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Data Validation Report

Project:	Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling
Laboratory:	SGS-AXYS, Sydney, British Columbia, Canada
Service Request:	WG66481-PCB
Analyses/Method:	Chlorinated Biphenyls by HRGC/HRMS / E1668A
Validation Level:	Stage 2A
AECOM Project Number:	60566335.2.12
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Completed on:	02/25/2019
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File Name:	WG66481-PCB DVR

SUMMARY

The samples listed below were collected by AECOM in Portland Harbor in Portland, OR on November 27-30, 2018 and December 1, 2018.

Sample ID	Matrix/Sample Type
PDI-RB-XF-181129	Equipment Blank
PDI-WS-T01-1811	Surface Water
PDI-WS-T02-1811	Surface Water
PDI-WS-T03-1811	Surface Water
PDI-WS-T04-1812	Surface Water
PDI-WS-T05-1811	Surface Water
PDI-WS-T06-1811	Surface Water
PDI-WS-T07-1811	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
✗	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 qualified as estimated, negated or rejected 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.

Laboratory Blanks/Equipment Blanks

Laboratory method blanks and equipment blank results are evaluated as to whether there are contaminants detected above the estimated detection limit (EDL).

Target compounds were detected in the laboratory method blank and equipment blank associated with the samples in this data set.

Detected compounds are summarized in Attachment A in Table A-1 and Table A-2. The results for the equipment blank PDI-RB-XF-181129 are provided for informational purposes only.

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 following manner on the basis of laboratory method blank contamination. As allowed in the NFG, a blank action limit (BAL) was determined as five times the blank result:

- When the sample results were < the blank result, the sample result was qualified as nondetect (U) at the sample result.
- When the sample result was ≥ the blank result and ≤ 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. Qualification of the data on this basis was not deemed necessary.

The laboratory noted in the case narrative that the solvent went to dryness for the OPR and samples PDI-WS-T06-1811 and PDI-RB-XF-181129 during sample extraction. A new OPR was created and extracted, replacing the original OPR. The OPR was re-united with the batch and the clean-up of the samples continued. Additional sample was not available for the re-extraction of these samples. No data validation actions were taken on this basis.

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, PCB-3L and PCB-15L were not quantifiable in the equipment blank PDI-RB-XF-181129 due to an interference which is known to originate during extraction near the mass and retention time of these labeled extraction standards making these results not quantifiable. Consequently, the results for PCB1, PCB-2, PCB-3, PCB-5, PCB-6, PCB-7, PCB-8, PCB-9, PCB-10, PCB-11, PCB-12, PCB-13, PCB-14 and PCB-15 were qualified as rejected (R) in the equipment blank and are not usable for project decisions Qualified sample results are summarized in Table 1.

The laboratory noted in the case narrative that the solvent went dry during the extraction procedure of samples PDI-WS-T06-1811 and PDI-RB-XF-181129 along with the associated OPR. Additional sample was not available for the re-extraction of these samples. However, given that the extract went dry after the addition of the labeled extraction standards and that isotope dilution quantification corrects for such losses, data are not considered significantly impacted. All labeled extraction standards met criteria in all samples, including sample PDI-WS-T06-1811. And all quantifiable labeled extraction standards met criteria in the equipment blank PDI-RB-XF-181129.

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.

The results for PCB1, PCB-2, PCB-3, PCB-5, PCB-6, PCB-7, PCB-8, PCB-9, PCB-10, PCB-11, PCB-12, PCB-13, PCB-14 and PCB-15 were not quantifiable in the equipment blank PDI-RB-XF-181129 because of an interference which is known to originate during extraction near the mass and retention time of these PCBs. The results for these PCBs in this equipment blank sample were qualified as rejected (R) and are not usable for project decisions.

Lock Mass Interferences

The laboratory identified the presence of interferences of the mass ion as indicated by the monitored lock mass by qualifying the affected sample result with a G laboratory qualifier. These interferences may impact compound quantitation; therefore, the positive and nondetect results for affected samples were qualified as estimated (J/UJ).

Estimated Maximum Possible Concentrations (EMPCs)

The data were reviewed to identify sample results that were indicated by the laboratory to be estimated maximum possible concentrations (EMPCs) because of identification criteria not being met.

The laboratory identified the presence of EMPCs for the samples in this data set by qualifying affected results with a K laboratory qualifier. Samples were qualified as follows:

Actions: (Based on AECOM professional judgment)

Criteria	Actions
A native target compound was reported by the laboratory as an EMPC.	Report result as an EMPC and qualify as estimated and presumptively present (JN).
A labeled compound was flagged by the laboratory indicating all identification criteria were not met.	Qualify associated positive and nondetect results as estimated (J/UJ).

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.

Qualified sample results are summarized in Table 1.

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-181129	WQ	PCB-1			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-10			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-105		2.42	pg/sample	U	bl
PDI-RB-XF-181129	WQ	PCB-107/124	1.07	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-11			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-110/115	8.86	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-118	7.17	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-12/13			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-128/166	1.92	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-129/138/160/163	8.54	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-130	1.39	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-132	4.04	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-135/151/154	3.62	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-136	1.56	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-14			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-141	2.44	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-144	1.16	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-146	1.58	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-147/149	9.76	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-15			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-153/168	7.18	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-158	1.01	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-16	16.1	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-17	57.2	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-170	1.29	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-174	1.25	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-177	0.888	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-179	1.63	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-18/30	41.4	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-180/193	4.28	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-183/185	1.68	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-187	2.63	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-19	6.37	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-198/199	1.26	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-2			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-20/28	43.2	0.843	pg/sample	J+	bl

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-RB-XF-181129	WQ	PCB-203	1.13	0.841	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-209 (decachlorobiphenyl)		2.57	pg/sample	U	bl
PDI-RB-XF-181129	WQ	PCB-21/33	26.6	0.847	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-22	14.3	0.983	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-24		0.890	pg/sample	U	bl
PDI-RB-XF-181129	WQ	PCB-25	8.82	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-26/29	8.39	0.880	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-27	2.42	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-3			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-31	32.6	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-32	14.0	0.852	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-35	1.39	0.943	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-37	5.15	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-39	1.76	0.879	pg/sample	JN	k
PDI-RB-XF-181129	WQ	PCB-4	16.9	5.35	pg/sample	JN	bl,k,q
PDI-RB-XF-181129	WQ	PCB-40/41/71	9.35	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-42	6.88	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-46		1.73	pg/sample	U	bl
PDI-RB-XF-181129	WQ	PCB-48	4.72	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-49/69	15.6	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-5			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-50/53	3.74	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-52	28.0	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-56	4.20	1.68	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-59/62/75	1.65	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-6			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-60	2.47	1.61	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-61/70/74/76	18.1	1.54	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-64	6.40	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-66	7.78	1.60	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-7			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-8			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-83/99	4.32	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-84	3.98	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-85/116/117	1.37	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-86/87/97/108/119/125		5.52	pg/sample	UJ	bl,q
PDI-RB-XF-181129	WQ	PCB-88/91	1.94	0.841	pg/sample	JN	bl,k
PDI-RB-XF-181129	WQ	PCB-9			pg/sample	R	q
PDI-RB-XF-181129	WQ	PCB-90/101/113	8.89	0.841	pg/sample	JN	bl,k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-RB-XF-181129	WQ	PCB-92	1.31	0.841	pg/sample	J+	bl
PDI-RB-XF-181129	WQ	PCB-93/95/98/100/102	7.92	0.841	pg/sample	J	bl,q
PDI-WS-T01-1811	WS	PCB-103	10.2	0.909	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-104	2.21	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-105	158	1.85	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-107/124	18.3	2.25	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-111	0.889	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-12/13	11.0	4.64	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-120	3.59	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-121	1.05	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-122	6.35	2.65	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-123	6.72	2.00	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-126	2.66	2.01	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-139/140	14.4	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-148	3.06	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-152	1.31	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-155	1.46	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-16	33.1	0.862	pg/sample	J+	bl
PDI-WS-T01-1811	WS	PCB-162	0.933	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-17	68.3	0.862	pg/sample	J+	bl
PDI-WS-T01-1811	WS	PCB-172	35.8	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-175	6.22	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-18/30	87.5	0.862	pg/sample	J	bl,q
PDI-WS-T01-1811	WS	PCB-181	3.15	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-182	2.34	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-184	1.25	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-189	7.30	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-19	26.1	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-197/200	23.1	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-202	35.5	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-205	6.00	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-207	10.9	2.59	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-23	1.31	0.866	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-24	1.72	0.862	pg/sample	JN	bl,k
PDI-WS-T01-1811	WS	PCB-27	10.5	0.862	pg/sample	J+	bl
PDI-WS-T01-1811	WS	PCB-32	42.9	0.862	pg/sample	J	bl,q
PDI-WS-T01-1811	WS	PCB-34	2.80	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-35	5.28	0.862	pg/sample	J+	bl
PDI-WS-T01-1811	WS	PCB-36	2.48	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-4	31.9	4.92	pg/sample	J+	bl

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T01-1811	WS	PCB-43	3.07	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-46	13.5	0.862	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-6	20.6	4.39	pg/sample	J+	bl
PDI-WS-T01-1811	WS	PCB-7	4.69	4.49	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-72	5.81	2.38	pg/sample	JN	k
PDI-WS-T01-1811	WS	PCB-8	79.3	4.02	pg/sample	J+	bl
PDI-WS-T01-1811	WS	PCB-86/87/97/108/119/125	356	0.862	pg/sample	J	q
PDI-WS-T01-1811	WS	PCB-9	6.75	4.24	pg/sample	JN	bl,k
PDI-WS-T02-1811	WS	PCB-1	19.3	1.25	pg/sample	J	q
PDI-WS-T02-1811	WS	PCB-104	1.32	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-107/124	27.8	1.98	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-111	1.62	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-114	10.9	1.52	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-12/13	15.1	4.25	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-120	6.17	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-122	9.42	2.16	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-123	8.51	1.61	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-126	5.30	1.65	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-134/143	51.8	2.05	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-139/140	21.8	1.87	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-148	5.13	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-150	3.00	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-152	1.58	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-155	1.72	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-159	17.6	1.37	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-16	36.1	0.884	pg/sample	J+	bl
PDI-WS-T02-1811	WS	PCB-162	2.00	1.34	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-17	61.4	0.884	pg/sample	J+	bl
PDI-WS-T02-1811	WS	PCB-175	11.2	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-18/30	82.3	0.884	pg/sample	J+	bl
PDI-WS-T02-1811	WS	PCB-181	3.21	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-184	2.57	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-188	1.39	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-197/200	32.1	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-205	8.72	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-22	68.0	0.888	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-24	1.35	0.884	pg/sample	J+	bl
PDI-WS-T02-1811	WS	PCB-27	10.4	0.884	pg/sample	J+	bl
PDI-WS-T02-1811	WS	PCB-32	44.6	0.884	pg/sample	J+	bl
PDI-WS-T02-1811	WS	PCB-34	2.02	0.884	pg/sample	JN	k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T02-1811	WS	PCB-36	3.54	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-38	1.00	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-4	35.9	4.80	pg/sample	J+	bl
PDI-WS-T02-1811	WS	PCB-6	23.2	4.02	pg/sample	J+	bl
PDI-WS-T02-1811	WS	PCB-66	348	3.82	pg/sample	J	q
PDI-WS-T02-1811	WS	PCB-67	6.52	3.13	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-7	4.81	4.01	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-72	7.85	3.62	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-79	11.2	2.93	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-8	87.5	3.58	pg/sample	J+	bl
PDI-WS-T02-1811	WS	PCB-86/87/97/108/119/125	439	0.884	pg/sample	J	q
PDI-WS-T02-1811	WS	PCB-89	5.62	0.884	pg/sample	JN	k
PDI-WS-T02-1811	WS	PCB-9	6.03	3.81	pg/sample	J+	bl
PDI-WS-T02-1811	WS	PCB-94	5.27	0.884	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-1	17.4	1.06	pg/sample	J	q
PDI-WS-T03-1811	WS	PCB-104	1.51	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-11	282	3.99	pg/sample	J	q
PDI-WS-T03-1811	WS	PCB-120	4.51	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-122	5.08	2.57	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-123	7.55	1.84	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-126	2.50	1.94	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-130	41.2	1.73	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-131	9.27	1.92	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-133	14.6	1.89	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-134/143	39.1	1.87	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-15	50.1	3.02	pg/sample	J+	bl
PDI-WS-T03-1811	WS	PCB-152	1.41	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-16	36.0	0.842	pg/sample	J+	bl
PDI-WS-T03-1811	WS	PCB-162	1.49	1.14	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-175	7.06	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-18/30	84.7	0.842	pg/sample	J+	bl
PDI-WS-T03-1811	WS	PCB-182	1.92	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-188	1.03	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-189	7.71	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-24	1.05	0.842	pg/sample	J+	bl
PDI-WS-T03-1811	WS	PCB-27	9.72	0.842	pg/sample	J+	bl
PDI-WS-T03-1811	WS	PCB-3	14.1	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-32	36.9	0.842	pg/sample	J	bl,q
PDI-WS-T03-1811	WS	PCB-34	1.09	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-4	35.4	4.62	pg/sample	J+	bl

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T03-1811	WS	PCB-43	6.25	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-55	2.88	2.69	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-59/62/75	16.0	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-6	19.3	3.59	pg/sample	J+	bl
PDI-WS-T03-1811	WS	PCB-66	255	2.40	pg/sample	J	q
PDI-WS-T03-1811	WS	PCB-72	8.01	2.35	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-73	2.43	0.842	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-79	6.25	1.87	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-8	74.1	3.29	pg/sample	J+	bl
PDI-WS-T03-1811	WS	PCB-86/87/97/108/119/125	331	0.842	pg/sample	J	q
PDI-WS-T03-1811	WS	PCB-89	3.31	1.00	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-9	5.79	3.46	pg/sample	JN	bl,k
PDI-WS-T03-1811	WS	PCB-94	5.49	1.05	pg/sample	JN	k
PDI-WS-T03-1811	WS	PCB-96	5.33	0.842	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-103	7.53	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-109	30.3	1.76	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-114	6.87	1.49	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-12/13	9.45	3.04	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-120	2.80	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-123	5.41	1.59	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-126	2.28	1.65	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-131	7.83	1.85	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-137	26.2	1.92	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-148	1.64	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-15	34.1	2.40	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-150	1.75	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-155	0.990	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-16	28.9	0.867	pg/sample	JN	bl,k
PDI-WS-T04-1812	WS	PCB-17	53.5	0.867	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-175	6.90	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-18/30	69.9	0.867	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-181	1.90	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-184	1.42	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-189	4.61	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-191	5.52	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-196	39.7	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-20/28	136	0.867	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-201	12.1	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-205	2.79	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-207	7.18	2.49	pg/sample	JN	k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T04-1812	WS	PCB-21/33	68.4	0.867	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-22	45.2	0.867	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-24	1.09	0.867	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-26/29	24.2	0.867	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-27	6.64	0.867	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-31	106	0.867	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-32	35.3	0.867	pg/sample	JN	bl,k
PDI-WS-T04-1812	WS	PCB-36	2.00	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-4	30.8	3.35	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-43	6.68	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-46	8.06	0.867	pg/sample	JN	bl,k
PDI-WS-T04-1812	WS	PCB-54	3.50	0.867	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-6	15.8	2.87	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-63	6.22	2.11	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-66	203	2.15	pg/sample	J	q
PDI-WS-T04-1812	WS	PCB-67	3.18	1.76	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-7	3.99	2.86	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-8	56.7	2.56	pg/sample	J+	bl
PDI-WS-T04-1812	WS	PCB-86/87/97/108/119/125	253	0.867	pg/sample	J	q
PDI-WS-T04-1812	WS	PCB-89	4.70	0.980	pg/sample	JN	k
PDI-WS-T04-1812	WS	PCB-9	6.27	2.73	pg/sample	JN	bl,k
PDI-WS-T04-1812	WS	PCB-94	2.53	0.994	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-1	22.7	1.55	pg/sample	J	q
PDI-WS-T05-1811	WS	PCB-104	1.26	0.868	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-120	4.79	0.868	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-122	14.6	3.31	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-123	14.8	2.54	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-126	6.06	2.56	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-139/140	20.0	2.11	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-148	3.42	0.868	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-150	3.77	0.868	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-159	18.7	1.36	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-162	3.03	1.42	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-181	4.04	0.868	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-188	1.35	0.868	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-191	15.8	0.868	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-202	75.8	0.868	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-207	20.7	2.69	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-24	4.29	0.868	pg/sample	J+	bl
PDI-WS-T05-1811	WS	PCB-36	5.46	1.93	pg/sample	JN	k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T05-1811	WS	PCB-4	60.0	5.81	pg/sample	J+	bl
PDI-WS-T05-1811	WS	PCB-6	31.1	4.72	pg/sample	J+	bl
PDI-WS-T05-1811	WS	PCB-67	17.9	4.56	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-7	7.05	4.84	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-72	5.63	5.31	pg/sample	JN	k
PDI-WS-T05-1811	WS	PCB-8	140	4.32	pg/sample	J+	bl
PDI-WS-T05-1811	WS	PCB-86/87/97/108/119/125	639	0.868	pg/sample	J	q
PDI-WS-T05-1811	WS	PCB-9	8.68	4.56	pg/sample	JN	bl,k
PDI-WS-T06-1811	WS	PCB-1	11.0	2.00	pg/sample	J	q
PDI-WS-T06-1811	WS	PCB-114	6.59	0.936	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-12/13	9.04	2.70	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-122	4.06	1.30	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-123	5.24	0.983	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-126	2.12	0.999	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-131	8.60	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-133	10.2	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-134/143	30.2	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-139/140	12.2	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-15	22.4	2.14	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-150	1.13	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-155	1.27	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-159	6.98	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-16	15.9	0.846	pg/sample	JN	bl,k
PDI-WS-T06-1811	WS	PCB-17	28.6	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-171/173	38.4	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-175	4.76	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-18/30	47.0	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-189	2.75	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-19	7.51	0.846	pg/sample	JN	bl,k
PDI-WS-T06-1811	WS	PCB-191	4.59	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-20/28	75.8	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-207	7.37	2.28	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-21/33	38.0	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-22	23.4	0.976	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-25	9.93	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-26/29	13.0	0.874	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-27	3.71	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-31	58.7	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-32	17.3	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-34	1.08	0.942	pg/sample	JN	k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T06-1811	WS	PCB-35	4.09	0.936	pg/sample	JN	bl,k
PDI-WS-T06-1811	WS	PCB-36	1.65	0.878	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-37	17.8	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-38	2.37	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-4	20.3	2.99	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-40/41/71	38.0	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-42	18.8	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-46	4.48	0.846	pg/sample	JN	bl,k
PDI-WS-T06-1811	WS	PCB-48	16.5	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-59/62/75	7.20	0.846	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-6	13.6	2.56	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-60	20.1	3.05	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-66	117	3.03	pg/sample	J	q
PDI-WS-T06-1811	WS	PCB-8	41.4	2.28	pg/sample	J+	bl
PDI-WS-T06-1811	WS	PCB-86/87/97/108/119/125	263	0.846	pg/sample	J	q
PDI-WS-T06-1811	WS	PCB-9	5.30	2.43	pg/sample	JN	bl,k
PDI-WS-T06-1811	WS	PCB-94	1.22	0.846	pg/sample	JN	k
PDI-WS-T06-1811	WS	PCB-96	1.93	0.846	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-1	13.5	1.06	pg/sample	J	q
PDI-WS-T07-1811	WS	PCB-103	1.75	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-107/124	11.2	1.20	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-114	5.37	0.923	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-120	1.73	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-122	2.86	1.31	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-123	3.69	0.976	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-126	2.51	1.01	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-133	4.82	1.37	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-137	14.5	1.49	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-139/140	3.32	1.30	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-144	12.2	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-15	26.3	3.18	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-159	9.09	0.952	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-16	20.3	0.831	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-164	27.1	0.971	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-17	41.2	0.831	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-175	4.35	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-176	14.6	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-18/30	48.8	0.831	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-181	1.05	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-182	0.934	0.831	pg/sample	JN	k

Sample ID	Matrix	Compound	Result	EDL	Units	Validation Qualifiers	Validation Reason
PDI-WS-T07-1811	WS	PCB-184	3.07	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-189	3.88	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-19	7.89	0.831	pg/sample	JN	bl,k
PDI-WS-T07-1811	WS	PCB-20/28	83.8	0.831	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-207	7.67	2.11	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-21/33	48.2	0.831	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-22	30.7	0.831	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-24	1.05	0.831	pg/sample	JN	bl,k
PDI-WS-T07-1811	WS	PCB-26/29	17.1	0.831	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-27	4.22	0.831	pg/sample	JN	bl,k
PDI-WS-T07-1811	WS	PCB-3	9.59	0.855	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-31	66.4	0.831	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-32	19.5	0.831	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-34	0.993	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-37	20.9	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-4	26.6	4.68	pg/sample	JN	bl,k
PDI-WS-T07-1811	WS	PCB-43	3.45	0.915	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-48	13.6	0.831	pg/sample	JN	bl,k
PDI-WS-T07-1811	WS	PCB-59/62/75	8.69	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-6	13.4	3.88	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-60	18.5	3.49	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-66	98.4	3.46	pg/sample	J	q
PDI-WS-T07-1811	WS	PCB-8	51.1	3.45	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-82	23.6	0.831	pg/sample	JN	k
PDI-WS-T07-1811	WS	PCB-86/87/97/108/119/125	141	0.831	pg/sample	J	q
PDI-WS-T07-1811	WS	PCB-9	5.29	3.68	pg/sample	J+	bl
PDI-WS-T07-1811	WS	PCB-96	0.837	0.831	pg/sample	JN	k

Attachment A

Nonconformance Summary Tables

Table A-1 - Laboratory Blanks

Blank ID	Compound	Result	ML	BAL	Units	Associated Samples
WG66481-101	PCB-4	13.6	3.71	68	pg/sample	PDI-RB-XF-181129 PDI-WS-T01-1811 PDI-WS-T02-1811 PDI-WS-T03-1811 PDI-WS-T04-1812 PDI-WS-T05-1811 PDI-WS-T06-1811 PDI-WS-T07-1811
	PCB-31	23.7	0.864	118	pg/sample	
	PCB-11	32.7	3.73	164	pg/sample	
	PCB-15	10.5	3.08	52.5	pg/sample	
	PCB-209 (decachlorobiphenyl)	3.15	0.864	15.8	pg/sample	
	PCB-6	9.64	3.35	48.2	pg/sample	
	PCB-118	5.73	0.864	28.6	pg/sample	
	PCB-66	5.23	1.30	26.2	pg/sample	
	PCB-105	2.69	0.864	13.4	pg/sample	
	PCB-60	1.60	1.31	8.00	pg/sample	
	PCB-9	3.78	3.23	18.9	pg/sample	
	PCB-8	38.2	3.07	191	pg/sample	
	PCB-27	2.18	0.864	10.9	pg/sample	
	PCB-32	8.93	0.864	44.6	pg/sample	
	PCB-16	14.8	0.864	74.0	pg/sample	
	PCB-22	10.4	0.864	52.0	pg/sample	
	PCB-37	4.13	0.864	20.6	pg/sample	
	PCB-56	1.84	1.37	9.2	pg/sample	
	PCB-46	2.12	0.864	10.6	pg/sample	
	PCB-64	5.83	0.864	29.2	pg/sample	
	PCB-84	2.10	0.864	10.5	pg/sample	
	PCB-92	1.12	0.864	5.60	pg/sample	
	PCB-82	1.26	0.864	6.30	pg/sample	
	PCB-141	1.07	0.864	5.35	pg/sample	
	PCB-24	0.894	0.864	4.47	pg/sample	
	PCB-25	2.22	0.864	11.1	pg/sample	
	PCB-48	4.21	0.864	21.0	pg/sample	
	PCB-68	1.68	1.22	8.40	pg/sample	
	PCB-110/115	6.94	0.864	34.7	pg/sample	
	PCB-128/166	1.10	0.864	5.50	pg/sample	
	PCB-129/138/160/163	5.07	0.864	25.4	pg/sample	
	PCB-135/151/154	1.97	0.864	9.85	pg/sample	
	PCB-147/149	3.20	0.864	16.0	pg/sample	
	PCB-153/168	4.01	0.864	20.0	pg/sample	

Blank ID	Compound	Result	ML	BAL	Units	Associated Samples
	PCB-18/30	33.4	0.864	167	pg/sample	
	PCB-20/28	28.5	0.864	142	pg/sample	
	PCB-21/33	15.4	0.864	77.0	pg/sample	
	PCB-26/29	5.58	0.864	27.9	pg/sample	
	PCB-40/41/71	7.79	0.864	39.0	pg/sample	
	PCB-44/47/65	17.2	0.864	86.0	pg/sample	
	PCB-45/51	4.97	0.864	24.8	pg/sample	
	PCB-49/69	7.34	0.864	36.7	pg/sample	
	PCB-50/53	2.30	0.864	11.5	pg/sample	
	PCB-59/62/75	1.44	0.864	7.20	pg/sample	
	PCB-61/70/74/76	11.0	1.27	55.0	pg/sample	
	PCB-83/99	4.08	0.864	20.4	pg/sample	
	PCB-85/116/117	1.06	0.864	5.30	pg/sample	
	PCB-86/87/97/108/119/125	6.03	0.864	30.2	pg/sample	
	PCB-88/91	0.870	0.864	4.35	pg/sample	
	PCB-90/101/113	6.99	0.864	35.0	pg/sample	
	PCB-93/95/98/100/102	6.08	0.864	30.4	pg/sample	
	PCB-52	18.5	0.864	92.5	pg/sample	
	PCB-42	3.77	0.864	18.8	pg/sample	
	PCB-17	14.7	0.864	73.5	pg/sample	
	PCB-35	1.10	0.864	5.50	pg/sample	
	PCB-132	3.60	0.864	18.0	pg/sample	
	PCB-19	3.78	0.864	18.9	pg/sample	

Table A-2 - Field Blanks

Blank ID	Compound	Result	ML	Units	Associated Samples
PDI-RB-XF-181129	PCB-4	16.9	5.35	pg/sample	PDI-WS-T01-1811 PDI-WS-T02-1811 PDI-WS-T03-1811 PDI-WS-T04-1812 PDI-WS-T05-1811 PDI-WS-T06-1811 PDI-WS-T07-1811
	PCB-31	32.6	0.841	pg/sample	
	PCB-209 (decachlorobiphenyl)	2.57	0.841	pg/sample	
	PCB-118	7.17	0.841	pg/sample	
	PCB-66	7.78	1.60	pg/sample	
	PCB-105	2.42	0.841	pg/sample	
	PCB-60	2.47	1.61	pg/sample	
	PCB-170	1.29	0.841	pg/sample	
	PCB-52	28.0	0.841	pg/sample	
	PCB-42	6.88	0.841	pg/sample	
	PCB-17	57.2	0.841	pg/sample	
	PCB-35	1.39	0.943	pg/sample	
	PCB-132	4.04	0.841	pg/sample	

Blank ID	Compound	Result	ML	Units	Associated Samples
	PCB-136	1.56	0.841	pg/sample	
	PCB-174	1.25	0.841	pg/sample	
	PCB-19	6.37	0.841	pg/sample	
	PCB-27	2.42	0.841	pg/sample	
	PCB-32	14.0	0.852	pg/sample	
	PCB-16	16.1	0.841	pg/sample	
	PCB-22	14.3	0.983	pg/sample	
	PCB-39	1.76	0.879	pg/sample	
	PCB-37	5.15	0.841	pg/sample	
	PCB-56	4.20	1.68	pg/sample	
	PCB-46	1.73	0.841	pg/sample	
	PCB-146	1.58	0.841	pg/sample	
	PCB-64	6.40	0.841	pg/sample	
	PCB-84	3.98	0.841	pg/sample	
	PCB-92	1.31	0.841	pg/sample	
	PCB-179	1.63	0.841	pg/sample	
	PCB-130	1.39	0.841	pg/sample	
	PCB-187	2.63	0.841	pg/sample	
	PCB-177	0.888	0.841	pg/sample	
	PCB-203	1.13	0.841	pg/sample	
	PCB-141	2.44	0.841	pg/sample	
	PCB-24	0.890	0.841	pg/sample	
	PCB-25	8.82	0.841	pg/sample	
	PCB-144	1.16	0.841	pg/sample	
	PCB-48	4.72	0.841	pg/sample	
	PCB-68	54.0	1.48	pg/sample	
	PCB-109	1.05	0.841	pg/sample	
	PCB-107/124	1.07	0.841	pg/sample	
	PCB-110/115	8.86	0.841	pg/sample	
	PCB-128/166	1.92	0.841	pg/sample	
	PCB-129/138/160/163	8.54	0.841	pg/sample	
	PCB-135/151/154	3.62	0.841	pg/sample	
	PCB-147/149	9.76	0.841	pg/sample	
	PCB-153/168	7.18	0.841	pg/sample	
	PCB-171/173	1.13	0.841	pg/sample	
	PCB-18/30	41.4	0.841	pg/sample	
	PCB-180/193	4.28	0.841	pg/sample	
	PCB-183/185	1.68	0.841	pg/sample	
	PCB-198/199	1.26	0.841	pg/sample	
	PCB-20/28	43.2	0.843	pg/sample	

Blank ID	Compound	Result	ML	Units	Associated Samples
	PCB-21/33	26.6	0.847	pg/sample	
	PCB-26/29	8.39	0.880	pg/sample	
	PCB-40/41/71	9.35	0.841	pg/sample	
	PCB-44/47/65	103	0.841	pg/sample	
	PCB-45/51	98.8	0.841	pg/sample	
	PCB-49/69	15.6	0.841	pg/sample	
	PCB-50/53	3.74	0.841	pg/sample	
	PCB-59/62/75	1.65	0.841	pg/sample	
	PCB-61/70/74/76	18.1	1.54	pg/sample	
	PCB-83/99	4.32	0.841	pg/sample	
	PCB-85/116/117	1.37	0.841	pg/sample	
	PCB-86/87/97/108/119/125	5.52	0.841	pg/sample	
	PCB-88/91	1.94	0.841	pg/sample	
	PCB-90/101/113	8.89	0.841	pg/sample	
	PCB-93/95/98/100/102	7.92	0.841	pg/sample	
	PCB-158	1.01	0.841	pg/sample	

Attachment B

Qualifier Codes and Explanations

Qualifier	Explanation
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