



United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

November 23, 2010

Tom Hatzopoulos - Mail Code OSRR02-2
US EPA New England R1

Project Number: 10110016

Project: Former Bendix Property - Greenville, MA

Analysis: PCBs in Oils

Analyst: Paul Carroll

Carroll
11/23/10

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England SOP for Sample Log-in

Sample preparation and analysis was done following the EPA Region I SOP, PCBOIL1.SOP.

The SOP is based on EPA SW-846 Method 8082

PCBs or Aroclors were extracted from oil and solvent soluble samples using a waste dilution technique using hexane as a solvent. Samples were then purified to reduce interferences by using a sulfuric acid clean-up followed by a florisil column elution. Sample extracts were directly injected into an Agilent 6890 gas chromatograph system equipped with dual 30M x 0.25mm capillary columns DB-5 and DB-1701. Detection is by electron capture detectors, and quantitation is performed using an external standard calibration method. This procedure follows EPA SW-846 Method 8082, Rev 0, December 1996.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Date Samples Received by the Laboratory: 11/05/2010

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Daniel N. Boudreau 12/1/10

Daniel N. Boudreau
Chemistry Team Leader

Qualifiers: RL = Reporting limit
ND = Not Detected above Reporting limit
NA = Not Applicable due to high sample dilutions or sample interferences
J = Estimated value
E = Estimated value exceeds the calibration range
L = Estimated value is below the calibration range
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
P = The confirmation value exceeded 35% difference and is less than 100%. The lower value is reported.
C = The identification has been confirmed by GC/MS.
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Former Bendix Property - Greenville, MA

PCBs in Oils

Client Sample ID: R01-101104TH-0001
Date of Collection: 11/4/2010
Date of Extraction: 11/22/10
Date of Analysis: 11/22/10
Weight Extracted: 0.112 grams

Lab Sample ID: AB12639
Matrix: Product
Final Volume: 10 mL
Extract Dilution: 1

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	9	
11104-28-2	Aroclor-1221	ND	9	
11141-16-5	Aroclor-1232	ND	9	
53469-21-9	Aroclor-1242	ND	9	
12672-29-6	Aroclor-1248	ND	9	
11097-69-1	Aroclor-1254	ND	9	
11096-82-5	Aroclor-1260	ND	9	
11100-14-4	Aroclor-1262	ND	9	
37324-23-5	Aroclor-1268	ND	9	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	90	59 - 108
Decachlorobiphenyl	104	54 - 100

Comments: Surrogate recovery for decachlorobiphenyl exceeded the QC limit.

US ENVIRONMENTAL PROTECTION AGENCY
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Former Bendix Property - Greenville, MA

PCBs in Oils

Client Sample ID: R01-101104TH-0002
Date of Collection: 11/4/2010
Date of Extraction: 11/22/10
Date of Analysis: 11/22/10
Weight Extracted: 0.124 grams

Lab Sample ID: AB12640
Matrix: Product
Final Volume: 10 mL
Extract Dilution: 1

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	8	
11104-28-2	Aroclor-1221	ND	8	
11141-16-5	Aroclor-1232	ND	8	
53469-21-9	Aroclor-1242	ND	8	
12672-29-6	Aroclor-1248	ND	8	
11097-69-1	Aroclor-1254	ND	8	
11096-82-5	Aroclor-1260	ND	8	
11100-14-4	Aroclor-1262	ND	8	
37324-23-5	Aroclor-1268	ND	8	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	90	59 - 108
Decachlorobiphenyl	101	54 - 100

Comments: Surrogate recovery for decachlorobiphenyl exceeded the QC limit.

US ENVIRONMENTAL PROTECTION AGENCY
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Former Bendix Property - Greenville, MA

PCBs in Oils

Client Sample ID: R01-101104TH-0003
Date of Collection: 11/4/2010
Date of Extraction: 11/22/10
Date of Analysis: 11/22/10
Weight Extracted: 0.120 grams

Lab Sample ID: AB12641
Matrix: Product
Final Volume: 10 mL
Extract Dilution: 1

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	8	
11104-28-2	Aroclor-1221	ND	8	
11141-16-5	Aroclor-1232	ND	8	
53469-21-9	Aroclor-1242	ND	8	
12672-29-6	Aroclor-1248	ND	8	
11097-69-1	Aroclor-1254	ND	8	
11096-82-5	Aroclor-1260	ND	8	
11100-14-4	Aroclor-1262	ND	8	
37324-23-5	Aroclor-1268	ND	8	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	89	59 - 108
Decachlorobiphenyl	100	54 - 100

Comments:

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Former Bendix Property - Greenville, MA

PCBs in Oils

Client Sample ID: R01-101104TH-0004
Date of Collection: 11/4/2010
Date of Extraction: 11/22/10
Date of Analysis: 11/22/10
Weight Extracted: 0.118 grams

Lab Sample ID: AB12642
Matrix: Product
Final Volume: 10 mL
Extract Dilution: 1

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	8	
11104-28-2	Aroclor-1221	ND	8	
11141-16-5	Aroclor-1232	ND	8	
53469-21-9	Aroclor-1242	ND	8	
12672-29-6	Aroclor-1248	ND	8	
11097-69-1	Aroclor-1254	ND	8	
11096-82-5	Aroclor-1260	ND	8	
11100-14-4	Aroclor-1262	ND	8	
37324-23-5	Aroclor-1268	ND	8	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	95	59 - 108
Decachlorobiphenyl	105	54 - 100

Comments: Surrogate recovery for decachlorobiphenyl exceeded the QC limit.

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Former Bendix Property - Greenville, MA

PCBs in Oils

Client Sample ID: R01-101104TH-0005
Date of Collection: 11/4/2010
Date of Extraction: 11/22/10
Date of Analysis: 11/22/10
Weight Extracted: 0.104 grams

Lab Sample ID: AB12643
Matrix: Product
Final Volume: 10 mL
Extract Dilution: 1

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	10	
11104-28-2	Aroclor-1221	ND	10	
11141-16-5	Aroclor-1232	ND	10	
53469-21-9	Aroclor-1242	ND	10	
12672-29-6	Aroclor-1248	ND	10	
11097-69-1	Aroclor-1254	ND	10	
11096-82-5	Aroclor-1260	ND	10	
11100-14-4	Aroclor-1262	ND	10	
37324-23-5	Aroclor-1268	ND	10	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	90	59 - 108
Decachlorobiphenyl	101	54 - 100

Comments: Surrogate recovery for decachlorobiphenyl exceeded the QC limit.

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Former Bendix Property - Greenville, MA

PCBs in Oils

Client Sample ID: R01-101104TH-0006
Date of Collection: 11/4/2010
Date of Extraction: 11/22/10
Date of Analysis: 11/22/10
Weight Extracted: 0.116 grams

Lab Sample ID: AB12644
Matrix: Product
Final Volume: 10 mL
Extract Dilution: 1

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	9	
11104-28-2	Aroclor-1221	ND	9	
11141-16-5	Aroclor-1232	ND	9	
53469-21-9	Aroclor-1242	ND	9	
12672-29-6	Aroclor-1248	ND	9	
11097-69-1	Aroclor-1254	ND	9	
11096-82-5	Aroclor-1260	ND	9	
11100-14-4	Aroclor-1262	ND	9	
37324-23-5	Aroclor-1268	ND	9	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	62	59 - 108
Decachlorobiphenyl	108	54 - 100

Comments: Surrogate recovery for decachlorobiphenyl exceeded the QC limit.

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Former Bendix Property - Greenville, MA

PCBs in Oils

Client Sample ID: R01-101104TH-0007
Date of Collection: 11/4/2010
Date of Extraction: 11/22/10
Date of Analysis: 11/22/10
Weight Extracted: 0.107 grams

Lab Sample ID: AB12645
Matrix: Product
Final Volume: 10 mL
Extract Dilution: 1

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	9	
11104-28-2	Aroclor-1221	ND	9	
11141-16-5	Aroclor-1232	ND	9	
53469-21-9	Aroclor-1242	ND	9	
12672-29-6	Aroclor-1248	ND	9	
11097-69-1	Aroclor-1254	ND	9	
11096-82-5	Aroclor-1260	ND	9	
11100-14-4	Aroclor-1262	ND	9	
37324-23-5	Aroclor-1268	ND	9	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	61	59 - 108
Decachlorobiphenyl	106	54 - 100

Comments: Surrogate recovery for decachlorobiphenyl exceeded the QC limit.

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Former Bendix Property - Greenville, MA

PCBs in Oils

Client Sample ID: R01-101104TH-0043
Date of Collection: 11/4/2010
Date of Extraction: 11/22/10
Date of Analysis: 11/22/10
Weight Extracted: 0.177 grams

Lab Sample ID: AB12650
Matrix: Solid Product
Final Volume: 10 mL
Extract Dilution: 1

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	6	
11104-28-2	Aroclor-1221	ND	6	
11141-16-5	Aroclor-1232	ND	6	
53469-21-9	Aroclor-1242	ND	6	
12672-29-6	Aroclor-1248	ND	6	
11097-69-1	Aroclor-1254	ND	6	
11096-82-5	Aroclor-1260	ND	6	
11100-14-4	Aroclor-1262	ND	6	
37324-23-5	Aroclor-1268	ND	6	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	91	59 - 108
Decachlorobiphenyl	104	54 - 100

Comments: Surrogate recovery for decachlorobiphenyl exceeded the QC limit.

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Laboratory Blank

Client Sample ID: N/A
Date of Collection: N/A
Date of Extraction: 11/22/10
Date of Analysis: 11/22/10
Weight Extracted: 0.148 grams

Lab Sample ID: N/A
Matrix: Solid Product
Final Volume: 10 mL
Extract Dilution: 1

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	10	
11104-28-2	Aroclor-1221	ND	10	
11141-16-5	Aroclor-1232	ND	10	
53469-21-9	Aroclor-1242	ND	10	
12672-29-6	Aroclor-1248	ND	10	
11097-69-1	Aroclor-1254	ND	10	
11096-82-5	Aroclor-1260	ND	10	
11100-14-4	Aroclor-1262	ND	10	
37324-23-5	Aroclor-1268	ND	10	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	89	55 - 106
Decachlorobiphenyl	99	47 - 120

Comments:

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LABORATORY FORTIFIED BLANK (LFB) AND DUPLICATE (LFB Dup) RECOVERY

Former Bendix Property - Greenville, MA

COMPOUND	SPIKE ADDED mg/kg	LFB CONCENTRATION mg/kg	LFB RECOVERY %	QC LIMITS (% REC)
Aroclor-1016	60	57.7	96	
Aroclor-1254	ND			
Aroclor-1260	60	58.8	98	50 - 127

Comments:

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Laboratory Duplicate Results

Sample ID: AB12650

PARAMETER	SAMPLE RESULT mg/Kg	SAMPLE DUPLICATE RESULT mg/Kg	PRECISION RPD %	QC LIMITS
Aroclor-1016	ND	ND		50
Aroclor-1221	ND	ND		50
Aroclor-1232	ND	ND		50
Aroclor-1242	ND	ND		50
Aroclor-1248	ND	ND		50
Aroclor-1254	ND	ND		50
Aroclor-1260	ND	ND		50
Aroclor-1262	ND	ND		50
Aroclor-1268	ND	ND		50

