	J	14
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-131		ng/g	UG	UJ	14
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-142		ng/g	UG	UJ	14
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-150	0.077	ng/g	q	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-11	0.043	ng/g	B	U	6
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-10	0.008	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-102	0.22	ng/g	qC98	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-122	0.068	ng/g	q	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-19L	1.2	ng/g	q	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-191	0.11	ng/g	qB	U	25
580-81308-2	D-9.09-SC-40to60-102318	580-81308-40	E1668A	PCB-19	0.16	ng/g	q	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	D2216	Total Solids	45.8	%		J	1
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	SW8082A	PCB-1260	12	ug/kg	J	J	13L
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-39	0.028	ng/g	q	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-54	0.011	ng/g	JqS	UJ	13L,25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-24	0.009	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-9	0.028	ng/g	q	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-85	0.76	ng/g	qC	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	Total Hexachlorobiphenyls	41	ng/g	qB	J	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	Total Octachlorobiphenyls	5.9	ng/g	q	J	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	Total Trichlorobiphenyls	9	ng/g	qB	J	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	Total Tetrachlorobiphenyls	28	ng/g	qB	J	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	Total Pentachlorobiphenyls	42	ng/g	qB	J	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	Total Dichlorobiphenyls	1.2	ng/g	q	J	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	Polychlorinated biphenyls, Total	150	ng/g	qB	J	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-7	0.022	ng/g	q	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-126	0.013	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-13	0.046	ng/g	qC12	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-148	0.05	ng/g	q	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-12	0.046	ng/g	qC	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-122	0.061	ng/g	q	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-123	0.045	ng/g	q	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-116	0.76	ng/g	qC85	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-117	0.76	ng/g	qC85	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	E1668A	PCB-197	0.048	ng/g	q	U	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	CWA1613B	Total PeCDF	0.025	ug/kg	q	J	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	CWA1613B	Total PeCDD	0.021	ug/kg	qB	J	25
580-81308-2	D-9.09-SC-10to20-102318	580-81308-41	CWA1613B	Total TCDD	0.01	ug/kg	q	J	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	D2216	Total Solids	48.5	%		J	1
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	SW8082A	PCB-1260	18	ug/kg	JF1F2	J	8,9,13L
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	SW8082A	PCB-1016		ug/kg	UF1F	UJ	8,13L
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	CWA1613B	Total PeCDD	0.024	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	CWA1613B	Total TCDD	0.012	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	CWA1613B	Total PeCDF	0.037	ug/kg	q	J	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-5	0.005	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-54	0.032	ng/g	S	J	13L
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-24	0.011	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-9	0.021	ng/g	q	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	Total Octachlorobiphenyls	7	ng/g	qB	J	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	Total Trichlorobiphenyls	7	ng/g	qB	J	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	Total Pentachlorobiphenyls	44	ng/g	qB	J	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	Polychlorinated biphenyls, Total	160	ng/g	qB	J	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	Total Hexachlorobiphenyls	50	ng/g	qB	J	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	Total Dichlorobiphenyls	1.1	ng/g	qB	J	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-85	0.77	ng/g	qCB	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-145	0.009	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-10	0.009	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-122	0.054	ng/g	q	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-123	0.073	ng/g	qB	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-114	0.07	ng/g	q	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-116	0.77	ng/g	qC85	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-117	0.77	ng/g	qC85	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-197	0.056	ng/g	q	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-19	0.088	ng/g	q	U	25
580-81308-2	D-9.09-SC-20to40-102318	580-81308-42	E1668A	PCB-202	0.45	ng/g	qB	U	25
580-81308-2	D-9.09-SC-20to40-	580-81308-42	SW8082A	PCB-1260	274	ug/kg	F1	J	8,9
580-81308-2	511-20to40-102318	580-81308-43	D2216	Total Solids	48.9	%		J	1
580-81308-2	511-20to40-102318	580-81308-43	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	511-20to40-102318	580-81308-43	SW8082A	PCB-1260	17	ug/kg	J	J	13L
580-81308-2	511-20to40-102318	580-81308-43	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	511-20to40-102318	580-81308-43	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	511-20to40-102318	580-81308-43	SW8082A	PCB-1221		ug/kg	U	UJ	13L

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	511-20to40-102318	580-81308-43	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	511-20to40-102318	580-81308-43	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	511-20to40-102318	580-81308-43	CWA1613B	1,2,3,7,8-PeCDD	0.002	ug/kg	JBq	U	25
580-81308-2	511-20to40-102318	580-81308-43	CWA1613B	Total PeCDD	0.019	ug/kg	Bq	J	25
580-81308-2	511-20to40-102318	580-81308-43	CWA1613B	Total TCDD	0.012	ug/kg	Bq	J	25
580-81308-2	511-20to40-102318	580-81308-43	CWA1613B	Total PeCDF	0.039	ug/kg	q	J	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-5	0.006	ng/g	Jq	U	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-54	0.019	ng/g	JqS	UJ	13L,25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-24	0.01	ng/g	Jq	U	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-93	0.17	ng/g	qCB	U	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	Total Monochlorobiphenyls	0.11	ng/g	qB	J	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	Total Trichlorobiphenyls	7.2	ng/g	qB	J	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	Total Tetrachlorobiphenyls	24	ng/g	qSB	J	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	Total Pentachlorobiphenyls	42	ng/g	qB	J	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	Polychlorinated biphenyls, Total	160	ng/g	qB	J	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	Total Hexachlorobiphenyls	48	ng/g	qB	J	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	Total Dichlorobiphenyls	1.1	ng/g	qB	J	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-7	0.02	ng/g	q	U	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-68	0.068	ng/g	q	UJ	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-79	0.061	ng/g	q	UJ	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-152	0.007	ng/g	JqB	U	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-100	0.17	ng/g	qC93	U	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-10	0.007	ng/g	Jq	U	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-122	0.05	ng/g	q	U	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-123	0.056	ng/g	qB	U	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-126	0.02	ng/g	qB	U	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-19	0.085	ng/g	q	U	25
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-2	0.02	ng/g	q	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	511-20to40-102318	580-81308-43	E1668A	PCB-167	0.22	ng/g	qB	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	D2216	Total Solids	40.9	%		J	1
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	CWA1613B	Total PeCDD	0.013	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	CWA1613B	Total TCDD	0.01	ug/kg	Bq	J	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	CWA1613B	Total PeCDF	0.027	ug/kg	q	J	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	CWA1613B	2,3,7,8-TCDD	7E-04	ug/kg	Jq	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-43	0.06	ng/g	qC	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-54	0.018	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-24	0.01	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-27	0.064	ng/g	q	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-9	0.021	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	Total Octachlorobiphenyls	6.2	ng/g	q	J	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	Total Trichlorobiphenyls	6.8	ng/g	qB	J	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	Total Tetrachlorobiphenyls	21	ng/g	qB	J	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	Total Pentachlorobiphenyls	41	ng/g	qB	J	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	Polychlorinated biphenyls, Total	140	ng/g	qB	J	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	Total Hexachlorobiphenyls	43	ng/g	qB	J	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	Total Dichlorobiphenyls	0.96	ng/g	q	J	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-7	0.018	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-73	0.06	ng/g	qC43	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-13	0.041	ng/g	JqC12	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-152	0.011	ng/g	Jq	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-12	0.041	ng/g	JqC	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-120	0.052	ng/g	q	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-114	0.061	ng/g	q	U	25
580-81308-2	D-9.09-SC-00to10-102318	580-81308-44	E1668A	PCB-197	0.052	ng/g	q	U	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	D2216	Total Solids	49.3	%		J	1
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	CWA1613B	Total PeCDD	0.022	ug/kg	Bq	J	25

Qualified Data Summary Table

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	CWA1613B	Total TCDD	0.011	ug/kg	Bq	J	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	CWA1613B	Total PeCDF	0.042	ug/kg	q	J	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	PCB-54	0.005	ng/g	JqS	UJ	13L,25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	PCB-9	0.035	ng/g	q	U	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	Total Tetrachlorobiphenyls	49	ng/g	qB	J	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	Total Pentachlorobiphenyls	93	ng/g	qB	J	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	Polychlorinated biphenyls, Total	320	ng/g	qB	J	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	Total Hexachlorobiphenyls	95	ng/g	qB	J	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	Total Dichlorobiphenyls	1.3	ng/g	q	J	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	PCB-7	0.028	ng/g	q	U	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	PCB-150	0.047	ng/g	q	U	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	PCB-11	0.052	ng/g		U	6
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	PCB-10	0.013	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	PCB-123	0.14	ng/g	q	U	25
580-81308-2	D-8.90-SC-40to62-102318	580-81308-46	E1668A	PCB-126	0.045	ng/g	q	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	D2216	Total Solids	40.9	%		J	1
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	CWA1613B	Total PeCDD	0.013	ug/kg	qB	J	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	CWA1613B	Total TCDD	0.006	ug/kg	q	J	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	CWA1613B	Total PeCDF	0.021	ug/kg	q	J	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	CWA1613B	2,3,4,7,8-PeCDF	0.002	ug/kg	Jq	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-79	0.074	ng/g	q	UJ	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-7	0.029	ng/g	q	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-9	0.032	ng/g	q	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-5	0.011	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-54L	0.31	ng/g	*q	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-54	0.018	ng/g	Jq	UJ	13L,25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-58	0.053	ng/g	q	UJ	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-57	0.01	ng/g	Jq	UJ	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-10	0.013	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	Total Hexachlorobiphenyls	65	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	Total Heptachlorobiphenyls	38	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	Total Tetrachlorobiphenyls	29	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	Total Pentachlorobiphenyls	62	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	Total Dichlorobiphenyls	1.4	ng/g	q	J	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-94	0.056	ng/g	q	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	Polychlorinated biphenyls, Total	220	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	Total Trichlorobiphenyls	8.8	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-123	0.075	ng/g	q	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-169	0.046	ng/g	q	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-182	0.061	ng/g	q	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-152	0.011	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-24	0.017	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-39	0.025	ng/g	q	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-34	0.018	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-00to10-102318	580-81308-47	E1668A	PCB-188	0.015	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	D2216	Total Solids	50.8	%		J	1
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	SW8082A	PCB-1260	44	ug/kg		J	13L
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	CWA1613B	Total PeCDD	0.019	ug/kg	Bq	J	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	CWA1613B	Total TCDD	0.01	ug/kg	Bq	J	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	CWA1613B	Total PeCDF	0.047	ug/kg	q	J	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	CWA1613B	2,3,7,8-TCDD	0.002	ug/kg	q	J	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-54	0.015	ng/g	Jq	UJ	13L,25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-57	0.013	ng/g	Jq	UJ	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-24	0.027	ng/g	q	U	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-36	0.005	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	Total Trichlorobiphenyls	15	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	Total Tetrachlorobiphenyls	43	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	Total Pentachlorobiphenyls	85	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	Polychlorinated biphenyls, Total	350	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	Total Hexachlorobiphenyls	120	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	Total Dichlorobiphenyls	1.8	ng/g	q	J	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-79	0.075	ng/g	q	UJ	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-137	0.58	ng/g	G	J	14
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-141	3.5	ng/g	G	J	14
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-132	7.7	ng/g	G	J	14
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-133	0.73	ng/g	G	J	14
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-130	1.7	ng/g	G	J	14
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-131	0.16	ng/g	qG	U	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-142		ng/g	UG	UJ	14
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-145	0.032	ng/g	q	U	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-146	6.9	ng/g	G	J	14
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-108	0.22	ng/g	Cq	U	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-11	0.036	ng/g	J	U	6
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-10	0.012	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-122	0.12	ng/g	q	U	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-126	0.03	ng/g	q	U	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-124	0.22	ng/g	qC10	U	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-165		ng/g	UG	UJ	14

Qualified Data Summary Table

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-169	0.1	ng/g	q	U	25
580-81308-2	D-8.90-SC-20to40-102318	580-81308-48	E1668A	PCB-162	0.055	ng/g	q	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	D2216	Total Solids	49.7	%		J	1
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	CWA1613B	Total PeCDD	0.017	ug/kg	Bq	J	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	CWA1613B	Total TCDD	0.01	ug/kg	Bq	J	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	CWA1613B	Total PeCDF	0.06	ug/kg	q	J	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	CWA1613B	2,3,7,8-TCDD	0.001	ug/kg	q	J	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-5	0.005	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-52	36	ng/g	BG	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-51	6.5	ng/g	C45G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-45	6.5	ng/g	CG	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-43	0.51	ng/g	Cq	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-48	0.9	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-46	0.91	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-60	0.21	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-63	0.2	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-55		ng/g	UG	UJ	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-58	0.3	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-57		ng/g	UG	UJ	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-56	1.6	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-42	2.3	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-39	0.045	ng/g	q	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-38	0.014	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-35	0.033	ng/g	q	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-9	0.026	ng/g	q	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	Total Trichlorobiphenyls	14	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	Total Tetrachlorobiphenyls	130	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	Total Pentachlorobiphenyls	190	ng/g	Bq	J	25

Qualified Data Summary Table

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	Polychlorinated biphenyls, Total	620	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	Total Hexachlorobiphenyls	150	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	Total Heptachlorobiphenyls	79	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	Total Dichlorobiphenyls	1.2	ng/g	q	J	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-7	0.027	ng/g	q	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-73	0.51	ng/g	C43q	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-72	0.36	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-66	5.6	ng/g	BG	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-64	1.9	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-68	0.25	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-67	0.081	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-81		ng/g	UG	UJ	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-80		ng/g	UG	UJ	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-77	0.41	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-79	0.17	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-78		ng/g	UG	UJ	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-137	0.57	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-134	1.7	ng/g	CG	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-140	0.46	ng/g	C139	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-141	3.1	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-139	0.46	ng/g	CG	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-128	2.6	ng/g	CG	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-132	6.8	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-133	5.6	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-130	1.8	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-131	0.086	ng/g	qG	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-142		ng/g	UG	UJ	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-157	1.6	ng/g	C156	J	14

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-156	1.6	ng/g	CG	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-146	9.2	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-143	1.7	ng/g	C134	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-147	26	ng/g	CBG	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-149	26	ng/g	BC14	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-11	0.047	ng/g		U	6
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-10	0.009	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-123	0.099	ng/g	q	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-126	0.24	ng/g	q	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-191	0.24	ng/g	q	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-19	0.16	ng/g	q	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-166	2.6	ng/g	C128	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-167	0.53	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-164	1.4	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-165	1.5	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-169	0.081	ng/g	qG	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-159	0.12	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-158	1.5	ng/g	G	J	14
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-162	0.059	ng/g	qG	U	25
580-81308-2	D-8.90-SC-10to20-102318	580-81308-49	E1668A	PCB-161		ng/g	UG	UJ	14
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	D2216	Total Solids	54.5	%		J	1
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	CWA1613B	Total PeCDD	0.023	ug/kg	Bq	J	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	CWA1613B	Total TCDD	0.015	ug/kg	Bq	J	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-43	0.096	ng/g	qC	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-57	0.013	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-29	0.23	ng/g	C26	J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-28	2.1	ng/g	C20B	J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-31	1.4	ng/g		J	13H

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-30	1.2	ng/g	C18	J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-24	0.015	ng/g	J	J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-22	0.38	ng/g		J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-27	0.087	ng/g		J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-26	0.23	ng/g	C	J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-25	0.12	ng/g		J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-32	0.26	ng/g	S	J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-39	0.022	ng/g	q	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-35	0.019	ng/g		J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-34	0.027	ng/g		J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-33	0.67	ng/g	C21B	J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-9	0.016	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	Total Trichlorobiphenyls	8.3	ng/g	qSB	J	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	Total Tetrachlorobiphenyls	34	ng/g	qB	J	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	Total Pentachlorobiphenyls	76	ng/g	qB	J	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	Polychlorinated biphenyls, Total	270	ng/g	qB	J	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	Total Hexachlorobiphenyls	91	ng/g	qB	J	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	Total Heptachlorobiphenyls	46	ng/g	qB	J	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	Total Dichlorobiphenyls	0.62	ng/g	qS	J	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-73	0.096	ng/g	qC43	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-67	0.071	ng/g	q	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-13	0.031	ng/g	JqC12	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-132	6.4	ng/g	G	J	14
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-133	0.39	ng/g	G	J	14
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-130	1.3	ng/g	G	J	14
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-131	0.17	ng/g	Gq	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-142		ng/g	UG	UJ	14
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-152	0.013	ng/g	Jq	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-145	0.018	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-108	0.28	ng/g	qC	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-11	0.009	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-112	0.053	ng/g	q	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-12	0.031	ng/g	JqC	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-126	0.02	ng/g	q	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-124	0.28	ng/g	qC10	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-19	0.12	ng/g		J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-21	0.67	ng/g	CB	J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-20	2.1	ng/g	CB	J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-17	0.71	ng/g		J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-16	0.43	ng/g	q	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-162	0.036	ng/g	q	U	25
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-18	1.2	ng/g	C	J	13H
580-81308-2	D-8.90-SC-103to120-102318	580-81308-50	E1668A	PCB-181	0.047	ng/g	q	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	D2216	Total Solids	53.1	%		J	1
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	CWA1613B	Total PeCDD	0.021	ug/kg	Bq	J	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	CWA1613B	Total TCDD	0.01	ug/kg	Bq	J	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-58	0.058	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-24	0.051	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-93	0.26	ng/g	qC	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-9	0.075	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	Total Octachlorobiphenyls	22	ng/g	q	J	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	Total Monochlorobiphenyls	0.19	ng/g	q	J	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	Total Trichlorobiphenyls	21	ng/g	qB	J	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	Total Tetrachlorobiphenyls	56	ng/g	qB	J	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	Total Pentachlorobiphenyls	120	ng/g	qB	J	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	Polychlorinated biphenyls, Total	460	ng/g	qB	J	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	Total Hexachlorobiphenyls	150	ng/g	qB	J	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	Total Dichlorobiphenyls	2.5	ng/g	q	J	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-7	0.065	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-77	0.46	ng/g	q	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-13	0.085	ng/g	JqC12	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-154	0.94	ng/g	q	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-150	0.077	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-11	0.03	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-100	0.26	ng/g	qC93	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-10	0.028	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-12	0.085	ng/g	JqC	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-114	0.22	ng/g	q	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-197	0.19	ng/g	q	U	25
580-81308-2	D-8.90-SC-80to103-102318	580-81308-51	E1668A	PCB-2	0.022	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	D2216	Total Solids	54	%		J	1
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	CWA1613B	Total PeCDD	0.042	ug/kg	Bq	J	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	CWA1613B	Total TCDD	0.015	ug/kg	Bq	J	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-29	0.35	ng/g	C26	J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-28	2.6	ng/g	BC20	J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-31	2.1	ng/g		J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-30	1.9	ng/g	C18	J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-24	0.025	ng/g		J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-22	0.76	ng/g		J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-27	0.11	ng/g		J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-26	0.35	ng/g	C	J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-25	0.17	ng/g		J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-32	0.41	ng/g		J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-39	0.017	ng/g	J	J	13H

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-35	0.029	ng/g		J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-33	1.3	ng/g	BC21	J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-93	0.062	ng/g	Cq	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-9	0.033	ng/g	q	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	Total Tetrachlorobiphenyls	24	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	Total Pentachlorobiphenyls	40	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	Polychlorinated biphenyls, Total	200	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	Total Hexachlorobiphenyls	66	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	Total Heptachlorobiphenyls	41	ng/g	Bq	J	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	Total Dichlorobiphenyls	1.3	ng/g	Sq	J	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-7	0.027	ng/g	q	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-68	0.031	ng/g	q	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-82	0.48	ng/g	q	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-13	0.037	ng/g	JC12q	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-132	4.3	ng/g	G	J	14
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-130	1.1	ng/g	G	J	14
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-131		ng/g	UG	UJ	14
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-100	0.062	ng/g	C93q	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-10	0.01	ng/g	Jq	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-103	0.16	ng/g	q	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-122	0.052	ng/g	q	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-12	0.037	ng/g	JCq	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-120	0.076	ng/g	q	U	25
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-19	0.17	ng/g		J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-21	1.3	ng/g	CB	J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-20	2.6	ng/g	CB	J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-17	0.9	ng/g		J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-169	0.056	ng/g	q	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-16	0.69	ng/g		J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-18	1.9	ng/g	C	J	13H
580-81308-2	D-8.90-SC-120to140-102318	580-81308-52	E1668A	PCB-182	0.1	ng/g	q	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	D2216	Total Solids	33.6	%		J	1
580-81308-2	D-8.83-0to25-102418	580-81308-55	CWA1613B	Total PeCDD	0.011	ug/kg	Bq	J	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	CWA1613B	Total TCDD	0.012	ug/kg	Bq	J	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	CWA1613B	Total PeCDF	0.041	ug/kg	q	J	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	CWA1613B	2,3,7,8-TCDD	8E-04	ug/kg	Jq	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-5	0.005	ng/g	Jq	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-60	0.083	ng/g	q	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-55	0.01	ng/g	Jq	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-3	0.048	ng/g	q	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-24	0.006	ng/g	Jq	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-34	0.005	ng/g	Jq	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-9	0.018	ng/g	Jq	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	Total Monochlorobiphenyls	0.19	ng/g	q	J	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	Total Trichlorobiphenyls	3.3	ng/g	qB	J	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	Total Tetrachlorobiphenyls	12	ng/g	qB	J	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	Total Pentachlorobiphenyls	29	ng/g	qB	J	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	Polychlorinated biphenyls, Total	140	ng/g	qB	J	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	Total Hexachlorobiphenyls	50	ng/g	qB	J	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	Total Heptachlorobiphenyls	32	ng/g	qB	J	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	Total Dichlorobiphenyls	1.2	ng/g	q	J	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-7	0.018	ng/g	Jq	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-67	0.023	ng/g	Jq	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-140	0.15	ng/g	qC13	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-139	0.15	ng/g	qC	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-13	0.039	ng/g	JqC12	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-152	0.028	ng/g	Jq	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-10	0.01	ng/g	Jq	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-122	0.037	ng/g	q	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-12	0.039	ng/g	JqC	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-126	0.011	ng/g	Jq	U	25
580-81308-2	D-8.83-0to25-102418	580-81308-55	E1668A	PCB-191	0.14	ng/g	q	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	D2216	Total Solids	34.2	%		J	1
580-81308-2	D-8.90-0to27-102418	580-81308-56	SW8082A	PCB-1254		ug/kg	U	UJ	13L
580-81308-2	D-8.90-0to27-102418	580-81308-56	SW8082A	PCB-1260	31	ug/kg		J	13L
580-81308-2	D-8.90-0to27-102418	580-81308-56	SW8082A	PCB-1248		ug/kg	U	UJ	13L
580-81308-2	D-8.90-0to27-102418	580-81308-56	SW8082A	PCB-1016		ug/kg	U	UJ	13L
580-81308-2	D-8.90-0to27-102418	580-81308-56	SW8082A	PCB-1221		ug/kg	U	UJ	13L
580-81308-2	D-8.90-0to27-102418	580-81308-56	SW8082A	PCB-1242		ug/kg	U	UJ	13L
580-81308-2	D-8.90-0to27-102418	580-81308-56	SW8082A	PCB-1232		ug/kg	U	UJ	13L
580-81308-2	D-8.90-0to27-102418	580-81308-56	CWA1613B	1,2,3,7,8-PeCDD	0.002	ug/kg	JBq	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	CWA1613B	Total PeCDD	0.012	ug/kg	Bq	J	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	CWA1613B	Total TCDD	0.011	ug/kg	Bq	J	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	CWA1613B	Total PeCDF	0.031	ug/kg	q	J	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-6	0.038	ng/g	q	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-59	0.076	ng/g	JCq	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-63	0.03	ng/g	q	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-62	0.076	ng/g	JC59q	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-55	0.02	ng/g	Jq	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-58	0.019	ng/g	Jq	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-94	0.043	ng/g	q	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-9	0.007	ng/g	Jq	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	Total Nonachlorobiphenyls	0.6	ng/g	G	J	14
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	Total Monochlorobiphenyls	0.099	ng/g	q	J	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	Total Trichlorobiphenyls	1.9	ng/g	Bq	J	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	Total Tetrachlorobiphenyls	8.8	ng/g	Bq	J	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	Total Pentachlorobiphenyls	23	ng/g	Bq	J	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	Polychlorinated biphenyls, Total	98	ng/g	Bq	J	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	Total Hexachlorobiphenyls	36	ng/g	Bq	J	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	Total Heptachlorobiphenyls	21	ng/g	Bq	J	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	Total Dichlorobiphenyls	0.44	ng/g	q	J	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-7	0.008	ng/g	Jq	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-67	0.013	ng/g	Jq	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-75	0.076	ng/g	JC59q	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-82	0.27	ng/g	q	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-79	0.022	ng/g	Jq	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-152	0.011	ng/g	Jq	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-150	0.042	ng/g	q	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-107	0.27	ng/g	q	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-1	0.031	ng/g	q	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-123	0.019	ng/g	Jq	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-126	0.015	ng/g	Jq	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-189	0.073	ng/g	q	U	25
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-207		ng/g	UG	UJ	14
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-206	0.6	ng/g	G	J	14
580-81308-2	D-8.90-0to27-102418	580-81308-56	E1668A	PCB-208		ng/g	UG	UJ	14
580-81308-2	C-8.94-0to27-102418	580-81308-57	D2216	Total Solids	29.9	%		J	1
580-81308-2	C-8.94-0to27-102418	580-81308-57	CWA1613B	1,2,3,7,8-PeCDD	0.002	ug/kg	JBq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	CWA1613B	Total PeCDD	0.013	ug/kg	Bq	J	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	CWA1613B	Total TCDD	0.013	ug/kg	Bq	J	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	CWA1613B	Total PeCDF	0.032	ug/kg	q	J	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	CWA1613B	2,3,7,8-TCDD	6E-04	ug/kg	Jq	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-59	0.076	ng/g	JCq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-62	0.076	ng/g	JC59q	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-24	0.005	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-4	0.053	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-94	0.056	ng/g	q	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-9	0.008	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	Total Monochlorobiphenyls	0.11	ng/g	q	J	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	Total Trichlorobiphenyls	1.8	ng/g	Bq	J	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	Total Tetrachlorobiphenyls	8.5	ng/g	Bq	J	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	Total Pentachlorobiphenyls	21	ng/g	Bq	J	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	Polychlorinated biphenyls, Total	96	ng/g	Bq	J	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	Total Hexachlorobiphenyls	36	ng/g	Bq	J	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	Total Heptachlorobiphenyls	22	ng/g	Bq	J	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	Total Dichlorobiphenyls	0.42	ng/g	q	J	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-7	0.006	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-75	0.076	ng/g	JC59q	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-13	0.02	ng/g	JC12q	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-131	0.057	ng/g	q	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-152	0.019	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-145	0.009	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-104	0.012	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-122	0.027	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-12	0.02	ng/g	JCq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-126	0.015	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-114	0.031	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-19L	1.5	ng/g	q	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-19	0.1	ng/g	q	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-2	0.036	ng/g	q	U	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-169	0.034	ng/g	q	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-162	0.015	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-181	0.017	ng/g	Jq	U	25
580-81308-2	C-8.94-0to27-102418	580-81308-57	E1668A	PCB-182	0.017	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	D2216	Total Solids	28.6	%		J	1
580-81308-2	E-8.99-0to28-102418	580-81308-58	CWA1613B	Total PeCDD	0.014	ug/kg	qB	J	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	CWA1613B	Total TCDD	0.015	ug/kg	qB	J	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	CWA1613B	Total PeCDF	0.052	ug/kg	q	J	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	CWA1613B	2,3,4,7,8-PeCDF	0.003	ug/kg	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-55	0.018	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-54	0.042	ng/g	q	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-30	0.12	ng/g	C18q	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-24	0.002	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-27	0.026	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-4	0.066	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-93	0.17	ng/g	Cq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-94	0.045	ng/g	q	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-9	0.009	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-89	0.018	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	Total Trichlorobiphenyls	1.6	ng/g	Bq	J	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	Total Tetrachlorobiphenyls	7.8	ng/g	Bq	J	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	Total Pentachlorobiphenyls	20	ng/g	Bq	J	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	Polychlorinated biphenyls, Total	83	ng/g	Bq	J	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	Total Hexachlorobiphenyls	30	ng/g	Bq	J	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	Total Dichlorobiphenyls	0.48	ng/g	q	J	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-7	0.01	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-140	0.096	ng/g	C139	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-139	0.096	ng/g	Cq	U	25

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580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-13	0.02	ng/g	JC12q	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-152	0.01	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-100	0.17	ng/g	C93q	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-10	0.006	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-122	0.036	ng/g	q	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-12	0.02	ng/g	JCq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-120	0.024	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-123	0.029	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-126	0.012	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-114	0.041	ng/g	q	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-169	0.026	ng/g	Jq	U	25
580-81308-2	E-8.99-0to28-102418	580-81308-58	E1668A	PCB-18	0.12	ng/g	Cq	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	D2216	Total Solids	26.6	%		J	1
580-81308-2	B-9.00-0to29-102418	580-81308-60	CWA1613B	1,2,3,7,8-PeCDD	0.003	ug/kg	JqB	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	CWA1613B	Total PeCDD	0.008	ug/kg	JqB	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	CWA1613B	Total TCDD	0.01	ug/kg	q	J	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	CWA1613B	Total PeCDF	0.027	ug/kg	q	J	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	CWA1613B	2,3,4,7,8-PeCDF	0.003	ug/kg	Jq	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-48	0.059	ng/g	q	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-46	0.033	ng/g	Jq	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-6	0.013	ng/g	Jq	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-3	0.019	ng/g	Jq	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	Total Octachlorobiphenyls	3.9	ng/g	q	J	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	Total Monochlorobiphenyls	0.061	ng/g	q	J	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	Total Trichlorobiphenyls	1.2	ng/g	qB	J	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	Total Tetrachlorobiphenyls	6.8	ng/g	qB	J	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	Total Pentachlorobiphenyls	18	ng/g	qB	J	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	Polychlorinated biphenyls, Total	77	ng/g	qB	J	25

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580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	Total Hexachlorobiphenyls	28	ng/g	qB	J	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	Total Dichlorobiphenyls	0.31	ng/g	q	J	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-140	0.084	ng/g	qC13	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-139	0.084	ng/g	qC	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-154	0.17	ng/g	q	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-150	0.028	ng/g	Jq	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-108	0.064	ng/g	JqC	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-11	0.1	ng/g	q	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-1	0.017	ng/g	Jq	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-120	0.026	ng/g	Jq	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-123	0.038	ng/g	q	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-126	0.013	ng/g	Jq	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-124	0.064	ng/g	JqC10	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-114	0.03	ng/g	Jq	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-200	0.089	ng/g	q	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-2	0.025	ng/g	Jq	U	25
580-81308-2	B-9.00-0to29-102418	580-81308-60	E1668A	PCB-16	0.03	ng/g	Jq	U	25
580-81308-2	611-102318	580-81308-61	CWA1613B	2,3,7,8-TCDD	3.3	pg/L	JB	U	7
580-81308-2	611-102318	580-81308-61	CWA1613B	Total TCDD	3.3	pg/L	JB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-45	0.005	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-44	0.026	ng/L	JCB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-49	0.005	ng/L	JCq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-48	0.002	ng/L	JB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-47	0.026	ng/L	JBC44	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-41	0.003	ng/L	JBC40	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-40	0.003	ng/L	JCB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-56	0.002	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-51	0.005	ng/L	JC45B	U	25

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580-81308-2	611-102318	580-81308-61	E1668A	PCB-50	0.002	ng/L	JCq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-53	0.002	ng/L	JC50q	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-52	0.007	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-22	0.004	ng/L	JB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-26	0.003	ng/L	JCB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-25	0.001	ng/L	Jq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-28	0.01	ng/L	JBC20	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-29	0.003	ng/L	JC26B	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-32	0.003	ng/L	JB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-31	0.008	ng/L	JB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-30	0.007	ng/L	JC18B	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-60	0.002	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-91	9E-04	ng/L	JC88B	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-90	0.009	ng/L	JCB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-95	0.007	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-86	0.006	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-85	4E-04	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-88	9E-04	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-87	0.006	ng/L	JBC86	U	25
580-81308-2	611-102318	580-81308-61	E1668A	Total Octachlorobiphenyls	0.017	ng/L	JBq	J	25
580-81308-2	611-102318	580-81308-61	E1668A	Total Monochlorobiphenyls	0.005	ng/L	JBq	J	25
580-81308-2	611-102318	580-81308-61	E1668A	Total Trichlorobiphenyls	0.046	ng/L	JBq	J	25
580-81308-2	611-102318	580-81308-61	E1668A	Total Tetrachlorobiphenyls	0.071	ng/L	JBq	J	25
580-81308-2	611-102318	580-81308-61	E1668A	Total Pentachlorobiphenyls	0.047	ng/L	JBq	J	25
580-81308-2	611-102318	580-81308-61	E1668A	Total Hexachlorobiphenyls	0.06	ng/L	JBq	J	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-97	0.006	ng/L	JBC86	U	25
580-81308-2	611-102318	580-81308-61	E1668A	Total Heptachlorobiphenyls	0.067	ng/L	JBq	J	25
580-81308-2	611-102318	580-81308-61	E1668A	Total Dichlorobiphenyls	0.025	ng/L	JBq	J	25

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SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-2	611-102318	580-81308-61	E1668A	Polychlorinated biphenyls, Total	0.34	ng/L	JBq	J	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-7	0.003	ng/L	Jq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-69	0.005	ng/L	JC49q	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-71	0.003	ng/L	JBC40	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-70	0.008	ng/L	JC61B	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-61	0.008	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-66	0.003	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-65	0.026	ng/L	JBC44	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-64	0.004	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-8	0.004	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-82	0.001	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-76	0.008	ng/L	JC61B	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-74	0.008	ng/L	JC61B	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-135	0.006	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-138	0.018	ng/L	JBC12	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-136	0.002	ng/L	Jq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-125	0.006	ng/L	JBC86	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-13	0.004	ng/L	JC12q	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-128	0.002	ng/L	JCB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-129	0.018	ng/L	JCB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-151	0.006	ng/L	JC135	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-149	0.008	ng/L	JBC14	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-153	0.011	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-141	0.002	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-146	0.002	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-147	0.008	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-110	0.009	ng/L	JCB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-109	0.006	ng/L	JBC86	U	25

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580-81308-2	611-102318	580-81308-61	E1668A	PCB-105	0.003	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-101	0.009	ng/L	JBC90	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-119	0.006	ng/L	JBC86	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-12	0.004	ng/L	JCq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-113	0.009	ng/L	JBC90	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-117	4E-04	ng/L	JC85B	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-118	0.006	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-115	0.009	ng/L	JBC11	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-116	4E-04	ng/L	JC85B	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-190	0.002	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-193	0.02	ng/L	JC180	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-194	0.007	ng/L	JB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-191	8E-04	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-187	0.005	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-195	0.003	ng/L	JB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-203	0.002	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-198	0.003	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-199	0.003	ng/L	JC198	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-196	0.002	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-2	0.005	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-20	0.01	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-163	0.018	ng/L	JBC12	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-164	8E-04	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-166	0.002	ng/L	JC128	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-160	0.018	ng/L	JBC12	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-157	0.003	ng/L	JC156	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-156	0.003	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-158	0.002	ng/L	JB	U	7

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580-81308-2	611-102318	580-81308-61	E1668A	PCB-168	0.011	ng/L	JBC15	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-18	0.007	ng/L	JCB	U	7
580-81308-2	611-102318	580-81308-61	E1668A	PCB-180	0.02	ng/L	JCBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-179	0.002	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	E1668A	PCB-170	0.014	ng/L	JBq	U	25
580-81308-2	611-102318	580-81308-61	SM5310B	Total Organic Carbon	0.22	mg/L	J	U	7
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	Total Trichlorobiphenyls	7.9	ng/g	qB	J	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	Total Tetrachlorobiphenyls	32	ng/g	qB	J	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	Total Dichlorobiphenyls	1.3	ng/g	qB	J	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	Polychlorinated biphenyls, Total	260	ng/g	qB	J	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-77	0.21	ng/g	qB	J	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-7	0.019	ng/g	Jq	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-11	0.02	ng/g	JqB	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-122	0.074	ng/g	JqB	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-120	0.085	ng/g	JqB	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-197	0.1	ng/g	qB	J	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	D2216	Total Solids	54.2	%		J	1
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	CWA1613B	Total PeCDD	0.018	ug/kg	qB	J	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	SW9060	Total Organic Carbon - Duplicates	35000	mg/kg		J	1
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-35	0.015	ng/g	JqB	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-5	0.012	ng/g	Jq	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-54	0.006	ng/g	Jq	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-27	0.07	ng/g	JqB	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-26	0.18	ng/g	JqCB	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-29	0.18	ng/g	JqC26	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-25	0.067	ng/g	Jq	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	PCB-9	0.043	ng/g	Jq	U	25
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	Total Octachlorobiphenyls	12	ng/g	qB	J	25

Qualified Data Summary Table

Pacific Groundwater Group - Portland Harbor Head of Swan Island Sediment Sampling

SDG	Sample ID	Laboratory ID	Method	Analyte	Result	Units	Laboratory Qualifier	Validation Qualifier	Validation Reason
580-81308-5	D-8.90-SC-140to160-102318	580-81308-53	E1668A	Total Pentachlorobiphenyls	62	ng/g	qB	J	25