

Data Validation Report

Project: Portland Harbor Pre-Remedial Design Investigation and Baseline Sampling
 Portland Harbor Superfund Site
 Subsurface Sediment – Deep/Nearshore Cores

Laboratory: ALS Environmental, Burlington, Ontario, Canada

Laboratory Group: L2150263

Analyses/Method: Chlorinated Pesticides and Total Solids

Validation Level: Stage 2

AECOM Project

Number: 60566335 Task #2.12

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File Name: L2150263 DVR

SUMMARY

The data quality review of 20 subsurface sediment samples, one field duplicate, and one rinsate blank collected on August 16 and August 17, 2018, has been completed. Samples were analyzed for chlorinated pesticides by EPA Method 1699-modified (GC/HRMS) and/or total solids by American Society for Testing and Materials (ASTM) Method D-2974 at ALS Environmental (ALS) located in Burlington, Ontario, Canada. The analyses were performed in general accordance with the methods specified in *Method 1699: Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS*, December 2007 (modified by ALS SOP BU-TM-1103 v07 OCP), and *Annual Book of ASTM Standards*, American Society for Testing & Materials (ASTM), Philadelphia, Pennsylvania. The laboratory provided level 2 and level 4 data packages containing sample results and associated quality assurance (QA) and quality control (QC) data, preparation logs, and raw instrument outputs (where applicable). The following samples are associated with laboratory group L2150263:

Sample ID	Laboratory ID
PDI-SC-S108-8.8TO9.8	L2150263-1
PDI-SC-S108-6.7TO8.8	L2150263-2
PDI-SC-S108-4.7TO6.7	L2150263-3
PDI-SC-S108-3TO4.7	L2150263-4
PDI-SC-S108-1.9TO3	L2150263-5
PDI-SC-S108-0TO1.9	L2150263-6
PDI-SC-S232-4TO6.2	L2150263-7
PDI-SC-S232-2TO4	L2150263-8
PDI-SC-S232-0TO2	L2150263-9
PDI-RB-SS-180817 (rinsate blank)	L2150263-10
PDI-SC-S157-0TO2	L2150263-11
PDI-SC-S157-3.7TO6	L2150263-12
PDI-SC-S157-14TO15.9	L2150263-13
PDI-SC-S157-8TO10	L2150263-14
PDI-SC-S157-2TO3.7	L2150263-15
PDI-SC-S157-10TO12.4	L2150263-16
PDI-SC-S157-6TO8	L2150263-17
PDI-SC-S157-12.4TO14	L2150263-18



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Sample ID	Laboratory ID
PDI-SC-S263-0TO2	L2150263-19
PDI-SC-S263-2TO3.8	L2150263-20
PDI-SC-S263-3.8TO5.9	L2150263-21
PDI-SC-S108-6.7TO8.8D (Duplicate of PDI-SC-S108-6.7TO8.8)	L2150263-22

Data validation is based on method performance criteria and QC criteria documented in the *Quality Assurance Project Plan (QAPP)*, dated March 23, 2018, as amended. If data qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA documents *USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review*, April 2016, *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, January 2017, and *USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review*, January 2017. Data qualifiers assigned to this sample set are included in Table 1.

SAMPLE RECEIPT

Upon receipt by ALS, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperature was recorded. No discrepancies related to sample identification were noted by ALS and the cooler was received at a temperature within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C.

ORGANIC ANALYSIS

Samples were analyzed for chlorinated pesticides by EPA Method 1699.

1. Holding Times – Acceptable except as noted below:

Samples PDI-SC-S263-0TO2, PDI-SC-S263-2TO3.8, PDI-SC-S263-3.8TO5.9, and PDI-SC-S108-6.7TO8.8D were extracted 1 day past the method-recommended holding time of 14 days. The results for all chlorinated pesticides in these samples were flagged 'J' or 'UJ' based on this holding time exceedance.

Sample PDI-SC-S157-12.4TO14 was re-extracted 6 days past the method-recommended holding time of 14 days due to extraction issues. The sample was frozen in archive until re-extraction; therefore, the sample was not extracted outside the holding time.

2. Initial and Continuing Calibration Verifications – Acceptable except as noted below:

The percent recovery for the labeled compound 4,4'-DDT-13C12 (134%) in the continuing calibration verification (CCV) analyzed on September 14, 2018 was outside the control limits of 70-130%. The results for 2,4'-DDT and 4,4'-DDT in PDI-SC-S108-8.8TO9.8, PDI-SC-S108-6.7TO8.8, PDI-SC-S108-4.7TO6.7, PDI-SC-S108-3TO4.7, PDI-SC-S108-1.9TO3, PDI-SC-S108-0TO1.9, PDI-SC-S232-4TO6.2, PDI-SC-S232-2TO4, PDI-SC-S232-0TO2, PDI-SC-S157-0TO2, PDI-SC-S157-3.7TO6, PDI-SC-S157-14TO15.9, PDI-SC-S157-8TO10, PDI-SC-S157-2TO3.7, and PDI-SC-S157-10TO12.4 were qualified as estimated and flagged 'J' or 'UJ' based on this CCV result.

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3. Blanks – Acceptable except as noted below:

The following analytes were detected in the method blanks.

Extraction Date	Analyte	Result
August 30, 2018	2,4'-DDE	0.0165 ng/g
	4,4'-DDE	0.028 ng/g
	2,4'-DDD	0.0783 ng/g
	4,4'-DDD	0.118 ng/g
	2,4'-DDT	0.025 ng/g
	4,4'-DDT	0.157 ng/g
August 23, 2018	4,4'-DDT	0.28 ng/L
August 31, 2018	2,4'-DDE	0.0059 ng/g
	4,4'-DDE	0.011 ng/g
	4,4'-DDD	0.032 ng/g
	4,4'-DDT	0.0399 ng/g

The NFG guidance stipulates that a conservative approach should be taken with regard to qualification of analytes based on blank contamination 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. As allowed in the NFG, a blank action limit (BAL) was determined as 5 times the blank result:

- When the sample results were < the blank result, the sample result was qualified as not detected (U) at the sample result or reported detection limit (RDL).
- When the sample result was \geq the blank result and \leq the BAL, the sample result was qualified as estimated and potentially biased high (J).
- When the sample result was > the BAL, sample result was not qualified.

The following results were reported at concentrations less than the blank concentration; therefore, these results were qualified as not detected and flagged 'U' at the sample results.

- 4,4'-DDE in PDI-SC-S157-3.7TO6.
- 2,4'-DDD in PDI-SC-S157-3.7TO6.
- 4,4'-DDD in PPDI-SC-S157-3.7TO6 and PDI-SC-S157-14TO15.9.

The following results were reported at concentrations greater than the blank concentration but less than the BAL; therefore, these results were qualified as estimated and flagged 'J' at the sample results.

- 2,4'-DDE in PDI-SC-S157-6TO8.
- 4,4'-DDE in PDI-SC-S108-8.8TO9.8 and PDI-SC-S157-6TO8.

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- 2,4'-DDD in PDI-SC-S108-8.8TO9.8.
- 4,4'-DDD in PDI-SC-S157-8TO10 and PDI-SC-S157-6TO8.
- 4,4'-DDT in PDI-RB-SS-180817 and PDI-SC-S157-6TO8.

The following results for were qualified as estimated based on holding time exceedances or CCV results as described in Section 1 and Section 2; therefore, no further qualification based on method blank results was required.

- 2,4'-DDE in PDI-SC-S263-0TO2.
- 2,4'-DDT in PDI-SC-S157-3.7TO6.
- 4,4'-DDT in PDI-SC-S108-8.8TO9.8, PDI-SC-S232-4TO6.2, PDI-SC-S232-2TO4, PDI-SC-S232-0TO2, PDI-SC-S157-2TO3.7, PDI-SC-S263-0TO2, and PDI-SC-S263-2TO3.8.

One rinsate blank was submitted with this laboratory group. After laboratory method blank actions were applied, 4,4'-DDD (0.082 ng/L) was detected at a concentration between the estimated detection limit (EDL) and the reporting limit. Sediment data were not qualified based on rinsate blank detections.

4. Labeled compounds – Acceptable except as noted below:

The percent recoveries for 4,4'-DDE-13C12 were below the control limits of 21-125% in the following samples.

Sample	Labeled Compound	Percent Recovery
PDI-SC-S108-6.7TO8.8	4,4'-DDE-13C12	9%
PDI-SC-S108-4.7TO6.7	4,4'-DDE-13C12	8%
PDI-SC-S108-1.9TO3	4,4'-DDE-13C12	9%
PDI-SC-S108-0TO1.9	4,4'-DDE-13C12	15%
PDI-SC-S232-0TO2	4,4'-DDE-13C12	20%
PDI-SC-S157-0TO2	4,4'-DDE-13C12	12%
PDI-SC-S157-2TO3.7	4,4'-DDE-13C12	14%
PDI-SC-S157-10TO12.4	4,4'-DDE-13C12	8%
Method Blank (Batch WG2856797)	4,4'-DDE-13C12	16%

Data were not qualified based on labeled compound recoveries in the QC (method blank) sample. The results for 2,4'-DDE and 4,4'-DDE in the samples listed above were qualified as estimated and flagged 'J' or 'UJ' based on these labeled compound recoveries.

5. Internal Standards – Acceptable

6. Laboratory Control Sample (LCS) – Acceptable except as noted below:

The percent recoveries for 2,4'-DDE in the LCSs extracted on August 23, 2018 (121%) and

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August 30, 2018 (123%) exceeded the control limits of 50-120%. The results for 2,4'-DDE in PDI-SC-S108-3TO4.7, PDI-SC-S232-4TO6.2, and PDI-SC-S232-2TO4 were qualified as estimated and flagged 'J' based on the elevated LCS recoveries. All other results associated with these LCSs were either not detected or qualified based on labeled compound recoveries; therefore, no further qualification based on LCS recoveries were required.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

An MS/MSD was not performed in association with the rinsate blank. Accuracy was assessed using the LCS results. Precision was not assessed.

An MS/MSD was not performed in association with the sediment samples. Accuracy was assessed using the LCS results. Precision was assessed using laboratory and field duplicate results.

8. Laboratory Duplicate – Acceptable except as noted below:

Laboratory duplicates were performed using PDI-SC-S108-8.8TO9.8 and PDI-SC-S157-6TO8. Results greater than five times the reporting limits (RLs) were evaluated. Results were comparable.

9. Field Duplicate – Acceptable except as noted below:

A field duplicate was submitted for PDI-SC-S108-6.7TO8.8 and identified as PDI-SC-S108-6.7TO8.8D. Results greater than five times the RL were evaluated. Results were comparable.

10. Reporting Limits – Acceptable except as noted below:

One or more results were flagged 'J' by the laboratory to indicate the reported concentrations were above the EDLs but below the reporting limits. Laboratory 'J'-flagged results are considered estimated. As the result is between the EDL and the reporting limit, there is a greater level of uncertainty associated with the numerical result.

The reporting limits for one or more pesticides reported as not detected in multiple samples were elevated due to the moisture content and/or dilution due to matrix interference. The reporting limits do not exceed the cleanup level.

Analytes with an ion abundance ratio outside the control limits of 1.56 +/- 25% were flagged 'R' by the laboratory indicating an 'EMPC' (estimated maximum possible concentration). Results that were not flagged 'U' based on method blank results were qualified as tentatively identified and flagged 'JN' based on this laboratory flag as identified in Table 1.

CONVENTIONAL ANALYSIS

Sediment samples were analyzed for total solids by ASTM D-2974.

1. Holding Times – Acceptable except as noted below:

The sediment samples exceeded the 7-day holding time indicated in the QAPP. No data qualifiers were assigned based on the holding time exceedance.



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2. Laboratory Duplicate – Acceptable

Laboratory duplicates were performed using PDI-SC-S108-8.8TO9.8 and PDI-SC-S157-6TO8. Results were comparable.

3. Field Duplicate – Acceptable

A field duplicate was submitted for PDI-SC-S108-6.7TO8.8 and identified as PDI-SC-S108-6.7TO8.8D. Results were comparable.

4. Reporting Limits – Acceptable

OVERALL ASSESSMENT OF DATA

The data reported in this laboratory group is considered usable for meeting project objectives. The completeness for laboratory group L2150263 is 100%.

Table 1
QA/QC Data Summary Review
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Subsurface Sediment
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Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
PDI-SC-S108-8.8TO9.8	L2150263-1	E1699M	2,4-DDD	0.311 J,B	ng/g	0.311 J	bl
PDI-SC-S108-8.8TO9.8	L2150263-1	E1699M	2,4-DDT	0.051 U	ng/g	0.051 UJ	c
PDI-SC-S108-8.8TO9.8	L2150263-1	E1699M	4,4'-DDE	0.135 J	ng/g	0.135 J	bl
PDI-SC-S108-8.8TO9.8	L2150263-1	E1699M	4,4'-DDT	0.426 M,J,B	ng/g	0.426 J	c
PDI-SC-S108-6.7TO8.8	L2150263-2	E1699M	2,4-DDE	0.18 U	ng/g	0.18 UJ	lc
PDI-SC-S108-6.7TO8.8	L2150263-2	E1699M	2,4-DDT	0.14 U	ng/g	0.14 UJ	c
PDI-SC-S108-6.7TO8.8	L2150263-2	E1699M	4,4'-DDE	0.24 U	ng/g	0.24 UJ	lc
PDI-SC-S108-6.7TO8.8	L2150263-2	E1699M	4,4'-DDT	1.34 J,B	ng/g	1.34 J	c
PDI-SC-S108-6.7TO8.8	L2150263-2	E1699M	2,4-DDD	0.71 J,R	ng/g	0.71 JN	k
PDI-SC-S108-4.7TO6.7	L2150263-3	E1699M	2,4-DDE	1.08 M,J	ng/g	1.08 J	lc
PDI-SC-S108-4.7TO6.7	L2150263-3	E1699M	2,4-DDT	2.1 R	ng/g	2.1 JN	c,k
PDI-SC-S108-4.7TO6.7	L2150263-3	E1699M	4,4'-DDE	4.13	ng/g	4.13 J	lc
PDI-SC-S108-4.7TO6.7	L2150263-3	E1699M	4,4'-DDT	9.23	ng/g	9.23 J	c
PDI-SC-S108-3TO4.7	L2150263-4	E1699M	2,4-DDE	0.466 J	ng/g	0.466 J	l
PDI-SC-S108-3TO4.7	L2150263-4	E1699M	2,4-DDT	0.74 J,R	ng/g	0.74 JN	c,k
PDI-SC-S108-3TO4.7	L2150263-4	E1699M	4,4'-DDT	13.9	ng/g	13.9 J	c
PDI-SC-S108-1.9TO3	L2150263-5	E1699M	2,4-DDE	0.687 J	ng/g	0.687 J	lc
PDI-SC-S108-1.9TO3	L2150263-5	E1699M	2,4-DDT	1.67 J	ng/g	1.67 J	c
PDI-SC-S108-1.9TO3	L2150263-5	E1699M	4,4'-DDE	4.54	ng/g	4.54 J	lc
PDI-SC-S108-1.9TO3	L2150263-5	E1699M	4,4'-DDT	27.5	ng/g	27.5 J	c
PDI-SC-S108-0TO1.9	L2150263-6	E1699M	2,4-DDE	0.254 J	ng/g	0.254 J	lc
PDI-SC-S108-0TO1.9	L2150263-6	E1699M	2,4-DDT	1.74	ng/g	1.74 J	c
PDI-SC-S108-0TO1.9	L2150263-6	E1699M	4,4'-DDE	2.14	ng/g	2.14 J	lc
PDI-SC-S108-0TO1.9	L2150263-6	E1699M	4,4'-DDT	71.8	ng/g	71.8 J	c
PDI-SC-S232-4TO6.2	L2150263-7	E1699M	2,4-DDE	0.211 J	ng/g	0.211 J	l
PDI-SC-S232-4TO6.2	L2150263-7	E1699M	2,4-DDT	0.15 M,J,R	ng/g	0.15 JN	c,k
PDI-SC-S232-4TO6.2	L2150263-7	E1699M	4,4'-DDT	0.204 J,B	ng/g	0.204 J	c
PDI-SC-S232-2TO4	L2150263-8	E1699M	2,4-DDE	0.472 J	ng/g	0.472 J	l
PDI-SC-S232-2TO4	L2150263-8	E1699M	2,4-DDT	0.047 U	ng/g	0.047 UJ	c
PDI-SC-S232-2TO4	L2150263-8	E1699M	4,4'-DDT	0.408 J,B	ng/g	0.408 J	c
PDI-SC-S232-0TO2	L2150263-9	E1699M	2,4-DDE	1.25 J	ng/g	1.25 J	lc
PDI-SC-S232-0TO2	L2150263-9	E1699M	2,4-DDT	0.058 U	ng/g	0.058 UJ	c
PDI-SC-S232-0TO2	L2150263-9	E1699M	4,4'-DDE	15.7	ng/g	15.7 J	lc
PDI-SC-S232-0TO2	L2150263-9	E1699M	4,4'-DDT	0.41 J,R	ng/g	0.41 JN	c,k
PDI-RB-SS-180817	L2150263-10	E1699M	4,4'-DDD	0.082 M,J,R	ng/L	0.082 JN	k
PDI-RB-SS-180817	L2150263-10	E1699M	4,4'-DDT	0.31 M,J,R	ng/L	0.31 JN	bl,k
PDI-SC-S157-0TO2	L2150263-11	E1699M	2,4-DDE	0.24 M,J,R	ng/g	0.24 JN	lc,k
PDI-SC-S157-0TO2	L2150263-11	E1699M	2,4-DDT	0.12 U	ng/g	0.12 UJ	c
PDI-SC-S157-0TO2	L2150263-11	E1699M	4,4'-DDE	2.33 M	ng/g	2.33 J	lc
PDI-SC-S157-0TO2	L2150263-11	E1699M	4,4'-DDT	0.31 U	ng/g	0.31 UJ	c
PDI-SC-S157-3.7TO6	L2150263-12	E1699M	2,4-DDD	0.0494 J,B	ng/g	0.0494 U	bl
PDI-SC-S157-3.7TO6	L2150263-12	E1699M	2,4-DDT	0.0332 J	ng/g	0.0332 J	c
PDI-SC-S157-3.7TO6	L2150263-12	E1699M	4,4'-DDD	0.0904 J,B	ng/g	0.0904 U	bl
PDI-SC-S157-3.7TO6	L2150263-12	E1699M	4,4'-DDE	0.0219 J	ng/g	0.0219 U	bl
PDI-SC-S157-3.7TO6	L2150263-12	E1699M	4,4'-DDT	2.07	ng/g	2.07 J	c
PDI-SC-S157-14TO15.9	L2150263-13	E1699M	2,4-DDT	0.021 U	ng/g	0.021 UJ	c
PDI-SC-S157-14TO15.9	L2150263-13	E1699M	4,4'-DDD	0.035 J,R	ng/g	0.035 U	bl
PDI-SC-S157-14TO15.9	L2150263-13	E1699M	4,4'-DDT	0.035 U	ng/g	0.035 UJ	c
PDI-SC-S157-8TO10	L2150263-14	E1699M	2,4-DDT	0.064 U	ng/g	0.064 UJ	c
PDI-SC-S157-8TO10	L2150263-14	E1699M	4,4'-DDD	0.12 J,R	ng/g	0.12 JN	bl,k
PDI-SC-S157-8TO10	L2150263-14	E1699M	4,4'-DDT	0.16 U	ng/g	0.16 UJ	c
PDI-SC-S157-2TO3.7	L2150263-15	E1699M	2,4-DDE	0.191 J	ng/g	0.191 J	lc
PDI-SC-S157-2TO3.7	L2150263-15	E1699M	2,4-DDT	0.064 U	ng/g	0.064 UJ	c
PDI-SC-S157-2TO3.7	L2150263-15	E1699M	4,4'-DDE	0.882 J	ng/g	0.882 J	lc
PDI-SC-S157-2TO3.7	L2150263-15	E1699M	4,4'-DDT	0.662 J,B	ng/g	0.662 J	c
PDI-SC-S157-10TO12.4	L2150263-16	E1699M	2,4-DDE	0.14 U	ng/g	0.14 UJ	lc
PDI-SC-S157-10TO12.4	L2150263-16	E1699M	2,4-DDT	0.090 U	ng/g	0.090 UJ	c
PDI-SC-S157-10TO12.4	L2150263-16	E1699M	4,4'-DDE	0.18 U	ng/g	0.18 UJ	lc
PDI-SC-S157-10TO12.4	L2150263-16	E1699M	4,4'-DDT	0.25 U	ng/g	0.25 UJ	c

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Sample ID	Laboratory ID	Method	Analyte	Laboratory Result	Units	Final Result	Reason Code
PDI-SC-S157-6TO8	L2150263-17	E1699M	2,4-DDE	0.012 M,J,R	ng/g	0.012 JN	bl,k
PDI-SC-S157-6TO8	L2150263-17	E1699M	4,4'-DDD	0.085 M,J,R	ng/g	0.085 JN	bl,k
PDI-SC-S157-6TO8	L2150263-17	E1699M	4,4'-DDE	0.0434 M,J	ng/g	0.0434 J	bl
PDI-SC-S157-6TO8	L2150263-17	E1699M	4,4'-DDT	0.0835 M,J,B	ng/g	0.0835 J	bl
PDI-SC-S157-12.4TO14	L2150263-18	E1699M	4,4'-DDD	0.029 J,R	ng/g	0.029 JN	k
PDI-SC-S263-0TO2	L2150263-19	E1699M	2,4-DDD	0.108 M,J	ng/g	0.108 J	h
PDI-SC-S263-0TO2	L2150263-19	E1699M	2,4-DDE	0.0233 M,J	ng/g	0.0233 J	h
PDI-SC-S263-0TO2	L2150263-19	E1699M	2,4-DDT	0.054 M,J,R	ng/g	0.054 JN	h,k
PDI-SC-S263-0TO2	L2150263-19	E1699M	4,4'-DDD	0.344 M,J	ng/g	0.344 J	h
PDI-SC-S263-0TO2	L2150263-19	E1699M	4,4'-DDE	0.518 J	ng/g	0.518 J	h
PDI-SC-S263-0TO2	L2150263-19	E1699M	4,4'-DDT	0.193 J,B	ng/g	0.193 J	h
PDI-SC-S263-2TO3.8	L2150263-20	E1699M	2,4-DDD	0.240 J	ng/g	0.240 J	h
PDI-SC-S263-2TO3.8	L2150263-20	E1699M	2,4-DDE	0.0467 M,J	ng/g	0.0467 J	h
PDI-SC-S263-2TO3.8	L2150263-20	E1699M	2,4-DDT	0.027 U	ng/g	0.027 UJ	h
PDI-SC-S263-2TO3.8	L2150263-20	E1699M	4,4'-DDD	1.01 M,J	ng/g	1.01 J	h
PDI-SC-S263-2TO3.8	L2150263-20	E1699M	4,4'-DDE	1.36 J	ng/g	1.36 J	h
PDI-SC-S263-2TO3.8	L2150263-20	E1699M	4,4'-DDT	0.151 M,J,B	ng/g	0.151 J	h
PDI-SC-S263-3.8TO5.9	L2150263-21	E1699M	2,4-DDD	0.656 M,J	ng/g	0.656 J	h
PDI-SC-S263-3.8TO5.9	L2150263-21	E1699M	2,4-DDE	0.0929 M,J	ng/g	0.0929 J	h
PDI-SC-S263-3.8TO5.9	L2150263-21	E1699M	2,4-DDT	0.095 M,J,R	ng/g	0.095 JN	h,k
PDI-SC-S263-3.8TO5.9	L2150263-21	E1699M	4,4'-DDD	2.02 M	ng/g	2.02 J	h
PDI-SC-S263-3.8TO5.9	L2150263-21	E1699M	4,4'-DDE	2.40	ng/g	2.40 J	h
PDI-SC-S263-3.8TO5.9	L2150263-21	E1699M	4,4'-DDT	0.286 J,B	ng/g	0.286 J	h
PDI-SC-S108-6.7TO8.8D	L2150263-22	E1699M	2,4-DDD	0.408 M,J	ng/g	0.408 J	h
PDI-SC-S108-6.7TO8.8D	L2150263-22	E1699M	2,4-DDE	0.021 U	ng/g	0.021 UJ	h
PDI-SC-S108-6.7TO8.8D	L2150263-22	E1699M	2,4-DDT	0.031 U	ng/g	0.031 UJ	h
PDI-SC-S108-6.7TO8.8D	L2150263-22	E1699M	4,4'-DDD	0.818 M,J	ng/g	0.818 J	h
PDI-SC-S108-6.7TO8.8D	L2150263-22	E1699M	4,4'-DDE	0.151 M,J	ng/g	0.151 J	h
PDI-SC-S108-6.7TO8.8D	L2150263-22	E1699M	4,4'-DDT	0.204 J,B	ng/g	0.204 J	h

Notes:

- B - detected in blank at >10% of sample concentration
- bl - laboratory blank contamination
- c - calibration issue
- h - holding time
- J - estimated value
- JN - tentatively identified analyte
- k - Estimated Maximum Possible Concentration (EMPC)
- I - LCS recovery
- Ic - labeled compound recovery
- M - manual integration by laboratory
- ng/g - nanogram per gram
- ng/L - nanogram per liter
- R - Ion abundance outside acceptance criterion
- U - Compound was analyzed for, but not detected above the value shown.

Note: Line items where the laboratory result contains a "J" and the final result contains a "U" with a data validation reason code "bl" indicate that the final result is reported as not detected ("U" flag) at the sample result.