

## Data Validation Report

Project: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling

Laboratory: SGS-AXYS, Sydney, British Columbia Canada

Service Request: WG65583-PCB

Analyses/Method: Chlorinated Biphenyls by HRGC/HRMS / E1668

Validation Level: Stage 4

AECOM Project Number: 60566335.2.12

Number:

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### SUMMARY

The samples listed below were collected by AECOM in Portland Harbor in Portland, OR on August 20-25, 2018.

Sample ID	Matrix/Sample Type
PDI-RB-XF-180820	Equipment Blank
PDI-WS-T01-1808	Surface Water
PDI-WS-T02-1808	Surface Water
PDI-WS-T03-1808	Surface Water
PDI-WS-T04-1808	Surface Water
PDI-WS-T05-1808	Surface Water
PDI-WS-T06-1808	Surface Water
PDI-WS-T06-1808	Surface Water
PDI-WS-T07-1808	Surface Water

Data validation activities were conducted with reference to:

- EPA Method 1668A: Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS (USEPA, August 2003),
- EPA Method 1668B: Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS (USEPA, November 2008),
- EPA Method 1668C: Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS (USEPA, April 2010),
- USEPA Contract Laboratory Program National Functional Guidelines for High Resolution Superfund Methods Data Review (April 2016),
- Quality Assurance Project Plan, Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling, Portland Harbor Superfund Site (March 2018), and the
- laboratory quality control (QC) limits.

The National Functional Guidelines were modified to accommodate the non-CLP methodologies. In the absence of method-specific information, laboratory QC limits, project-specific requirements and/or AECOM professional judgment were used as appropriate.

## REVIEW ELEMENTS

The data were evaluated based on the following parameters (where applicable to the method):

- ✓ Data completeness (chain-of-custody (COC)/sample integrity)
- ✓ Holding times and sample preservation
- ✓ GC/MS performance checks
- ✓ Initial calibration/continuing calibration verification
- ✗ Laboratory blanks/equipment blanks
- NA Matrix spike (MS) and/or matrix spike duplicate (MSD) results
- ✓ Ongoing precision and recovery results
- NA Field duplicate results
- ✗ Labeled compounds and labeled clean-up standard recoveries
- ✗ Sample results/reporting issues

The symbol (✓) indicates that no validation qualifiers were applied based on this parameter. An NA indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (✗) indicates that a QC nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as qualified and may be used for decision making purposes. Select data points were negated, rejected, or qualified as estimated due to nonconformances of certain QC criteria (see discussion below). Qualified sample results are presented in Table 1.

## RESULTS

### **Data Completeness (COC)/Sample Integrity**

The data package was reviewed and found to meet acceptance criteria for completeness:

- The COCs were reviewed for completeness of information relevant to the samples and requested analyses, and for signatures indicating transfer of sample custody.
- The laboratory sample login sheet(s) were reviewed for issues potentially affecting sample integrity, including the condition of sample containers upon receipt at the laboratory.
- Completeness of analyses was verified by comparing the reported results to the COC requests.

### **Holding Times and Sample Preservation**

Sample preservation and preparation/analysis holding times were reviewed for conformance with method criteria. All method QC acceptance criteria were met.

### **GC/MS Performance Checks**

The data were reviewed to ensure that

- the perfluorokerosene (PFK) molecular leak was performed at the correct frequency and method acceptance criteria were met;
- the method acceptance criteria were met in the Diluted combined 209 congener standard for the chromatographic resolution on the SPB-octyl column of the congener pairs PCB-34 and PCB-23, and PCB-187 and PCB-182;
- the method acceptance criteria was met in the Diluted combined 209 congener standard for the co-elution of the congener pair PCB-156 and PCB-157 within 2 seconds of the peak maximum on the SPB-octyl column; and
- the retention time for decachlorobiphenyl (PCB 209) was greater than 55 minutes as required by the method.

All method QC acceptance criteria were met.

### **Initial Calibration/Continuing Calibration Verification**

The data were reviewed to ensure that

- the absolute and relative retention time, signal/noise (S/N), and ion abundance ratio method acceptance criteria were met for all native toxics/level of chlorination (LOC) congeners and labeled toxics/LOC/window-defining congeners (as summarized by the laboratory);
- the initial calibration percent relative standard deviation (%RSD) method acceptance criteria were met for all native toxic/LOC congeners, and labeled toxics/LOC/window-defining congeners; and that performance was technically acceptable in the absence of method criteria for additional congeners in the standards; and
- the calibration verification standard (VER) method acceptance criteria were met for all native toxic/LOC congeners, and labeled toxics/LOC/window-defining congeners, and that performance was technically acceptable in the absence of method criteria for additional congeners in the standards.

All method QC acceptance criteria were met.

### **Laboratory Blanks/Equipment Blanks**

Method and equipment rinsate blank results are evaluated as to whether there are contaminants detected above the estimated detection limit (EDL). Target compounds were detected in the method blank and equipment blank associated with the samples in this data set.

Compounds detected in the laboratory method blank and the equipment blank are summarized in Attachment A in Tables A-1 and A-2, respectively. It should be noted that significant contamination was found in the equipment blank associated with the samples in this data set. Consequently, the sample data were qualified on the basis of the equipment blank contamination as well as the laboratory method blank contamination.

The NFG guidance stipulates that a conservative approach should be taken with regards to qualification of PCB congeners due to the toxicity of these compounds and the reporting of false negative results should be avoided. Therefore, in order to avoid the reporting of false negative results, professional judgment was used to qualify the data in the manner summarized below.

The data were first qualified for laboratory method blank contamination on the following basis. As allowed in the NFG, a blank action limit (BAL) was determined as five times the method blank result.

- When the sample results were  $<$  the method blank result, the sample result was qualified as nondetect (U) at the sample result.
- When the sample result was  $\geq$  the method blank result but  $\leq$  the BAL, the sample result was qualified as estimated and potentially biased high (J+).
- When the sample result was  $>$  the BAL, the sample result was not qualified.

Qualified sample results are summarized in Table 1.

The data were subsequently qualified for equipment blank contamination on the following basis. Again, as allowed in the NFG, a blank action limit (BAL) was determined as five times the equipment blank result.

- When the sample result was  $\leq$  the BAL, the sample result was qualified as estimated and potentially biased high (J+).
- When the sample result was  $>$  the BAL, the sample result was not qualified.

Qualified sample results are summarized in Table 1.

### **MS/MSD Results**

MS/MSD analyses were not performed on a sample in this data set. No data validation actions were taken on this basis.

### **Ongoing Precision and Recovery**

The OPR %Rs were reviewed for conformance with the method QC acceptance criteria. All method QC acceptance criteria were met for all compounds with the following exceptions. The recoveries for PCB-1 and PCB-3 were not quantifiable in the OPR due to an interference which is known to originate during extraction near the mass and retention time of the mono-substituted PCBs making these results not quantifiable.

The results for PCB-1 and PCB-3 were quantifiable in all associated samples with the exception of the equipment blank PDI-RB-XF-180820 for which results were not reported for PCB-1 and PCB-3. Since the interference is not noted in the associated filter samples, qualification on this basis is not required.

### **Field Duplicate Results**

A field duplicate pair was not submitted with this data set. No data validation actions were taken on this basis.

### **Labeled Compounds and Labeled Clean-up Standard Recoveries**

The labeled compounds and labeled clean-up standard %Rs were reviewed for conformance with the QC acceptance criteria.

The recoveries for PCB-1L and PCB-3L were not quantifiable in the equipment blank PDI-RB-XF-180820 due to an interference which is known to originate during extraction near the mass and retention time of the mono-substituted PCBs making these results not quantifiable. Consequently, the results for PCB1, PCB-2 and PCB-3 were qualified as rejected (R) in the equipment blank and are not usable for project decisions.

Nonconformances are summarized in Attachment A in Table-3. Other sample results were qualified as follows:

**Actions:** (Based on NFG 2016)

Criteria		Actions	
		Detected	Nondetected
%R > Upper Acceptance Limit		J	UJ
%R >10% but < Lower Acceptance Limit		J	UJ
%R <10%		See below	
<10% and S/N >10:1		J	R
<10% and S/N <10:1		R	R
Ion abundance ratio criteria not met	Calibration compliant	J	UJ
	Calibration non-compliant	J	R
Clean-up Standard Recovery < Lower Acceptance Limit		J	UJ
See Table 6 of method for method QC acceptance criteria <sup>1</sup>			
<sup>2</sup> The PCB congener method is performed using isotope dilution technique; therefore, professional judgment was applied and bias codes were not included in data qualification.			

Qualified sample results are summarized in Table 1.

### **Sample Results/Reporting Issues**

All sample results detected at concentrations less than the lowest calibration standard but greater than the EDL are qualified by the laboratory as estimated (J). This "J" qualifier is retained during data validation.

It should be noted that the sample reported detection limit is the sample specific estimated detection limit (EDL) with the following exceptions. In cases when the EDL is less than the nominal concentration of 0.5 pg/sample, the EDL is raised to the nominal concentration and adjusted to include the appropriate preparation factors.

### **Laboratory Duplicate Analysis**

The laboratory was unable to extract the entire number of filters received for each sample due to limitations of their Dean Stark apparatus. Approximately 1/5<sup>th</sup> of each homogenized original filter

sample was spiked with labeled standards and extracted rather than the entire amount that was collected. Consequently, a laboratory duplicate analysis was performed to ensure that the results achieved were representative of the entire sample.

Professional judgement was applied to use a relative percent difference criterion of <20% for results greater than five times the quantitation limit. Nonconformances are summarized in Attachment A in Table A-4.

Samples were qualified as follows:

**Actions:** (Based on AECOM professional judgment)

Criteria	RPD	Action	
		Detect	Nondetect
Sample and duplicate are nondetect results	Not calculable (NC)	No qualification	No qualification
Sample and duplicate results <QL	Not applicable	No qualification	No qualification
Sample and duplicate results $\geq 5 \times \text{QL}$	>20%	J	Not Applicable
Sample and duplicate results are >QL and <5xQL	>40%	J	Not Applicable
If sample or duplicate result is >5xQL and the other is not detected	NC	J	UJ
If sample or duplicate result is <QL and the other is not detected	NC	No qualification	No qualification

Qualified sample results are summarized in Table 1.

#### Compound Identification

The data were reviewed to ensure that

- the retention time, relative retention time, ion abundance ratios, SIM ion co-maximization, and S/N method acceptance criteria were met for compound identification.

Samples were qualified as follows:

**Actions:** (Based on NFG 2016 and AECOM professional judgment)

Criteria <sup>1</sup>	Actions <sup>2</sup>
RRT falls outside of method limits and RT falls outside of window defining mix windows	If there is no peak, consider the analyte as nondetect (U) at the reported EDL for WHO Toxics congeners. Non-WHO Toxic congeners are considered ND at the ML.
S/N criteria not met	Consider the analyte as nondetect (U) at the reported EDL for WHO Toxics congeners
Ion co-maximization and/or ion abundance ratios are outside of QC limits for a PCB congener	Report result as an EMPC and qualify as estimated (JN). <sup>1</sup>
Ion co-maximization and/or ion abundance ratios are outside	Qualify associated positive and nondetect results as

Criteria <sup>1</sup>	Actions <sup>2</sup>
QC limits for a Labeled compound	estimated (J/UJ). <sup>1</sup>
<sup>1</sup> Based on AECOM professional judgment.	

Qualified sample results are summarized in Table 1.

It should be noted that in instances of multiple nonconformances, the bias is considered indeterminate where there is a conflicting low and high bias or when a result does not exhibit a consistent bias. These results have an overall qualification of estimated (J) with the exception noted below.

When applicable, the "JN" qualifier was retained rather than replacement with the conventional overall "J" qualifier in instances where EMPC results were qualified for multiple quality control nonconformances.

The results for PCB-1, PCB-2 and PCB-3 were not quantifiable in the equipment blank PDI-RB-XF-180820 because of an interference which is known to originate during extraction near the mass and retention time of the mono-substituted PCBs. The results for PCB-1, PCB-2 and PCB-3 in this sample were qualified as rejected (R) and are not usable for project decisions.

The laboratory noted that peaks for select congeners summarized below were on the tail or shoulder of a larger peak and there was no obvious valley between the two peaks. Consequently, these results were considered EMPCs. It should be noted that in some cases the ion ratio did meet criteria, but due to the noted interferences, these instances were also considered to be EMPCs. These results were qualified as estimated and tentatively identified (JN).

PCB-123: PDI-WS-T04-1808, PDI-T07-1808, PDI-WS-T01-1808

PCB-126: PDI-WS-T05-1808, PDI-WS-T03-1808

#### Lock Mass Interferences

The positive and nondetect results for the following compounds for the listed samples were qualified as estimated and potentially biased low (J-/UJ) as a result of ion suppression as indicated by the monitored lock mass:

PDI-RB-XF-180820: PCB-17, PCB-32

PDI-WS-T04-1808: PCB-1, PCB-17, PCB-32

PDI-WS-T02-1808: PCB-1, PCB-17, PCB-32

PDI-WS-T05-1808: PCB-1, PCB-17, PCB-32, PCB-128/166, PCB-187, PCB-197/200

PDI-WS-T07-1808: PCB-32, PCB-128/166, PCB-187, PCB-197/200

PDI-WS-T03-1808: PCB-8, PCB-17, PCB-18/30, PCB-32

PDI-WS-T01-1808: PCB-32, PCB-197/200

The positive results for the following compounds for the listed samples were qualified as estimated and potentially biased high (J+) as a result of ion enhancement as indicated by the monitored lock mass:

PDI-RB-XF-180820: PCB-86/87/97/108/119/125

PDI-WS-T04-1808: PCB-66, PCB-86/87/97/108/119/12

PDI-WS-T02-1808: PCB-66, PCB-86/87/97/108/119/125

PDI-WS-T05-1808: PCB-66, PCB-86/87/97/108/119/125

PDI-WS-T07-1808: PCB-86/87/97/108/119/125

PDI-WS-T01-1808: PCB-66, PCB-86/87/97/108/119/125

PDI-WS-T03-1808: PCB-66, PCB-86/87/97/108/119/125

Verification of calculations was performed on a subset of the data as deemed appropriate. No discrepancies were noted.

### **QUALIFICATION ACTIONS**

Sample results qualified as a result of validation actions are summarized in Table 1. All actions are described above.

### **ATTACHMENTS**

Attachment A: Nonconformance Summary Tables

Attachment B: Qualifier Codes and Explanations

Attachment C: Reason Codes and Explanations



**Table 1 - Data Validation Summary of Qualified Data**

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-RB-XF-180820	WQ	PCB-105		21.7	pg/sample	U	bl
PDI-RB-XF-180820	WQ	PCB-11	1050	37.1	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-110/115	66.9	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-118	44.2	5.54	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-129/138/160/163	51.2	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-130	5.36	5.34	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-132	22.2	5.17	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-135/151/154	26.6	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-136	7.90	4.49	pg/sample	JN	bl,k
PDI-RB-XF-180820	WQ	PCB-141	15.2	4.79	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-144	4.64	4.49	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-146	11.4	4.49	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-147/149	52.3	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-15	64.8	38.3	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-153/168	53.7	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-156/157	9.82	4.50	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-16	128	5.58	pg/sample	JN	bl,k
PDI-RB-XF-180820	WQ	PCB-17	148	4.83	pg/sample	J	bl,su
PDI-RB-XF-180820	WQ	PCB-170	9.27	5.09	pg/sample	JN	bl,k
PDI-RB-XF-180820	WQ	PCB-174	9.23	5.22	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-177	6.71	4.49	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-179	6.24	4.49	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-18/30	257	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-180/193	33.0	5.48	pg/sample	JN	bl,k
PDI-RB-XF-180820	WQ	PCB-183/185		5.82	pg/sample	U	bl
PDI-RB-XF-180820	WQ	PCB-187	21.4	4.71	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-19		30.3	pg/sample	U	bl
PDI-RB-XF-180820	WQ	PCB-194	6.17	4.49	pg/sample	JN	bl,k
PDI-RB-XF-180820	WQ	PCB-196	5.37	4.57	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-198/199	16.6	4.68	pg/sample	JN	bl,k
PDI-RB-XF-180820	WQ	PCB-20/28	311	6.48	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-202	5.76	4.49	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-203	6.61	4.49	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-208	6.09	4.49	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-209 (decachlorobiphenyl)		12.8	pg/sample	U	bl

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-RB-XF-180820	WQ	PCB-21/33	191	6.39	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-22	113	7.36	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-24	7.02	4.49	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-25	123	5.57	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-26/29	55.1	6.64	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-27	21.6	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-31	252	6.11	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-32		45.2	pg/sample	UJ	bl,su
PDI-RB-XF-180820	WQ	PCB-35	9.08	6.78	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-37	39.3	6.63	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-40/41/71	96.3	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-42	48.9	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-44/47/65	1370	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-45/51	296	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-46	14.0	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-48	46.8	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-49/69	106	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-50/53	26.4	4.49	pg/sample	JN	bl,k
PDI-RB-XF-180820	WQ	PCB-52	265	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-56	39.9	5.16	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-59/62/75	18.7	4.49	pg/sample	JN	bl,k
PDI-RB-XF-180820	WQ	PCB-60	28.3	5.21	pg/sample	JN	bl,k
PDI-RB-XF-180820	WQ	PCB-61/70/74/76	153	4.67	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-64	62.5	4.49	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-66	86.0	4.65	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-68	143	4.65	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-7	93.4	35.8	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-77	8.61	4.83	pg/sample	JN	bl,k
PDI-RB-XF-180820	WQ	PCB-83/99	44.4	5.51	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-85/116/117	13.9	4.59	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-86/87/97/108/119/125	66.6	4.73	pg/sample	JN	bl,k,q
PDI-RB-XF-180820	WQ	PCB-90/101/113	64.9	4.70	pg/sample	J+	bl
PDI-RB-XF-180820	WQ	PCB-92	15.7	5.49	pg/sample	JN	k
PDI-RB-XF-180820	WQ	PCB-93/95/98/100/102	93.1	5.09	pg/sample	J+	bl
PDI-WS-T01-1808	WS	PCB-103	29.0	6.50	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-104	9.82	4.31	pg/sample	JN	bl,k
PDI-WS-T01-1808	WS	PCB-11	1960	45.7	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-12/13	58.8	46.3	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-120	13.3	5.54	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-123	34.0	8.20	pg/sample	JN	k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T01-1808	WS	PCB-126	14.0	9.90	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-131	34.0	13.3	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-133	55.5	13.0	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-134/143	130	13.2	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-137	83.5	14.3	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-144	89.3	4.31	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-15	229	50.2	pg/sample	J+	be
PDI-WS-T01-1808	WS	PCB-150	10.6	4.31	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-155	5.43	4.31	pg/sample	JN	bl,k
PDI-WS-T01-1808	WS	PCB-16	145	6.12	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-17	312	5.30	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-171/173	182	4.76	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-175	22.3	4.31	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-176	76.0	4.31	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-18/30	391	4.52	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-181	15.3	4.55	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-19	152	6.13	pg/sample	J+	bl
PDI-WS-T01-1808	WS	PCB-197/200	71.5	4.31	pg/sample	JN	k,su
PDI-WS-T01-1808	WS	PCB-2	71.2	8.78	pg/sample	J+	bl
PDI-WS-T01-1808	WS	PCB-20/28	835	7.96	pg/sample	J+	be
PDI-WS-T01-1808	WS	PCB-205	12.6	4.31	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-207	35.0	4.31	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-208	120	4.31	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-21/33	358	7.85	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-22	232	9.04	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-23		9.18	pg/sample	U	bl
PDI-WS-T01-1808	WS	PCB-24	5.03	4.31	pg/sample	JN	be,k
PDI-WS-T01-1808	WS	PCB-25	156	6.84	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-26/29	144	8.16	pg/sample	J+	be
PDI-WS-T01-1808	WS	PCB-27	43.5	4.31	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-3		62.3	pg/sample	U	bl
PDI-WS-T01-1808	WS	PCB-31	560	7.50	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-32	98.5	7.97	pg/sample	J	bl,su
PDI-WS-T01-1808	WS	PCB-34	13.5	8.41	pg/sample	JN	bl,k
PDI-WS-T01-1808	WS	PCB-35	22.4	8.33	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-39	8.42	8.16	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-4	134	52.0	pg/sample	J+	be
PDI-WS-T01-1808	WS	PCB-40/41/71	455	4.31	pg/sample	J+	be
PDI-WS-T01-1808	WS	PCB-42	232	4.31	pg/sample	J+	be
PDI-WS-T01-1808	WS	PCB-43	22.4	4.31	pg/sample	JN	bl,k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T01-1808	WS	PCB-44/47/65	2230	4.31	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-45/51	650	4.31	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-46	52.0	4.31	pg/sample	J+	be
PDI-WS-T01-1808	WS	PCB-48	134	4.31	pg/sample	J+	be
PDI-WS-T01-1808	WS	PCB-52	1110	4.31	pg/sample	J+	be
PDI-WS-T01-1808	WS	PCB-54	37.7	4.31	pg/sample	J+	bl
PDI-WS-T01-1808	WS	PCB-59/62/75	83.5	4.31	pg/sample	J+	be
PDI-WS-T01-1808	WS	PCB-6	88.4	43.6	pg/sample	JN	be,k
PDI-WS-T01-1808	WS	PCB-63	40.5	11.8	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-66	967	11.7	pg/sample	J+	q
PDI-WS-T01-1808	WS	PCB-67	16.8	10.1	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-68	339	11.7	pg/sample	J+	be,bl
PDI-WS-T01-1808	WS	PCB-7	70.4	44.2	pg/sample	JN	be,k
PDI-WS-T01-1808	WS	PCB-79	14.7	10.5	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-8	293	39.5	pg/sample	J+	be
PDI-WS-T01-1808	WS	PCB-86/87/97/108/119/125	1050	6.63	pg/sample	J+	q
PDI-WS-T01-1808	WS	PCB-89	14.8	7.83	pg/sample	JN	k
PDI-WS-T01-1808	WS	PCB-96	13.1	4.31	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-1	45.8	5.09	pg/sample	J-	su
PDI-WS-T02-1808	WS	PCB-104	10.7	4.34	pg/sample	JN	bl,k
PDI-WS-T02-1808	WS	PCB-107/124	62.1	5.50	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-11	1200	46.2	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-12/13	59.8	46.8	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-120	18.4	6.14	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-122	20.8	6.06	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-123	28.8	5.17	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-126	14.6	6.00	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-137	100	10.7	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-148	17.9	4.34	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-15	193	46.3	pg/sample	J+	be
PDI-WS-T02-1808	WS	PCB-150	15.6	4.34	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-152	6.00	4.34	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-155	4.79	4.34	pg/sample	JN	bl,k
PDI-WS-T02-1808	WS	PCB-159	47.2	7.30	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-16	157	5.77	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-17	237	5.00	pg/sample	J	be,bl,su
PDI-WS-T02-1808	WS	PCB-172	143	4.34	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-175	31.4	4.34	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-18/30	357	4.34	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-189	21.6	4.34	pg/sample	JN	k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T02-1808	WS	PCB-2	61.3	5.45	pg/sample	J+	bl
PDI-WS-T02-1808	WS	PCB-20/28	748	5.07	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-21/33	328	5.00	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-22	227	5.76	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-24	4.90	4.34	pg/sample	J+	be
PDI-WS-T02-1808	WS	PCB-25	151	4.36	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-26/29	122	5.20	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-27	54.0	4.34	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-3		54.9	pg/sample	U	bl
PDI-WS-T02-1808	WS	PCB-31	522	4.78	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-32	65.4	5.08	pg/sample	J	bl,su
PDI-WS-T02-1808	WS	PCB-34		6.28	pg/sample	U	bl
PDI-WS-T02-1808	WS	PCB-35	18.2	5.31	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-39	12.8	5.20	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-4	155	60.6	pg/sample	J+	be
PDI-WS-T02-1808	WS	PCB-40/41/71	430	4.34	pg/sample	J+	be
PDI-WS-T02-1808	WS	PCB-42	206	4.34	pg/sample	J+	be
PDI-WS-T02-1808	WS	PCB-44/47/65	2800	4.34	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-45/51	736	4.34	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-46	49.5	4.34	pg/sample	J+	be
PDI-WS-T02-1808	WS	PCB-48	132	4.34	pg/sample	J+	be
PDI-WS-T02-1808	WS	PCB-52	1120	4.34	pg/sample	J+	be
PDI-WS-T02-1808	WS	PCB-59/62/75	82.4	4.34	pg/sample	J+	be
PDI-WS-T02-1808	WS	PCB-6	75.2	44.0	pg/sample	JN	be,k
PDI-WS-T02-1808	WS	PCB-66	909	9.56	pg/sample	J+	q
PDI-WS-T02-1808	WS	PCB-67	21.3	8.32	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-68	371	9.57	pg/sample	J+	be,bl
PDI-WS-T02-1808	WS	PCB-7	64.7	44.7	pg/sample	J+	be
PDI-WS-T02-1808	WS	PCB-79	19.7	8.58	pg/sample	JN	k
PDI-WS-T02-1808	WS	PCB-8	251	39.9	pg/sample	J+	be
PDI-WS-T02-1808	WS	PCB-86/87/97/108/119/125	1120	7.36	pg/sample	J+	q
PDI-WS-T02-1808	WS	PCB-89	17.6	8.69	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-103	86.8	5.31	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-104	13.3	4.35	pg/sample	JN	bl,k
PDI-WS-T03-1808	WS	PCB-11	1830	50.3	pg/sample	J	be,bl,ld
PDI-WS-T03-1808	WS	PCB-114	62.4	9.32	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-12/13	143	50.7	pg/sample	J	ld
PDI-WS-T03-1808	WS	PCB-121	8.19	4.79	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-122	42.7	10.4	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-123	51.6	8.46	pg/sample	JN	k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T03-1808	WS	PCB-126	18.2	10.7	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-148	30.2	4.35	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-152	7.71	4.35	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-155	8.46	4.35	pg/sample	JN	bl,k
PDI-WS-T03-1808	WS	PCB-16	406	5.58	pg/sample	J	be,bl,ld
PDI-WS-T03-1808	WS	PCB-162	25.4	11.3	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-17	595	4.90	pg/sample	J	be,su
PDI-WS-T03-1808	WS	PCB-18/30	792	4.35	pg/sample	J	be,bl,su
PDI-WS-T03-1808	WS	PCB-181	16.6	4.35	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-184	5.72	4.35	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-189	41.3	4.35	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-2	80.0	8.19	pg/sample	J+	bl
PDI-WS-T03-1808	WS	PCB-20/28	2300	9.35	pg/sample	J	ld
PDI-WS-T03-1808	WS	PCB-205	37.2	4.35	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-209 (decachlorobiphenyl)	575	4.35	pg/sample	JN	k,ld
PDI-WS-T03-1808	WS	PCB-21/33	913	8.89	pg/sample	J	be,ld
PDI-WS-T03-1808	WS	PCB-22	637	10.1	pg/sample	J	ld
PDI-WS-T03-1808	WS	PCB-24	14.3	4.35	pg/sample	J+	be
PDI-WS-T03-1808	WS	PCB-25	311	7.97	pg/sample	J	be,bl,ld
PDI-WS-T03-1808	WS	PCB-3	81.1	6.25	pg/sample	J+	bl
PDI-WS-T03-1808	WS	PCB-31	1480	8.70	pg/sample	J	ld
PDI-WS-T03-1808	WS	PCB-32	207	8.94	pg/sample	J	bl,su
PDI-WS-T03-1808	WS	PCB-34	14.8	10.1	pg/sample	J+	bl
PDI-WS-T03-1808	WS	PCB-35	53.4	9.54	pg/sample	J	ld
PDI-WS-T03-1808	WS	PCB-36	52.2	8.74	pg/sample	J	ld
PDI-WS-T03-1808	WS	PCB-4	272	51.2	pg/sample	J+	be
PDI-WS-T03-1808	WS	PCB-44/47/65	5630	4.35	pg/sample	J+	be
PDI-WS-T03-1808	WS	PCB-6	159	48.4	pg/sample	J	be,ld
PDI-WS-T03-1808	WS	PCB-66	1800	20.4	pg/sample	J	ld,q
PDI-WS-T03-1808	WS	PCB-67	44.3	17.3	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-68	597	18.9	pg/sample	J	be,ld
PDI-WS-T03-1808	WS	PCB-7	115	48.5	pg/sample	JN	be,k
PDI-WS-T03-1808	WS	PCB-8	636	44.1	pg/sample	J	be,ld,su
PDI-WS-T03-1808	WS	PCB-86/87/97/108/119/125	2120	5.39	pg/sample	J+	q
PDI-WS-T03-1808	WS	PCB-89	36.1	6.53	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-9	59.0	48.6	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-94	38.7	6.54	pg/sample	JN	k
PDI-WS-T03-1808	WS	PCB-96	33.5	4.35	pg/sample	J	ld
PDI-WS-T04-1808	WS	PCB-1	66.5	5.79	pg/sample	J-	su

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T04-1808	WS	PCB-104	16.0	4.33	pg/sample	JN	bl,k
PDI-WS-T04-1808	WS	PCB-11	1510	34.9	pg/sample	J+	be,bl
PDI-WS-T04-1808	WS	PCB-123	50.4	7.33	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-126	24.3	9.43	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-130	245	9.44	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-148	22.8	4.33	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-15	204	36.2	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-155	5.07	4.33	pg/sample	JN	bl,k
PDI-WS-T04-1808	WS	PCB-16	206	5.24	pg/sample	J+	be,bl
PDI-WS-T04-1808	WS	PCB-17	325	4.54	pg/sample	J	be,bl,su
PDI-WS-T04-1808	WS	PCB-175	48.6	4.33	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-18/30	477	4.33	pg/sample	J+	be,bl
PDI-WS-T04-1808	WS	PCB-181	19.7	4.33	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-188	8.45	4.33	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-196	304	4.33	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-2	72.9	5.93	pg/sample	J+	bl
PDI-WS-T04-1808	WS	PCB-20/28	973	4.33	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-205	32.3	4.33	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-21/33	469	4.33	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-22	296	4.38	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-24	5.80	4.33	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-25	226	4.33	pg/sample	J+	be,bl
PDI-WS-T04-1808	WS	PCB-26/29	168	4.33	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-27	68.8	4.33	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-3	80.7	4.69	pg/sample	J+	bl
PDI-WS-T04-1808	WS	PCB-31	686	4.33	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-32	89.5	4.33	pg/sample	J	bl,su
PDI-WS-T04-1808	WS	PCB-34		9.28	pg/sample	U	bl
PDI-WS-T04-1808	WS	PCB-35	31.0	4.33	pg/sample	J+	be,bl
PDI-WS-T04-1808	WS	PCB-39	18.3	4.33	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-4	202	43.1	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-44/47/65	4320	4.33	pg/sample	J+	be,bl
PDI-WS-T04-1808	WS	PCB-45/51	1150	4.33	pg/sample	J+	be,bl
PDI-WS-T04-1808	WS	PCB-46	64.9	4.33	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-48	178	4.33	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-6	81.6	33.2	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-66	1210	8.49	pg/sample	J+	q
PDI-WS-T04-1808	WS	PCB-68	548	8.49	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-7	107	33.7	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-72	29.3	8.27	pg/sample	JN	k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T04-1808	WS	PCB-79	26.9	7.61	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-8	327	30.1	pg/sample	J+	be
PDI-WS-T04-1808	WS	PCB-86/87/97/108/119/125	1570	5.64	pg/sample	J+	q
PDI-WS-T04-1808	WS	PCB-89	23.9	6.65	pg/sample	JN	k
PDI-WS-T04-1808	WS	PCB-96	33.9	4.33	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-1	69.2	7.39	pg/sample	J-	su
PDI-WS-T05-1808	WS	PCB-104	13.9	4.39	pg/sample	J+	bl
PDI-WS-T05-1808	WS	PCB-11	1230	28.0	pg/sample	J+	be,bl
PDI-WS-T05-1808	WS	PCB-114	40.5	15.6	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-126	18.9	17.9	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-128/166	614	13.0	pg/sample	J-	su
PDI-WS-T05-1808	WS	PCB-133	76.6	15.2	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-155	5.88	4.39	pg/sample	JN	bl,k
PDI-WS-T05-1808	WS	PCB-16	271	6.05	pg/sample	J+	be,bl
PDI-WS-T05-1808	WS	PCB-17	681	5.24	pg/sample	J	be,su
PDI-WS-T05-1808	WS	PCB-176	134	4.39	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-18/30	682	4.47	pg/sample	J+	be,bl
PDI-WS-T05-1808	WS	PCB-181	11.2	4.39	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-187	1700	4.39	pg/sample	J-	su
PDI-WS-T05-1808	WS	PCB-191	37.1	4.39	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-197/200	107	4.39	pg/sample	JN	k,su
PDI-WS-T05-1808	WS	PCB-2	63.5	6.14	pg/sample	J+	bl
PDI-WS-T05-1808	WS	PCB-20/28	1520	5.90	pg/sample	J+	be
PDI-WS-T05-1808	WS	PCB-202	182	4.39	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-205	27.1	4.39	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-21/33	648	5.81	pg/sample	J+	be
PDI-WS-T05-1808	WS	PCB-22	419	6.69	pg/sample	J+	be
PDI-WS-T05-1808	WS	PCB-24	11.9	4.39	pg/sample	J+	be
PDI-WS-T05-1808	WS	PCB-25	307	5.07	pg/sample	J+	be,bl
PDI-WS-T05-1808	WS	PCB-26/29	248	6.04	pg/sample	J+	be
PDI-WS-T05-1808	WS	PCB-27	95.0	4.39	pg/sample	J+	be
PDI-WS-T05-1808	WS	PCB-3	82.7	4.39	pg/sample	J+	bl
PDI-WS-T05-1808	WS	PCB-31	1050	5.55	pg/sample	J+	be
PDI-WS-T05-1808	WS	PCB-32	136	5.90	pg/sample	J	bl,su
PDI-WS-T05-1808	WS	PCB-34	19.0	6.23	pg/sample	J+	bl
PDI-WS-T05-1808	WS	PCB-35	30.2	6.17	pg/sample	JN	be,bl,k
PDI-WS-T05-1808	WS	PCB-44/47/65	4780	4.39	pg/sample	J+	be,bl
PDI-WS-T05-1808	WS	PCB-6	113	26.7	pg/sample	J+	be
PDI-WS-T05-1808	WS	PCB-66	1270	16.3	pg/sample	J+	q
PDI-WS-T05-1808	WS	PCB-7	134	27.1	pg/sample	J+	be



Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T05-1808	WS	PCB-72	25.3	15.9	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-8	411	24.2	pg/sample	J+	be
PDI-WS-T05-1808	WS	PCB-86/87/97/108/119/125	1770	6.03	pg/sample	J+	q
PDI-WS-T05-1808	WS	PCB-89	26.6	7.12	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-9	33.3	26.9	pg/sample	JN	k
PDI-WS-T05-1808	WS	PCB-94	36.9	7.20	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-1	42.1	15.1	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-105	237	19.0	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-109	85.3	24.2	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-11	1400	31.4	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-110/115	703	15.4	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-12/13	38.3	31.7	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-123	15.0	4.89	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-126	9.40	6.01	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-131	17.2	7.35	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-137	58.8	7.45	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-146	269	14.6	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-15	121	32.9	pg/sample	J+	be
PDI-WS-T06-1808	WS	PCB-150	4.88	4.30	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-155	5.43	4.30	pg/sample	JN	bl,k
PDI-WS-T06-1808	WS	PCB-16	120	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-17	190	28.0	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-178	130	4.30	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-18/30	282	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-184	5.76	4.30	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-19	41.7	4.30	pg/sample	J+	bl
PDI-WS-T06-1808	WS	PCB-191	17.2	4.30	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-197/200	97.1	12.8	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-2	56.3	23.2	pg/sample	J+	bl
PDI-WS-T06-1808	WS	PCB-20/28	461	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-205	15.8	4.30	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-208	73.0	4.30	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-21/33	248	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-22	152	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-25	127	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-26/29	86.6	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-27	25.0	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-3		45.8	pg/sample	U	bl
PDI-WS-T06-1808	WS	PCB-31	364	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-32	92.3	28.7	pg/sample	JN	bl,k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T06-1808	WS	PCB-35	24.5	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-37	104	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-4	88.2	35.4	pg/sample	J+	be
PDI-WS-T06-1808	WS	PCB-40/41/71	173	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-42	90.1	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-43	12.6	4.30	pg/sample	JN	bl,k
PDI-WS-T06-1808	WS	PCB-44/47/65	1570	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-45/51	403	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-46	21.8	4.30	pg/sample	JN	be,bl,k
PDI-WS-T06-1808	WS	PCB-48	62.6	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-49/69	256	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-50/53	62.2	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-52	541	4.30	pg/sample	J+	be
PDI-WS-T06-1808	WS	PCB-56	137	7.68	pg/sample	J+	be
PDI-WS-T06-1808	WS	PCB-59/62/75	28.2	4.30	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-6	69.4	30.2	pg/sample	J+	be
PDI-WS-T06-1808	WS	PCB-60	73.7	7.77	pg/sample	J+	be
PDI-WS-T06-1808	WS	PCB-61/70/74/76	606	6.98	pg/sample	J+	be
PDI-WS-T06-1808	WS	PCB-64	143	4.30	pg/sample	J+	be
PDI-WS-T06-1808	WS	PCB-66	350	25.5	pg/sample	J+	be
PDI-WS-T06-1808	WS	PCB-68	210	6.59	pg/sample	J+	be,bl
PDI-WS-T06-1808	WS	PCB-7	88.1	30.3	pg/sample	JN	be,k
PDI-WS-T06-1808	WS	PCB-72	8.47	6.51	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-8	240	27.5	pg/sample	J+	be
PDI-WS-T06-1808	WS	PCB-82	60.6	23.2	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-83/99	387	21.3	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-84	104	22.8	pg/sample	JN	be,k
PDI-WS-T06-1808	WS	PCB-85/116/117	123	17.3	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-88/91	67.8	20.1	pg/sample	JN	be,k
PDI-WS-T06-1808	WS	PCB-9	37.4	30.4	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-92	132	20.4	pg/sample	JN	k
PDI-WS-T06-1808	WS	PCB-93/95/98/100/102	450	19.6	pg/sample	JN	be,k
PDI-WS-T07-1808	WS	PCB-1	40.8	7.41	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-10		59.8	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-103		11.5	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-104	7.36	5.67	pg/sample	JN	bl,cl,k,lc
PDI-WS-T07-1808	WS	PCB-105	230	8.62	pg/sample	J	cl
PDI-WS-T07-1808	WS	PCB-106		11.0	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-107/124	23.2	11.7	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-109	54.5	10.6	pg/sample	JN	cl,k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T07-1808	WS	PCB-11	1150	62.2	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-110/115	653	10.2	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-111		10.2	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-112		9.93	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-114	22.1	11.6	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-118	565	11.6	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-12/13		63.0	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-120		9.83	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-121		10.4	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-122		12.9	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-123	23.8	11.1	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-126		14.1	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-127		12.4	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-128/166	176	9.43	pg/sample	J	cl,lc,su
PDI-WS-T07-1808	WS	PCB-129/138/160/163	1030	9.51	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-130	66.2	12.4	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-131	20.5	11.3	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-132	300	12.0	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-133	16.8	11.0	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-134/143	59.1	11.2	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-135/151/154	307	7.78	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-136	84.7	5.87	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-137	41.2	12.1	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-139/140		10.1	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-14		60.7	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-141	128	11.1	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-142		11.4	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-144	29.9	8.07	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-145		6.28	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-146	197	9.63	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-147/149	850	9.97	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-148		8.06	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-15	111	66.2	pg/sample	JN	be,k,cl,lc
PDI-WS-T07-1808	WS	PCB-150		6.09	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-152		5.62	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-153/168	862	8.53	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-155	5.87	5.68	pg/sample	JN	bl,cl,k,lc
PDI-WS-T07-1808	WS	PCB-156/157	119	10.3	pg/sample	J	cl
PDI-WS-T07-1808	WS	PCB-158	75.8	7.30	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-159		8.29	pg/sample	UJ	cl,lc

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T07-1808	WS	PCB-16	102	12.9	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-161		7.74	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-162		7.58	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-164	65.1	7.92	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-165		9.21	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-167	50.7	8.03	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-169		9.31	pg/sample	UJ	cl
PDI-WS-T07-1808	WS	PCB-17	172	11.2	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-170	222	9.61	pg/sample	J	cl
PDI-WS-T07-1808	WS	PCB-171/173	65.5	9.20	pg/sample	J	cl
PDI-WS-T07-1808	WS	PCB-172	55.1	9.67	pg/sample	J	cl
PDI-WS-T07-1808	WS	PCB-174	182	8.63	pg/sample	J	cl
PDI-WS-T07-1808	WS	PCB-175		8.33	pg/sample	UJ	cl
PDI-WS-T07-1808	WS	PCB-176	33.2	6.21	pg/sample	J	cl
PDI-WS-T07-1808	WS	PCB-177	119	6.62	pg/sample	J	cl
PDI-WS-T07-1808	WS	PCB-178	60.1	8.52	pg/sample	J	cl
PDI-WS-T07-1808	WS	PCB-179	99.6	5.93	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-18/30	260	9.53	pg/sample	JN	be,bl,cl,k,lc
PDI-WS-T07-1808	WS	PCB-180/193	542	9.84	pg/sample	J	cl
PDI-WS-T07-1808	WS	PCB-181		8.80	pg/sample	UJ	cl
PDI-WS-T07-1808	WS	PCB-182	9.13	8.11	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-183/185	134	8.31	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-184		5.90	pg/sample	UJ	cl
PDI-WS-T07-1808	WS	PCB-186		6.56	pg/sample	UJ	cl
PDI-WS-T07-1808	WS	PCB-187	468	7.78	pg/sample	J	cl,su
PDI-WS-T07-1808	WS	PCB-188	7.86	6.53	pg/sample	J	cl
PDI-WS-T07-1808	WS	PCB-189	9.46	7.63	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-19		27.0	pg/sample	UJ	bl,cl,lc
PDI-WS-T07-1808	WS	PCB-190	38.9	7.07	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-191		7.33	pg/sample	UJ	cl
PDI-WS-T07-1808	WS	PCB-192		8.03	pg/sample	UJ	cl
PDI-WS-T07-1808	WS	PCB-194	132	8.25	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-195	38.1	8.85	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-196	63.6	9.49	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-197/200	31.9	6.59	pg/sample	JN	cl,k,lc,su
PDI-WS-T07-1808	WS	PCB-198/199	154	9.71	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-2	45.2	9.28	pg/sample	JN	bl,cl,k,lc
PDI-WS-T07-1808	WS	PCB-20/28	397	10.3	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-201	16.3	6.46	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-202	58.3	8.72	pg/sample	JN	k,cl,lc

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T07-1808	WS	PCB-203	97.2	9.05	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-204		6.71	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-205		6.44	pg/sample	UJ	cl
PDI-WS-T07-1808	WS	PCB-206	111	11.5	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-207	12.2	7.70	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-208	43.7	8.84	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-209 (decachlorobiphenyl)	201	9.62	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-21/33	193	10.1	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-22	116	11.7	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-23		10.9	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-24		8.64	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-25	122	8.82	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-26/29	65.4	10.5	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-27	23.6	7.74	pg/sample	JN	be,bl,cl,k,lc
PDI-WS-T07-1808	WS	PCB-3		59.5	pg/sample	UJ	bl,cl,lc
PDI-WS-T07-1808	WS	PCB-31	292	9.67	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-32	72.1	10.3	pg/sample	JN	bl,cl,k,lc,su
PDI-WS-T07-1808	WS	PCB-34		10.8	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-35	12.4	10.7	pg/sample	JN	be,bl,cl,k,lc
PDI-WS-T07-1808	WS	PCB-36		9.89	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-37	64.4	10.5	pg/sample	JN	be,bl,cl,k,lc
PDI-WS-T07-1808	WS	PCB-38		10.6	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-39		10.5	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-4	82.8	74.2	pg/sample	JN	be,cl,k,lc
PDI-WS-T07-1808	WS	PCB-40/41/71	132	6.35	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-42	64.4	6.56	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-43	10.1	6.92	pg/sample	JN	bl,cl,k,lc
PDI-WS-T07-1808	WS	PCB-44/47/65	2110	5.74	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-45/51	689	6.21	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-46	26.5	7.12	pg/sample	JN	be,bl,cl,k,lc
PDI-WS-T07-1808	WS	PCB-48	62.3	6.37	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-49/69	220	5.38	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-5		66.3	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-50/53	52.1	6.03	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-52	493	5.95	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-54		4.62	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-55		12.1	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-56	97.5	12.1	pg/sample	J	be,cl,lc
PDI-WS-T07-1808	WS	PCB-57		10.9	pg/sample	UJ	cl,lc

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T07-1808	WS	PCB-58		11.2	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-59/62/75	36.2	4.69	pg/sample	JN	be,bl,cl,k,lc
PDI-WS-T07-1808	WS	PCB-6		59.2	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-60	46.4	12.2	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-61/70/74/76	468	10.9	pg/sample	J	be,cl,lc
PDI-WS-T07-1808	WS	PCB-63		11.0	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-64	115	4.58	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-66	270	10.9	pg/sample	J	be,cl,lc
PDI-WS-T07-1808	WS	PCB-67		9.46	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-68	377	10.9	pg/sample	J	be,bl,cl,lc
PDI-WS-T07-1808	WS	PCB-7	124	60.1	pg/sample	JN	be,cl,k,lc
PDI-WS-T07-1808	WS	PCB-72	12.6	10.6	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-73		5.06	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-77	47.1	11.1	pg/sample	JN	cl,k
PDI-WS-T07-1808	WS	PCB-78		11.9	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-79	9.78	9.76	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-8	204	53.7	pg/sample	JN	be,cl,k,lc
PDI-WS-T07-1808	WS	PCB-80		11.0	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-81		11.5	pg/sample	UJ	cl
PDI-WS-T07-1808	WS	PCB-82	60.0	15.0	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-83/99	370	13.7	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-84	123	14.7	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-85/116/117	107	11.4	pg/sample	JN	cl,k,lc
PDI-WS-T07-1808	WS	PCB-86/87/97/108/119/125	423	11.8	pg/sample	JN	cl,k,q
PDI-WS-T07-1808	WS	PCB-88/91	83.1	13.1	pg/sample	J	cl,be,lc
PDI-WS-T07-1808	WS	PCB-89		13.9	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-9		59.6	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-90/101/113	585	11.7	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-92	115	13.7	pg/sample	J	cl,lc
PDI-WS-T07-1808	WS	PCB-93/95/98/100/102	455	12.7	pg/sample	J	be,cl,lc
PDI-WS-T07-1808	WS	PCB-94		14.1	pg/sample	UJ	cl,lc
PDI-WS-T07-1808	WS	PCB-96	7.05	5.02	pg/sample	JN	cl,k,lc

## Attachment A

## Nonconformance Summary Tables

Table A-1 Lab Blanks

Blank ID	Compound	Result	RL	Units	BAL	Associated Samples
WG65583-101	PCB-104	6.03	34.2	pg/sample	30.2	PDI-RB-XF-180820 PDI-WS-T01-1808 PDI-WS-T02-1808 PDI-WS-T03-1808 PDI-WS-T04-1808 PDI-WS-T05-1808 PDI-WS-T06-1808 PDI-WS-T06-1808 PDI-WS-T07-1808
	PCB-105	23.5	171	pg/sample	118	
	PCB-11	408	171	pg/sample	2040	
	PCB-110/115	45.0	171	pg/sample	225	
	PCB-118	35.3	34.2	pg/sample	176	
	PCB-129/138/160/163	38.9	34.2	pg/sample	194	
	PCB-132	16.5	34.2	pg/sample	82.5	
	PCB-135/151/154	15.2	34.2	pg/sample	76.0	
	PCB-136	5.90	34.2	pg/sample	29.5	
	PCB-141	8.11	34.2	pg/sample	40.6	
	PCB-147/149	27.2	34.2	pg/sample	136	
	PCB-153/168	32.3	34.2	pg/sample	162	
	PCB-155	4.63	34.2	pg/sample	23.2	
	PCB-156/157	7.29	68.5	pg/sample	36.4	
	PCB-16	84.5	34.2	pg/sample	422	
	PCB-17	113	34.2	pg/sample	565	
	PCB-170	5.61	34.2	pg/sample	28.0	
	PCB-18/30	198	34.2	pg/sample	990	
	PCB-180/193	20.0	34.2	pg/sample	100	
	PCB-183/185	7.23	34.2	pg/sample	36.2	
	PCB-187	18.4	171	pg/sample	92.0	
	PCB-19	32.3	34.2	pg/sample	162	
	PCB-194	4.46	34.2	pg/sample	22.3	
	PCB-198/199	6.19	34.2	pg/sample	31.0	
	PCB-2	41.3	171	pg/sample	206	
	PCB-20/28	165	34.2	pg/sample	825	
	PCB-206	4.53	34.2	pg/sample	22.6	
	PCB-209 (decachlorobiphenyl)	13.4	34.2	pg/sample	67.0	
	PCB-21/33	91.3	34.2	pg/sample	456	
	PCB-22	52.4	34.2	pg/sample	262	
PCB-23	10.2	34.2	pg/sample	51		
PCB-25	89.4	34.2	pg/sample	447		
PCB-26/29	28.6	34.2	pg/sample	143		
PCB-27	13.3	34.2	pg/sample	66		
PCB-3	64.0	171	pg/sample	320		

Blank ID	Compound	Result	RL	Units	BAL	Associated Samples
	PCB-31	123	34.2	pg/sample	615	
	PCB-32	54.1	171	pg/sample	270	
	PCB-34	9.90	34.2	pg/sample	49.5	
	PCB-35	8.74	34.2	pg/sample	43.7	
	PCB-37	21.9	34.2	pg/sample	110	
	PCB-40/41/71	37.4	34.2	pg/sample	187	
	PCB-42	21.7	34.2	pg/sample	108	
	PCB-43	5.05	34.2	pg/sample	25.2	
	PCB-44/47/65	1010	34.2	pg/sample	5050	
	PCB-45/51	233	34.2	pg/sample	1165	
	PCB-46	8.64	34.2	pg/sample	43.2	
	PCB-48	16.1	34.2	pg/sample	80.5	
	PCB-49/69	58.8	34.2	pg/sample	294	
	PCB-50/53	16.4	34.2	pg/sample	82.0	
	PCB-52	108	34.2	pg/sample	540	
	PCB-54	10.9	34.2	pg/sample	54.5	
	PCB-56	16.9	34.2	pg/sample	84.5	
	PCB-59/62/75	9.20	34.2	pg/sample	46.0	
	PCB-60	10.2	34.2	pg/sample	51.0	
	PCB-61/70/74/76	57.2	34.2	pg/sample	286	
	PCB-64	26.5	34.2	pg/sample	132	
	PCB-66	34.6	171	pg/sample	173	
	PCB-68	85.1	34.2	pg/sample	426	
	PCB-77	8.61	34.2	pg/sample	43.0	
	PCB-81	4.80	34.2	pg/sample	24.0	
	PCB-83/99	29.3	171	pg/sample	146	
	PCB-86/87/97/108/119/125	47.8	171	pg/sample	239	
	PCB-90/101/113	44.6	171	pg/sample	223	
	PCB-93/95/98/100/102	67.7	171	pg/sample	338	

Table A-2 Field Blanks

Blank ID	Compound	Result	RL	Units	BAL	Associate Samples
	PCB-11	1050	37.1	pg/sample	5250	PDI-WS-T01-1808 PDI-WS-T02-1808 PDI-WS-T03-1808 PDI-WS-T04-1808 PDI-WS-T05-1808 PDI-WS-T06-1808 PDI-WS-T06-1808 PDI-WS-T07-1808
	PCB-110/115	66.9	4.49	pg/sample	334	
	PCB-118	44.2	5.54	pg/sample	221	
	PCB-129/138/160/163	51.2	4.49	pg/sample	256	
	PCB-130	5.36	5.34	pg/sample	26.8	



Blank ID	Compound	Result	RL	Units	BAL	Associate Samples
	PCB-132	22.2	5.17	pg/sample	111	
	PCB-135/151/154	26.6	4.49	pg/sample	133	
	PCB-136	7.90	4.49	pg/sample	39.5	
	PCB-141	15.2	4.79	pg/sample	76.0	
	PCB-144	4.64	4.49	pg/sample	23.2	
	PCB-146	11.4	4.49	pg/sample	57	
	PCB-147/149	52.3	4.49	pg/sample	262	
	PCB-15	64.8	38.3	pg/sample	324	
	PCB-153/168	53.7	4.49	pg/sample	268	
	PCB-156/157	9.82	4.50	pg/sample	49.1	
	PCB-16	128	5.58	pg/sample	640	
	PCB-17	148	4.83	pg/sample	740	
	PCB-170	9.27	5.09	pg/sample	46.4	
	PCB-174	9.23	5.22	pg/sample	46.2	
	PCB-177	6.71	4.49	pg/sample	33.6	
	PCB-178	7.34	5.16	pg/sample	36.7	
	PCB-179	6.24	4.49	pg/sample	31.2	
	PCB-18/30	257	4.49	pg/sample	1285	
	PCB-180/193	33.0	5.48	pg/sample	165	
	PCB-187	21.4	4.71	pg/sample	107	
	PCB-194	6.17	4.49	pg/sample	30.8	
	PCB-196	5.37	4.57	pg/sample	26.8	
	PCB-198/199	16.6	4.68	pg/sample	83.0	
	PCB-20/28	311	6.48	pg/sample	1555	
	PCB-202	5.76	4.49	pg/sample	28.8	
	PCB-203	6.61	4.49	pg/sample	33.0	
	PCB-208	6.09	4.49	pg/sample	30.4	
	PCB-21/33	191	6.39	pg/sample	955	
	PCB-22	113	7.36	pg/sample	565	
	PCB-24	7.02	4.49	pg/sample	35.1	
	PCB-25	123	5.57	pg/sample	615	
	PCB-26/29	55.1	6.64	pg/sample	276	

Blank ID	Compound	Result	RL	Units	BAL	Associate Samples
	PCB-27	21.6	4.49	pg/sample	108	
	PCB-31	252	6.11	pg/sample	1260	
	PCB-35	9.08	6.78	pg/sample	45.4	
	PCB-37	39.3	6.63	pg/sample	196	
	PCB-4	66.0	46.8	pg/sample	330	
	PCB-40/41/71	96.3	4.49	pg/sample	482	
	PCB-42	48.9	4.49	pg/sample	244	
	PCB-44/47/65	1370	4.49	pg/sample	6850	
	PCB-45/51	296	4.49	pg/sample	1480	
	PCB-46	14.0	4.49	pg/sample	70	
	PCB-48	46.8	4.49	pg/sample	234	
	PCB-49/69	106	4.49	pg/sample	530	
	PCB-50/53	26.4	4.49	pg/sample	132	
	PCB-52	265	4.49	pg/sample	1325	
	PCB-56	39.9	5.16	pg/sample	200	
	PCB-59/62/75	18.7	4.49	pg/sample	93.5	
	PCB-6	51.5	35.3	pg/sample	258	
	PCB-60	28.3	5.21	pg/sample	142	
	PCB-61/70/74/76	153	4.67	pg/sample	765	
	PCB-64	62.5	4.49	pg/sample	312	
	PCB-66	86.0	4.65	pg/sample	430	
	PCB-68	143	4.65	pg/sample	715	
	PCB-7	93.4	35.8	pg/sample	467	
	PCB-77	8.61	4.83	pg/sample	43	
	PCB-8	203	32.0	pg/sample	1015	
	PCB-83/99	44.4	5.51	pg/sample	222	
	PCB-84	24.0	5.92	pg/sample	120	
	PCB-85/116/117	13.9	4.59	pg/sample	69.5	
	PCB-86/87/97/108/119/125	66.6	4.73	pg/sample	333	
	PCB-88/91	18.8	5.25	pg/sample	94.0	
	PCB-90/101/113	64.9	4.70	pg/sample	324	

Blank ID	Compound	Result	RL	Units	BAL	Associate Samples
	PCB-92	15.7	5.49	pg/sample	78.5	
	PCB-93/95/98/100/102	93.1	5.09	pg/sample	466	

**Table A-3 - Labeled Compound and Labeled Clean-Up Standard Recoveries**

Sample ID	Labeled Toxics/LOC/window-defining and labeled clean-up recoveries	% Recovery	Lower Limit	Upper Limit
PDI-RB-XF-180820	PCB-1L	0	15	150
	PCB-3L	0	15	150
PDI-WS-T07-1808	PCB-104L	19.8	25	150
	PCB-111L	27.1	30	135
	PCB-114L	23.7	25	150
	PCB-118L	24.5	25	150
	PCB-126L	22.8	25	150
	PCB-155L	21.6	25	150
	PCB-15L	16.1	25	150
	PCB-178L	23.1	30	135
	PCB-19L	18.5	25	150
	PCB-1L	14.9	15	150
	PCB-202L	19.4	25	150
	PCB-209L	21.0	25	150
	PCB-28L	21.0	30	135
	PCB-37L	20.8	25	150
	PCB-4L	15.8	25	150
PCB-54L	21.1	25	150	

**Table A-4 Laboratory Duplicate**

Compound	QL	5xQL	PDI-WS-T03-1808 (pg/sample)	Lab duplicate (pg/sample)	RPD
PCB-11	34.8	174	1830	1360	29
PCB-12/13	34.8	174	143	94.1	41
PCB-16	34.8	174	406	302	29
PCB-20/28	34.8	174	2300	1720	29
PCB-209 (decachlorobiphenyl)	34.8	174	575	742	25
PCB-21/33	34.8	174	913	704	26
PCB-22	34.8	174	637	462	32
PCB-25	34.8	174	311	234	28
PCB-31	34.8	174	1480	1140	26
PCB-35	34.8	174	53.4	31.6	51

<b>Compound</b>	<b>QL</b>	<b>5xQL</b>	<b>PDI-WS-T03-1808 (pg/sample)</b>	<b>Lab duplicate (pg/sample)</b>	<b>RPD</b>
PCB-36	34.8	174	52.2	32.9	45
PCB-6	34.8	174	159	105	41
PCB-66	34.8	174	1800	1410	24
PCB-68	34.8	174	597	480	22
PCB-8	34.8	174	636	441	36
PCB-96	34.8	174	33.5	51.6	43

**Attachment B**  
**Qualifier Codes and Explanations**

<b>Qualifier</b>	<b>Explanation</b>
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
J-	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a potential low bias.
J+	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a potential high bias.
JN	The analyte was tentatively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
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.
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
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.

## Attachment C

### Reason Codes and Explanations

Reason Code	Explanation
be	Equipment blank contamination
bf	Field blank contamination
bl	Laboratory blank contamination
c	Calibration issue
cl	Clean-up standard recovery
d	Reporting limit raised due to chromatographic interference
fd	Field duplicate RPDs
h	Holding times
i	Internal standard areas
k	Estimated Maximum Possible Concentration (EMPC)
l	LCS or OPR recoveries
lc	Labeled compound recovery
ld	Laboratory duplicate RPDs
lp	Laboratory control sample/laboratory control sample duplicate RPDs
m	Matrix spike recovery
md	Matrix spike/matrix spike duplicate RPDs
nb	Negative laboratory blank contamination
p	Chemical preservation issue
r	Dual column RPD
q	Quantitation issue
s	Surrogate recovery
su	Ion suppression
t	Temperature preservation issue
x	Percent solids
y	Serial dilution results
z	ICS results