



Prepared for:

City of Manitowoc
Planning Department
900 Quay Street
Manitowoc, Wisconsin 54220

PCB Contaminated Concrete Sampling and Unlabeled Drum Characterization Results

1512 Washington Street,
Manitowoc, Wisconsin

Symbiont Project No. W140408
May 13, 2015

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Section 1.0 INTRODUCTION

This report documents the results of the polychlorinated biphenyl (PCB) contaminated concrete and unlabeled drum sampling at a property located at 1512 Washington Street, Manitowoc, Wisconsin (hereinafter referred to as the "Site" or "Property"). The Site location is shown on Figure 1.

Sampling and analysis was completed by Symbiont pursuant to the Site-Specific Sampling and Analysis Plan (SAP) which was prepared on behalf of the City of Manitowoc ("City") and Niagara World Wide LLC, by Symbiont (2014) and approved by the United States Environmental Protection Agency (USEPA) in an email correspondence dated October 29, 2014. All work was completed in compliance with the United States Environmental Protection Agency (USEPA) approved Quality Assurance Project Plan (QAPP; Symbiont, 2012). PCB contaminated concrete sampling was conducted pursuant to USEPAs Standard Operating Procedures for Sampling Porous Surfaces for PCB (USEPA, 2011). The sampling was conducted using funding provided through a Wisconsin Economic Development Corporation (WEDC) Site Assessment Grant (SAG) awarded in July 2014.

The primary purpose of the polychlorinated biphenyl (PCB) contaminated concrete and unlabeled drum characterization was to assist the site owner in delineating the concrete contamination and characterize the contents of the drums to facilitate disposal. The activities included collection and analysis of concrete samples and subcontracting Veolia ES Industrial Services (Veolia) to sample and characterize the contents of the five 15-gallon unlabeled drums currently stored at the Site.

Supporting documentation presented within the appendices includes:

- Photo documentation
- Laboratory analytical reports and chain-of-custody documentation
- Veolia Report, VES-IS Project Number: 41GT15.078 (2015)

Section 2.0 BACKGROUND INFORMATION

2.1 SITE LOCATION AND LEGAL DESCRIPTION

The Site includes one parcel of land, located at 1512 Washington Street in Manitowoc, Wisconsin. The Site is described as follows:

Street Address	Tax ID	Lot Size (acres)
1512 Washington St.	052-000-246-000.00	3.72

2.2 ENVIRONMENTAL CONCERNS

PCBs are a group of synthetic organic chemicals that were domestically manufactured from 1929 until manufacturing of the chemicals was banned in the United States in 1979, due to the promulgation of the 1976 Toxic Substances Control Act (TSCA). Although PCBs are no longer commercially produced in the United States, they may be present in materials manufactured or produced before 1979. PCBs were commonly used in electrical equipment, including transformers.

PCB Contaminated Concrete

During an EPA Targeted Brownfield Assessment (TBA) conducted at the Site by Advanced Environmental Solutions (AES), it was noted that PCB containing transformers had been "illegally drained". Transformer fluid appears to have been drained into drums; however, it was noted that the concrete in three areas surrounding the transformers was significantly stained. Wipe samples were collected from the concrete in this area in 2010. The analytical results confirmed the presence of PCBs at concentrations ranging from 3.8 to 16.1 micrograms per 100 square centimeters ($\mu\text{g}/100 \text{ cm}^2$) at the unstained area. Higher concentrations of PCBs ranging from 70.5 to 302 $\mu\text{g}/100 \text{ cm}^2$ were detected at the perimeter of the stained area. Concentrations of PCBs ranged from 594 to 459,000 $\mu\text{g}/100 \text{ cm}^2$ within the stained area (AES, 2011).

Containers of Unknown Product/Unlabeled Containers

Approximately 30 small drums of waste oil, some of which contained concentrations of PCBs up to 480,000 milligrams per kilogram (mg/kg), and three small drums of ethylene glycol (antifreeze) are known to be at the Site. In addition, according to the Site owner, there are reportedly several unlabeled containers of unknown product at the Site. Subsequent inspections conducted at the site confirmed five unlabeled containers are located at the Site.

Section 3.0

METHODS OF INVESTIGATION

This section documents the methods of investigation used by Symbiont to perform the field and laboratory portions of the PCB contaminated concrete sampling. Sample methods, procedures and analytical result for the unlabeled drums are provided in Attachment C. As noted in Section 1, this work was completed in compliance with a Site-Specific SAP, prepared on behalf of the City and Niagara World Wide LLC, by Symbiont (2014) and approved by the USEPA. Photographic documentation of the activities is provided in Appendix A.

3.1 PCB CONTAMINATED CONCRETE SAMPLING

The concrete investigation consisted of collecting eight core samples from Area A (former transformer pad) and three core samples from Area B (loading dock area), each area is shown on Figure 2. The number of samples collected were determined based on sample design criteria described in USEPAs Sampling Guidelines for Porous Surfaces (USEPA, 2011).

In accordance with the US EPA sampling guidelines for porous surfaces (USEPA, 2011), Title 40 Code of Federal Regulations chapter 761 (40 CFR 761), and in general compliance with Symbiont SOPs 06.08 and 06.18, core samples were collected using a powder drill with a core drill bit attachment. The samples were collected on a bulk basis, from the top 0.5 centimeters (cm) to 2 cm of the porous surface.

In accordance with the US EPA guidelines and 40 CFR 761, the samples were collected based on a grid pattern at the approximate locations as shown on Figure 2. The sample locations were marked on the concrete surface using paint. All collected samples were placed in laboratory-supplied containers, preserved as appropriate, stored on ice, and submitted under proper chain-of-custody procedures to TestAmerica-University Park, Illinois for analysis. The samples were analyzed for PCBs by USEPA method 8082.

Evaluation Criteria

Analytical results were evaluated by comparing the constituent concentrations detected in the samples with US EPA guidelines and 40 CFR 761 disposal standards for PCB remediation waste.

3.2 UNLABLED DRUM CHARACTERIZATION

Prior to Veolia arriving on Site, Symbiont located the unlabeled drums that were required to be sampled. Five, approximate 15-gallon drums were located on the Site. Sampling was conducted by Veolia and in general compliance with Symbiont's SOP 01.08. The content of the containers were visually inspected. Veolia determined that the contents of each of the containers was similar; therefore, one composite was created for submittal to the laboratory (see Veolia Sampling Report in Appendix C). The contents were field screened for organic vapors using a photoionization detector (PID), and flammability. The composite sample was submitted to the laboratory for analysis of PCBs (method 8082), Resource Conservation and Recovery Act (RCRA) metals (methods 6010 and 7470), Volatile Organic Compounds (VOCs) (method

8260), Semi-Volatile Organic Compounds (SVOCs) (method 8270), pH (method 9040/6045), and flashpoint (method 1010). Laboratory analysis was performed to facilitate proper disposal by the Site owner.

Evaluation Criteria

The liquid in the drums were evaluated by comparing concentrations contaminants with the disposal criteria set forth 40 CFR 261.

Section 4.0 SAMPLING RESULTS

The concrete sampling locations are depicted on Figure 2. Sample locations include eight coring locations in Area A and three coring locations in Area B. Photographs taken during the sampling activities are presented in Appendix A. Laboratory analytical results for the concrete samples are presented in Appendix B and are summarized in Table 1.

4.1 CONCRETE ANALYTICAL RESULTS

As noted in Section 3.2, concrete samples were analyzed for PCBs. Table 1 presents a summary of results for the samples compared to the EPA guidance set forth in 40 CFR 761.

Samples were collected from two locations, Area A and Area B as shown on Figure 2. Eight samples were collected from Area A and three samples were collected from Area B. Aroclor 1260 was detected in all Area A samples at concentrations ranging from 23,000 milligrams per kilogram (mg/kg) to 79,000 mg/kg. Aroclor 1260 was also detected in all Area B samples ranging from 11,000 mg/kg to 26,000 mg/kg (Table 1: Appendix B).

4.2 UNLABLED DRUMS

As noted in Section 3.2, each of the five 15-gallon drums was sampled and composited into one sample for laboratory analysis of PCBs, RCRA Metals, VOCs, SVOCs, pH, and flashpoint. PCBs, specifically Aroclor 1260 was detected at a concentration of 9.5 micrograms per liter (ug/l). VOCs including benzene and toluene were each detected at concentration of 6.0 ug/l and 8.8 ug/l, respectively. RCRA metals detected in the sample included barium, cadmium, chromium, and lead. Concentrations of these metals were 1,090 ug/l, 10.8 ug/l, 33.0 ug/l, and 977 ug/l, respectively. SVOCs were not detected in the sample at concentrations above the laboratory's limits of detection (Appendix C).

Section 5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the PCB contaminated concrete and unlabeled drum sampling and analysis activities, the following conclusions and recommendations are made.

5.1 CONCLUSIONS AND RECOMMENDATIONS

General Site Conditions

The Site is located at 1512 Washington Street in Manitowoc, Wisconsin. Two areas of PCB contaminated concrete were identified in the building on the southern half of the Site. A large amount of debris is scattered on top of these areas, particularly in Area A. In addition, five 15-gallon unlabeled drums containing a liquid were identified near the PCB contaminated concrete.

Concrete

PCBs were detected at a concentration above 50 mg/kg in all eight of the samples collected from Area A and all three of the samples collected from Area B. Per 40 CFR 761.61, bulk PCB remediation wastes with a PCB concentration of ≥ 50 ppm shall be disposed of in a hazardous waste landfill permitted by the EPA under the Resource Conservation Recover Act (RCRA) or in an approved PCB disposal facility. The concrete and the debris that is in direct contact with the concrete should be properly handled, transported and disposed of by a licensed waste handler and in accordance with state, local, and federal regulations. Once the concrete and debris is removed, additional sampling should be performed to confirm that the Site is free of highly concentrated PCB's prior to additional demolition.

Unlabeled Drums

Veolia was subcontracted to collect samples from the five 15-gallon unlabeled drums located at the Site and characterize the contents. Based on visual observations, Veolia determined that the contents of the containers were similar and therefore bulked the five individual samples into one composite sample. Based on the analytical results, the contents of the drums could likely be classified as non-hazardous waste. The lab report should be provided to the disposal facility and waste hauler so that it can be properly profiled and manifested. The drums should be properly handled, transported and disposed of by a licensed waste handler and in accordance with state, local, and federal regulations.

Section 6.0 LIMITATIONS

The PCB contaminated concrete and unlabeled drum sampling and analysis activities were performed in accordance with generally accepted practices for the environmental consulting profession, undertaking similar studies at the same time and in the same geographical area as the work conducted by Symbiont. Symbiont observed the degree of care and skill that are generally exercised by the profession under similar circumstances and conditions. No other warranty is expressed or implied.

Symbiont's observations, findings, and opinions should not be considered as scientific certainties, but only as opinion based upon our professional judgment concerning the significance of the data gathered during the course of this investigation. Specifically, Symbiont cannot represent that the Property contains any hazardous or toxic materials or other latent conditions beyond that observed by Symbiont during the course of the investigation. Additionally, due to limitations of the investigation process and the necessary use of data furnished by others, Symbiont and its subcontractors cannot assume liability if actual conditions differ from the information presented in this report.

TABLES

TABLE 1
CONCRETE SAMPLE RESULTS

CONSTUENT	EPA PCB remediation waste standard (milligrams per kilogram)	SOIL BORING LOCATION										
		A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	B-1	B-2	B-3
<i>(milligrams per kilogram)</i>												
PCB-1016 (Aroclor 1016)	50	<170	<170	<1700	<880	<860	<1700	<1700	<1700	<840	<170	<350
PCB-1221 (Aroclor 1221)		<210	<210	<2100	<1100	<1100	<2100	<2100	<2100	<1000	<220	<430
PCB-1232 (Aroclor 1232)		<210	<210	<2100	<1100	<1100	<2100	<2100	<2100	<1000	<220	<430
PCB-1242 (Aroclor 1242)		<160	<160	<1600	<820	<800	<1600	<1600	<1600	<780	<160	<320
PCB-1248 (Aroclor 1248)		<190	<190	<1900	<980	<960	<1900	<1900	<1900	<940	<190	<380
PCB-1254 (Aroclor 1254)		<100	<100	<1000	<540	<530	<1000	<1000	<1100	<510	<110	<210
PCB-1260 (Aroclor 1260)		23000 B	25000 B	79000 B	40000 B	31000 B	59000 B	69000 B	58000 B	26000 B	11000 B	18000 B

NOTES:

Soil samples collected February 6, 2015.

EPA = U.S. Environmental Protection Agency

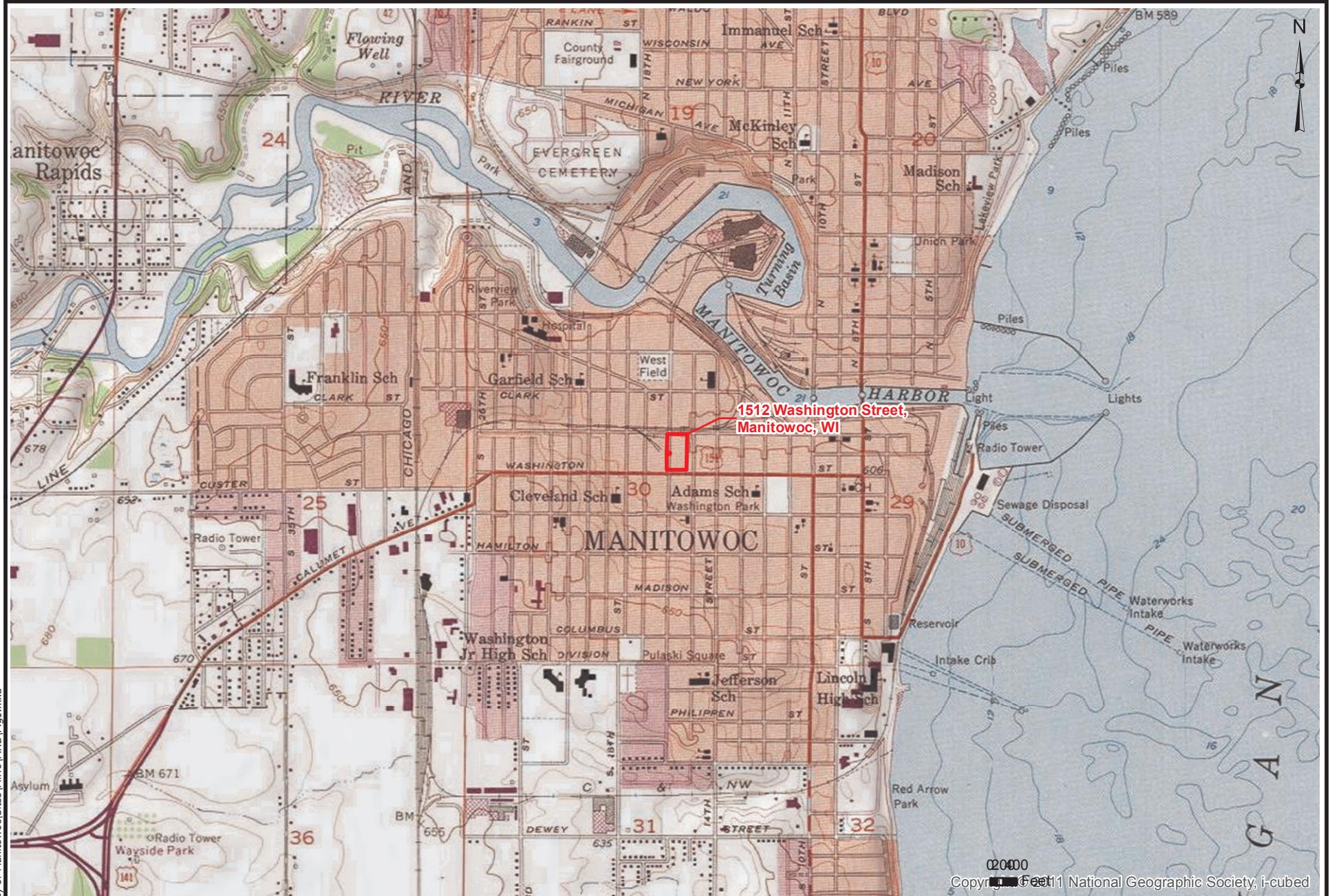
PCB = Polychlorinated biphenyl

B = Compound was detected in the laboratory method blank and sample

< = Less than laboratory method reporting limit

 Result exceeds EPA PCB remediation waste standard

FIGURES





APPENDICES

APPENDIX A

Photographic Documentation



View of Area A Sample Locations



View of Area A Sample Location 6



View of Area A Sample Location 7



View of Area A Sample Locations 1, 2, and 7



View of Area A Sample Locations



View of Area A Sample Locations



View of Area A, Sample Location 4



View of Area B Sample Locations

APPENDIX B

Laboratory Analytical Reports and Chain of Custody Documentation

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-92594-1

Client Project/Site: Former Mirro 9 - PCB W140408

For:

Symbiont Inc

6737 West Washington Street

Suite 3440

West Allis, Wisconsin 53214

Attn: Jennifer Coe

Sandie Fredrick

Authorized for release by:

3/2/2015 8:51:28 AM

Sandie Fredrick, Project Manager II

(920)261-1660

sandie.fredrick@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Symbiont Inc
Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Job ID: 500-92594-1

Laboratory: TestAmerica Chicago

Narrative

Job Narrative 500-92594-1

Comments

No additional comments.

Receipt

The samples were received on 2/25/2015 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.9° C.

GC Semi VOA

Method(s) 8082: The following sample(s) were diluted to bring the concentration of target analytes within the calibration range: A-01 (500-92594-1), A-02 (500-92594-2), A-03 (500-92594-3), A-04 (500-92594-4), A-05 (500-92594-5), A-06 (500-92594-6), A-07 (500-92594-7), A-08 (500-92594-8), B-01 (500-92594-9), B-02 (500-92594-10), B-03 (500-92594-11). Elevated reporting limits (RLs) are provided.

Method(s) 8082: The following sample(s) required a dilution due to the nature of the sample matrix: A-01 (500-92594-1), A-02 (500-92594-2), A-03 (500-92594-3), A-04 (500-92594-4), A-05 (500-92594-5), A-06 (500-92594-6), A-07 (500-92594-7), A-08 (500-92594-8), B-01 (500-92594-9), B-02 (500-92594-10), B-03 (500-92594-11). Because of this dilution, the surrogate spike concentrations in the samples were reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8082: The method blank for batch 277395 contained AR1260 above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank. A-01 (500-92594-1), A-02 (500-92594-2), A-03 (500-92594-3), A-04 (500-92594-4), A-05 (500-92594-5), A-06 (500-92594-6), A-07 (500-92594-7), A-08 (500-92594-8), B-01 (500-92594-9), B-02 (500-92594-10), B-03 (500-92594-11)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Symbiont Inc
 Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Client Sample ID: A-01

Lab Sample ID: 500-92594-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	23000000	B	480000	240000	ug/Kg	10000		8082	Total/NA

Client Sample ID: A-02

Lab Sample ID: 500-92594-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	25000000	B	480000	240000	ug/Kg	10000		8082	Total/NA

Client Sample ID: A-03

Lab Sample ID: 500-92594-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	79000000	B	4800000	2400000	ug/Kg	100000		8082	Total/NA

Client Sample ID: A-04

Lab Sample ID: 500-92594-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	40000000	B	2500000	1200000	ug/Kg	50000		8082	Total/NA

Client Sample ID: A-05

Lab Sample ID: 500-92594-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	31000000	B	2400000	1200000	ug/Kg	50000		8082	Total/NA

Client Sample ID: A-06

Lab Sample ID: 500-92594-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	59000000	B	4800000	2300000	ug/Kg	100000		8082	Total/NA

Client Sample ID: A-07

Lab Sample ID: 500-92594-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	69000000	B	4800000	2400000	ug/Kg	100000		8082	Total/NA

Client Sample ID: A-08

Lab Sample ID: 500-92594-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	58000000	B	4900000	2400000	ug/Kg	100000		8082	Total/NA

Client Sample ID: B-01

Lab Sample ID: 500-92594-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	26000000	B	2400000	1200000	ug/Kg	50000		8082	Total/NA

Client Sample ID: B-02

Lab Sample ID: 500-92594-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	11000000	B	490000	240000	ug/Kg	10000		8082	Total/NA

Client Sample ID: B-03

Lab Sample ID: 500-92594-11

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Detection Summary

Client: Symbiont Inc

Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Client Sample ID: B-03 (Continued)

Lab Sample ID: 500-92594-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	18000000	B	980000	480000	ug/Kg	20000		8082	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

Method Summary

Client: Symbiont Inc
Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Method	Method Description	Protocol	Laboratory
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CHI

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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Sample Summary

Client: Symbiont Inc

Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-92594-1	A-01	Solid	02/06/15 11:00	02/25/15 10:20
500-92594-2	A-02	Solid	02/06/15 11:10	02/25/15 10:20
500-92594-3	A-03	Solid	02/06/15 11:20	02/25/15 10:20
500-92594-4	A-04	Solid	02/06/15 11:30	02/25/15 10:20
500-92594-5	A-05	Solid	02/06/15 11:40	02/25/15 10:20
500-92594-6	A-06	Solid	02/06/15 11:50	02/25/15 10:20
500-92594-7	A-07	Solid	02/06/15 12:00	02/25/15 10:20
500-92594-8	A-08	Solid	02/06/15 12:10	02/25/15 10:20
500-92594-9	B-01	Solid	02/06/15 12:30	02/25/15 10:20
500-92594-10	B-02	Solid	02/06/15 12:40	02/25/15 10:20
500-92594-11	B-03	Solid	02/06/15 12:50	02/25/15 10:20

Client Sample Results

Client: Symbiont Inc

Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Client Sample ID: A-01

Date Collected: 02/06/15 11:00

Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-1

Matrix: Solid

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<170000		480000	170000	ug/Kg		02/26/15 16:55	02/27/15 15:11	10000
PCB-1221	<210000		480000	210000	ug/Kg		02/26/15 16:55	02/27/15 15:11	10000
PCB-1232	<210000		480000	210000	ug/Kg		02/26/15 16:55	02/27/15 15:11	10000
PCB-1242	<160000		480000	160000	ug/Kg		02/26/15 16:55	02/27/15 15:11	10000
PCB-1248	<190000		480000	190000	ug/Kg		02/26/15 16:55	02/27/15 15:11	10000
PCB-1254	<100000		480000	100000	ug/Kg		02/26/15 16:55	02/27/15 15:11	10000
PCB-1260	23000000	B	480000	240000	ug/Kg		02/26/15 16:55	02/27/15 15:11	10000
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D		50 - 116			02/26/15 16:55	02/27/15 15:11	10000
DCB Decachlorobiphenyl	0	D		48 - 142			02/26/15 16:55	02/27/15 15:11	10000

Client Sample ID: A-02

Date Collected: 02/06/15 11:10

Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-2

Matrix: Solid

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<170000		480000	170000	ug/Kg		02/26/15 16:55	02/27/15 15:24	10000
PCB-1221	<210000		480000	210000	ug/Kg		02/26/15 16:55	02/27/15 15:24	10000
PCB-1232	<210000		480000	210000	ug/Kg		02/26/15 16:55	02/27/15 15:24	10000
PCB-1242	<160000		480000	160000	ug/Kg		02/26/15 16:55	02/27/15 15:24	10000
PCB-1248	<190000		480000	190000	ug/Kg		02/26/15 16:55	02/27/15 15:24	10000
PCB-1254	<100000		480000	100000	ug/Kg		02/26/15 16:55	02/27/15 15:24	10000
PCB-1260	25000000	B	480000	240000	ug/Kg		02/26/15 16:55	02/27/15 15:24	10000
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D		50 - 116			02/26/15 16:55	02/27/15 15:24	10000
DCB Decachlorobiphenyl	0	D		48 - 142			02/26/15 16:55	02/27/15 15:24	10000

Client Sample ID: A-03

Date Collected: 02/06/15 11:20

Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-3

Matrix: Solid

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<1700000		4800000	1700000	ug/Kg		02/26/15 16:55	02/27/15 15:38	100000
PCB-1221	<2100000		4800000	2100000	ug/Kg		02/26/15 16:55	02/27/15 15:38	100000
PCB-1232	<2100000		4800000	2100000	ug/Kg		02/26/15 16:55	02/27/15 15:38	100000
PCB-1242	<1600000		4800000	1600000	ug/Kg		02/26/15 16:55	02/27/15 15:38	100000
PCB-1248	<1900000		4800000	1900000	ug/Kg		02/26/15 16:55	02/27/15 15:38	100000
PCB-1254	<1000000		4800000	1000000	ug/Kg		02/26/15 16:55	02/27/15 15:38	100000
PCB-1260	79000000	B	4800000	2400000	ug/Kg		02/26/15 16:55	02/27/15 15:38	100000
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D		50 - 116			02/26/15 16:55	02/27/15 15:38	100000
DCB Decachlorobiphenyl	0	D		48 - 142			02/26/15 16:55	02/27/15 15:38	100000

TestAmerica Chicago

Client Sample Results

Client: Symbiont Inc

Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Client Sample ID: A-04

Date Collected: 02/06/15 11:30

Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-4

Matrix: Solid

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<880000		2500000	880000	ug/Kg		02/26/15 16:55	02/27/15 15:51	50000
PCB-1221	<1100000		2500000	1100000	ug/Kg		02/26/15 16:55	02/27/15 15:51	50000
PCB-1232	<1100000		2500000	1100000	ug/Kg		02/26/15 16:55	02/27/15 15:51	50000
PCB-1242	<820000		2500000	820000	ug/Kg		02/26/15 16:55	02/27/15 15:51	50000
PCB-1248	<980000		2500000	980000	ug/Kg		02/26/15 16:55	02/27/15 15:51	50000
PCB-1254	<540000		2500000	540000	ug/Kg		02/26/15 16:55	02/27/15 15:51	50000
PCB-1260	40000000	B	2500000	1200000	ug/Kg		02/26/15 16:55	02/27/15 15:51	50000
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D		50 - 116			02/26/15 16:55	02/27/15 15:51	50000
DCB Decachlorobiphenyl	0	D		48 - 142			02/26/15 16:55	02/27/15 15:51	50000

Client Sample ID: A-05

Date Collected: 02/06/15 11:40

Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-5

Matrix: Solid

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<860000		2400000	860000	ug/Kg		02/26/15 16:55	02/27/15 16:05	50000
PCB-1221	<1100000		2400000	1100000	ug/Kg		02/26/15 16:55	02/27/15 16:05	50000
PCB-1232	<1100000		2400000	1100000	ug/Kg		02/26/15 16:55	02/27/15 16:05	50000
PCB-1242	<800000		2400000	800000	ug/Kg		02/26/15 16:55	02/27/15 16:05	50000
PCB-1248	<960000		2400000	960000	ug/Kg		02/26/15 16:55	02/27/15 16:05	50000
PCB-1254	<530000		2400000	530000	ug/Kg		02/26/15 16:55	02/27/15 16:05	50000
PCB-1260	31000000	B	2400000	1200000	ug/Kg		02/26/15 16:55	02/27/15 16:05	50000
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D		50 - 116			02/26/15 16:55	02/27/15 16:05	50000
DCB Decachlorobiphenyl	0	D		48 - 142			02/26/15 16:55	02/27/15 16:05	50000

Client Sample ID: A-06

Date Collected: 02/06/15 11:50

Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-6

Matrix: Solid

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<1700000		4800000	1700000	ug/Kg		02/26/15 16:55	02/27/15 16:19	100000
PCB-1221	<2100000		4800000	2100000	ug/Kg		02/26/15 16:55	02/27/15 16:19	100000
PCB-1232	<2100000		4800000	2100000	ug/Kg		02/26/15 16:55	02/27/15 16:19	100000
PCB-1242	<1600000		4800000	1600000	ug/Kg		02/26/15 16:55	02/27/15 16:19	100000
PCB-1248	<1900000		4800000	1900000	ug/Kg		02/26/15 16:55	02/27/15 16:19	100000
PCB-1254	<1000000		4800000	1000000	ug/Kg		02/26/15 16:55	02/27/15 16:19	100000
PCB-1260	59000000	B	4800000	2300000	ug/Kg		02/26/15 16:55	02/27/15 16:19	100000
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D		50 - 116			02/26/15 16:55	02/27/15 16:19	100000
DCB Decachlorobiphenyl	0	D		48 - 142			02/26/15 16:55	02/27/15 16:19	100000

TestAmerica Chicago

Client Sample Results

Client: Symbiont Inc

Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Client Sample ID: A-07

Date Collected: 02/06/15 12:00

Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-7

Matrix: Solid

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<1700000		4800000	1700000	ug/Kg		02/26/15 16:55	02/27/15 16:32	100000
PCB-1221	<2100000		4800000	2100000	ug/Kg		02/26/15 16:55	02/27/15 16:32	100000
PCB-1232	<2100000		4800000	2100000	ug/Kg		02/26/15 16:55	02/27/15 16:32	100000
PCB-1242	<1600000		4800000	1600000	ug/Kg		02/26/15 16:55	02/27/15 16:32	100000
PCB-1248	<1900000		4800000	1900000	ug/Kg		02/26/15 16:55	02/27/15 16:32	100000
PCB-1254	<1000000		4800000	1000000	ug/Kg		02/26/15 16:55	02/27/15 16:32	100000
PCB-1260	69000000	B	4800000	2400000	ug/Kg		02/26/15 16:55	02/27/15 16:32	100000
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D		50 - 116			02/26/15 16:55	02/27/15 16:32	100000
DCB Decachlorobiphenyl	0	D		48 - 142			02/26/15 16:55	02/27/15 16:32	100000

Client Sample ID: A-08

Date Collected: 02/06/15 12:10

Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-8

Matrix: Solid

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<1700000		4900000	1700000	ug/Kg		02/26/15 16:55	02/27/15 16:46	100000
PCB-1221	<2100000		4900000	2100000	ug/Kg		02/26/15 16:55	02/27/15 16:46	100000
PCB-1232	<2100000		4900000	2100000	ug/Kg		02/26/15 16:55	02/27/15 16:46	100000
PCB-1242	<1600000		4900000	1600000	ug/Kg		02/26/15 16:55	02/27/15 16:46	100000
PCB-1248	<1900000		4900000	1900000	ug/Kg		02/26/15 16:55	02/27/15 16:46	100000
PCB-1254	<1100000		4900000	1100000	ug/Kg		02/26/15 16:55	02/27/15 16:46	100000
PCB-1260	58000000	B	4900000	2400000	ug/Kg		02/26/15 16:55	02/27/15 16:46	100000
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D		50 - 116			02/26/15 16:55	02/27/15 16:46	100000
DCB Decachlorobiphenyl	0	D		48 - 142			02/26/15 16:55	02/27/15 16:46	100000

Client Sample ID: B-01

Date Collected: 02/06/15 12:30

Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-9

Matrix: Solid

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<840000		2400000	840000	ug/Kg		02/26/15 16:55	02/27/15 17:00	50000
PCB-1221	<1000000		2400000	1000000	ug/Kg		02/26/15 16:55	02/27/15 17:00	50000
PCB-1232	<1000000		2400000	1000000	ug/Kg		02/26/15 16:55	02/27/15 17:00	50000
PCB-1242	<780000		2400000	780000	ug/Kg		02/26/15 16:55	02/27/15 17:00	50000
PCB-1248	<940000		2400000	940000	ug/Kg		02/26/15 16:55	02/27/15 17:00	50000
PCB-1254	<510000		2400000	510000	ug/Kg		02/26/15 16:55	02/27/15 17:00	50000
PCB-1260	26000000	B	2400000	1200000	ug/Kg		02/26/15 16:55	02/27/15 17:00	50000
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D		50 - 116			02/26/15 16:55	02/27/15 17:00	50000
DCB Decachlorobiphenyl	0	D		48 - 142			02/26/15 16:55	02/27/15 17:00	50000

TestAmerica Chicago

Client Sample Results

Client: Symbiont Inc

Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Client Sample ID: B-02

Date Collected: 02/06/15 12:40

Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-10

Matrix: Solid

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<170000		490000	170000	ug/Kg		02/26/15 16:55	02/27/15 11:12	10000
PCB-1221	<220000		490000	220000	ug/Kg		02/26/15 16:55	02/27/15 11:12	10000
PCB-1232	<220000		490000	220000	ug/Kg		02/26/15 16:55	02/27/15 11:12	10000
PCB-1242	<160000		490000	160000	ug/Kg		02/26/15 16:55	02/27/15 11:12	10000
PCB-1248	<190000		490000	190000	ug/Kg		02/26/15 16:55	02/27/15 11:12	10000
PCB-1254	<110000		490000	110000	ug/Kg		02/26/15 16:55	02/27/15 11:12	10000
PCB-1260	11000000	B	490000	240000	ug/Kg		02/26/15 16:55	02/27/15 11:12	10000
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D		50 - 116			02/26/15 16:55	02/27/15 11:12	10000
DCB Decachlorobiphenyl	0	D		48 - 142			02/26/15 16:55	02/27/15 11:12	10000

Client Sample ID: B-03

Date Collected: 02/06/15 12:50

Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-11

Matrix: Solid

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<350000		980000	350000	ug/Kg		02/26/15 16:55	02/27/15 17:14	20000
PCB-1221	<430000		980000	430000	ug/Kg		02/26/15 16:55	02/27/15 17:14	20000
PCB-1232	<430000		980000	430000	ug/Kg		02/26/15 16:55	02/27/15 17:14	20000
PCB-1242	<320000		980000	320000	ug/Kg		02/26/15 16:55	02/27/15 17:14	20000
PCB-1248	<380000		980000	380000	ug/Kg		02/26/15 16:55	02/27/15 17:14	20000
PCB-1254	<210000		980000	210000	ug/Kg		02/26/15 16:55	02/27/15 17:14	20000
PCB-1260	18000000	B	980000	480000	ug/Kg		02/26/15 16:55	02/27/15 17:14	20000
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	0	D		50 - 116			02/26/15 16:55	02/27/15 17:14	20000
DCB Decachlorobiphenyl	0	D		48 - 142			02/26/15 16:55	02/27/15 17:14	20000

TestAmerica Chicago

Definitions/Glossary

Client: Symbiont Inc
Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

QC Association Summary

Client: Symbiont Inc

Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

GC Semi VOA

Prep Batch: 277395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-92594-1	A-01	Total/NA	Solid	3541	
500-92594-2	A-02	Total/NA	Solid	3541	
500-92594-3	A-03	Total/NA	Solid	3541	
500-92594-4	A-04	Total/NA	Solid	3541	
500-92594-5	A-05	Total/NA	Solid	3541	
500-92594-6	A-06	Total/NA	Solid	3541	
500-92594-7	A-07	Total/NA	Solid	3541	
500-92594-8	A-08	Total/NA	Solid	3541	
500-92594-9	B-01	Total/NA	Solid	3541	
500-92594-10	B-02	Total/NA	Solid	3541	
500-92594-11	B-03	Total/NA	Solid	3541	
LCS 500-277395/3-A	Lab Control Sample	Total/NA	Solid	3541	
MB 500-277395/1-A	Method Blank	Total/NA	Solid	3541	

Analysis Batch: 277461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-92594-1	A-01	Total/NA	Solid	8082	277395
500-92594-2	A-02	Total/NA	Solid	8082	277395
500-92594-3	A-03	Total/NA	Solid	8082	277395
500-92594-4	A-04	Total/NA	Solid	8082	277395
500-92594-5	A-05	Total/NA	Solid	8082	277395
500-92594-6	A-06	Total/NA	Solid	8082	277395
500-92594-7	A-07	Total/NA	Solid	8082	277395
500-92594-8	A-08	Total/NA	Solid	8082	277395
500-92594-9	B-01	Total/NA	Solid	8082	277395
500-92594-10	B-02	Total/NA	Solid	8082	277395
500-92594-11	B-03	Total/NA	Solid	8082	277395
LCS 500-277395/3-A	Lab Control Sample	Total/NA	Solid	8082	277395
MB 500-277395/1-A	Method Blank	Total/NA	Solid	8082	277395

Surrogate Summary

Client: Symbiont Inc

Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (50-116)	DCB1 (48-142)											
500-92594-1	A-01	0 D	0 D											
500-92594-2	A-02	0 D	0 D											
500-92594-3	A-03	0 D	0 D											
500-92594-4	A-04	0 D	0 D											
500-92594-5	A-05	0 D	0 D											
500-92594-6	A-06	0 D	0 D											
500-92594-7	A-07	0 D	0 D											
500-92594-8	A-08	0 D	0 D											
500-92594-9	B-01	0 D	0 D											
500-92594-10	B-02	0 D	0 D											
500-92594-11	B-03	0 D	0 D											
LCS 500-277395/3-A	Lab Control Sample	83	94											
MB 500-277395/1-A	Method Blank	68	94											

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

QC Sample Results

Client: Symbiont Inc

Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 500-277395/1-A

Matrix: Solid

Analysis Batch: 277461

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 277395

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1016	<5.9		17	5.9	ug/Kg		02/26/15 16:55	02/27/15 08:27	1
PCB-1221	<7.3		17	7.3	ug/Kg		02/26/15 16:55	02/27/15 08:27	1
PCB-1232	<7.3		17	7.3	ug/Kg		02/26/15 16:55	02/27/15 08:27	1
PCB-1242	<5.5		17	5.5	ug/Kg		02/26/15 16:55	02/27/15 08:27	1
PCB-1248	<6.6		17	6.6	ug/Kg		02/26/15 16:55	02/27/15 08:27	1
PCB-1254	<3.6		17	3.6	ug/Kg		02/26/15 16:55	02/27/15 08:27	1
PCB-1260	41.5		17	8.2	ug/Kg		02/26/15 16:55	02/27/15 08:27	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Tetrachloro-m-xylene	68		50 - 116			02/26/15 16:55	02/27/15 08:27	1
DCB Decachlorobiphenyl	94		48 - 142			02/26/15 16:55	02/27/15 08:27	1

Lab Sample ID: LCS 500-277395/3-A

Matrix: Solid

Analysis Batch: 277461

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 277395

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
PCB-1016	167	146		ug/Kg		88	59 - 110
PCB-1260	167	170		ug/Kg		102	69 - 120

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
	Result	Qualifier			
Tetrachloro-m-xylene	83		50 - 116		
DCB Decachlorobiphenyl	94		48 - 142		

TestAmerica Chicago

Lab Chronicle

Client: Symbiont Inc
Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Client Sample ID: A-01

Lab Sample ID: 500-92594-1

Matrix: Solid

Date Collected: 02/06/15 11:00
Date Received: 02/25/15 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			277395	02/26/15 16:55	JP1	TAL CHI
Total/NA	Analysis	8082		10000	277461	02/27/15 15:11	GMO	TAL CHI

Client Sample ID: A-02

Lab Sample ID: 500-92594-2

Matrix: Solid

Date Collected: 02/06/15 11:10
Date Received: 02/25/15 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			277395	02/26/15 16:55	JP1	TAL CHI
Total/NA	Analysis	8082		10000	277461	02/27/15 15:24	GMO	TAL CHI

Client Sample ID: A-03

Lab Sample ID: 500-92594-3

Matrix: Solid

Date Collected: 02/06/15 11:20
Date Received: 02/25/15 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			277395	02/26/15 16:55	JP1	TAL CHI
Total/NA	Analysis	8082		100000	277461	02/27/15 15:38	GMO	TAL CHI

Client Sample ID: A-04

Lab Sample ID: 500-92594-4

Matrix: Solid

Date Collected: 02/06/15 11:30
Date Received: 02/25/15 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			277395	02/26/15 16:55	JP1	TAL CHI
Total/NA	Analysis	8082		50000	277461	02/27/15 15:51	GMO	TAL CHI

Client Sample ID: A-05

Lab Sample ID: 500-92594-5

Matrix: Solid

Date Collected: 02/06/15 11:40
Date Received: 02/25/15 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			277395	02/26/15 16:55	JP1	TAL CHI
Total/NA	Analysis	8082		50000	277461	02/27/15 16:05	GMO	TAL CHI

Client Sample ID: A-06

Lab Sample ID: 500-92594-6

Matrix: Solid

Date Collected: 02/06/15 11:50
Date Received: 02/25/15 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			277395	02/26/15 16:55	JP1	TAL CHI
Total/NA	Analysis	8082		100000	277461	02/27/15 16:19	GMO	TAL CHI

TestAmerica Chicago

Lab Chronicle

Client: Symbiont Inc
Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Client Sample ID: A-07

Date Collected: 02/06/15 12:00
Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			277395	02/26/15 16:55	JP1	TAL CHI
Total/NA	Analysis	8082		100000	277461	02/27/15 16:32	GMO	TAL CHI

Client Sample ID: A-08

Date Collected: 02/06/15 12:10
Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			277395	02/26/15 16:55	JP1	TAL CHI
Total/NA	Analysis	8082		100000	277461	02/27/15 16:46	GMO	TAL CHI

Client Sample ID: B-01

Date Collected: 02/06/15 12:30
Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			277395	02/26/15 16:55	JP1	TAL CHI
Total/NA	Analysis	8082		50000	277461	02/27/15 17:00	GMO	TAL CHI

Client Sample ID: B-02

Date Collected: 02/06/15 12:40
Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			277395	02/26/15 16:55	JP1	TAL CHI
Total/NA	Analysis	8082		10000	277461	02/27/15 11:12	GMO	TAL CHI

Client Sample ID: B-03

Date Collected: 02/06/15 12:50
Date Received: 02/25/15 10:20

Lab Sample ID: 500-92594-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			277395	02/26/15 16:55	JP1	TAL CHI
Total/NA	Analysis	8082		20000	277461	02/27/15 17:14	GMO	TAL CHI

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TestAmerica Chicago

Certification Summary

Client: Symbiont Inc

Project/Site: Former Mirro 9 - PCB W140408

TestAmerica Job ID: 500-92594-1

Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-15
Analysis Method	Prep Method	Matrix	Analyte	

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60466
Phone: 708.534.5200 Fax: 708.534



500-92594 COC

Turnaround Time Required (Business Days)

1 Day 2 Days 5 Days 7 Days 10 Days 15 Days Other

Request Due Date _____ Return to Client _____ Disposal by Lab _____ Archive for _____ Months _____
(A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <i>John Symant</i>	Company Date Time	Received By <i>Sheniscots TA-CRT</i>	Company Date Time	Lab Courier
Relinquished By Company Date Time	Received By Company Date Time			Shipped
Relinquished By Company Date Time	Received By Company Date Time			Hand Delivered

Matrix Key	
WW - Wastewater	SE - Sediment
W - Water	SO - Soil
S - Soil	L - Leachate
SL - Sludge	WI - Wipe
MS - Miscellaneous	DW - Drinking Water
OL - Oil	O - Other
A - Air	

Client Comments	Lab Comments:
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TAL-4124-500 (1209)

Page 19 of 21

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

<p>Report To: _____</p> <p>Contact: <u>Jen Cee</u></p> <p>Company: <u>Symbriont</u></p> <p>Address: _____</p> <p>Address: _____</p> <p>Phone: _____</p> <p>Fax: _____</p> <p>E-Mail: _____</p>	<p>(optional)</p>
--	-------------------

ill To: contact: _____ company: _____ ddress: _____ ddress: _____ hone: _____ ax: _____ O#/Reference# _____	(optional)
--	------------

Chain of Custody Record

Lab Job #: 500-92594

Chain of Custody Number: _____

Page _____ of _____

Temperature °C of Cooler:

Turnaround Time Required (Business Days)

Sample Disposal

1 Day 2 Days 5 Days 7 Days 10 Days 15 Days Other

Requested Due Date _____ Return to Client _____ Archive for _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Dollars Cents

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
John Symbant	2/28/15	3:00pm		John Scott TA-CPT	2/25/15	10:20	
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Matrix Key	Client Comments	Lab Comments:
WW - Wastewater	SE - Sediment	
W - Water	SO - Soil	
S - Soil	L - Leachate	
SL - Sludge	WI - Wipe	
MS - Miscellaneous	DW - Drinking Water	
OL - Oil	O - Other	
A - Air		

Login Sample Receipt Checklist

Client: Symbiont Inc

Job Number: 500-92594-1

Login Number: 92594

List Source: TestAmerica Chicago

List Number: 1

Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX C

Veolia ES Industrial Services Sampling Report



VEOLIA ES INDUSTRIAL SERVICES NORTH AMERICA

March 13, 2015

SYMBIONT
Attn: Jen Coe
6737 West Washington Street
Milwaukee, WI 53214
(414) 291-8840
Jennifer.Coe@symbiontonline.com

VES-IS Project Number: 41GT15.078

On February 13, 2015, Veolia ES Industrial Services, Inc. (VES-IS) submitted a proposal to Symbiont to collect samples from abandoned containers at a former manufacturing facility at 900 South 16th Street in Manitowoc, Wisconsin. The proposal was accepted, and arrangements were made for Symbiont to meet VES-IS at the site.

An assessment of the containers was conducted. There were five 15-gallon plastic carboys. Each had approximately ½ of the top cut off. The container contents ranged from approximately five to ten gallons. Each of the containers was frozen completely solid. Symbiont personnel informed VES-IS that the containers were suspected to have previously contained transformer oil. It was further suspected that the unprotected nature of the site had allowed rain water to collect in the containers. A visual inspection showed that the containers contained primarily ice.

A core sample was collected from each container with a sharpened pipe driven through the ice to the container bottom, ensuring that any layers in the container were collected in the sample. Gloves were changed, and the pipe was decontaminated with a degreaser solution and water, between samples. The sample media was allowed to melt.

Field screening was performed on the five individual samples. A visual inspection noted that each sample contained primarily water,



discolored to a light brown. Each sample exhibited identical characteristics. Flashpoint was determined to be above 200° Fahrenheit. It was determined that the material had a neutral pH. A photoionization detector revealed no airborne organic compounds above the samples. Chlor-N-Oil tests revealed less than 50 parts per million (ppm) for Polychlorinated biphenyls (PCB's).

The five individual samples were bulked into a single composite sample. This sample was relinquished to Pace Analytical for analysis. The attached Pace Analytical report documents the analysis performed on the sample.

No further action was requested of VES-IS, and this concludes our activities in regards to this response.

Veolia ES Industrial Services, Inc. appreciates the opportunity to assist with your environmental needs. If you have any questions regarding this response, please call me at (262) 512-8007.

All information presented in this report has been submitted with good intent and to the best of my knowledge.

REPORT COMPLETED BY: Damon Brattset – Response Manager

SIGNATURE:  DATE: 03-20-15

REPORT REVIEWED BY: Chad M. Kraemer – Operations Manager

SIGNATURE:  DATE: 03-23-15

March 09, 2015

Jon Borkenhagen
Veolia ES Industrial Services, Inc
N104 W13275 Donges Bay Road
Germantown, WI 53022

RE: Project: 41GT15.078 SYMBIONT
Pace Project No.: 40110939

Dear Jon Borkenhagen:

Enclosed are the analytical results for sample(s) received by the laboratory on February 25, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Brian Basten
brian.basten@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 41GT15.078 SYMBIONT
Pace Project No.: 40110939

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334

New York Certification #: 11888
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40110939001	41GT15.078-001	Water	02/23/15 11:00	02/25/15 09:30
40110939002	TRIP BLANK	Water	02/23/15 11:00	02/25/15 09:30

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SAMPLE ANALYTE COUNT

Project: 41GT15.078 SYMBIONT
Pace Project No.: 40110939

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40110939001	41GT15.078-001	EPA 8082	BDS	10
		EPA 6010	DLB	7
		EPA 7470	AJT	1
		EPA 8270	RJN	70
		EPA 8260	HNW	64
		EPA 1010	DEY	1
		SM 4500-H+B	MLH	1
40110939002	TRIP BLANK	EPA 8260	HNW	64

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

Sample: 41GT15.078-001	Lab ID: 40110939001	Collected: 02/23/15 11:00	Received: 02/25/15 09:30	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	<0.71	ug/L	1.4	0.71	3	02/26/15 08:31	02/26/15 21:31	12674-11-2	
PCB-1221 (Aroclor 1221)	<0.71	ug/L	1.4	0.71	3	02/26/15 08:31	02/26/15 21:31	11104-28-2	
PCB-1232 (Aroclor 1232)	<0.71	ug/L	1.4	0.71	3	02/26/15 08:31	02/26/15 21:31	11141-16-5	
PCB-1242 (Aroclor 1242)	<0.71	ug/L	1.4	0.71	3	02/26/15 08:31	02/26/15 21:31	53469-21-9	
PCB-1248 (Aroclor 1248)	<0.71	ug/L	1.4	0.71	3	02/26/15 08:31	02/26/15 21:31	12672-29-6	
PCB-1254 (Aroclor 1254)	<0.71	ug/L	1.4	0.71	3	02/26/15 08:31	02/26/15 21:31	11097-69-1	
PCB-1260 (Aroclor 1260)	9.5	ug/L	1.4	0.71	3	02/26/15 08:31	02/26/15 21:31	11096-82-5	
PCB, Total	9.5	ug/L	1.4	0.71	3	02/26/15 08:31	02/26/15 21:31	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	65	%	55-130		3	02/26/15 08:31	02/26/15 21:31	877-09-8	
Decachlorobiphenyl (S)	41	%	34-130		3	02/26/15 08:31	02/26/15 21:31	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	<6.8	ug/L	20.0	6.8	1	03/04/15 13:00	03/05/15 14:17	7440-38-2	
Barium	1090	ug/L	5.0	1.7	1	03/04/15 13:00	03/05/15 14:17	7440-39-3	
Cadmium	10.8	ug/L	5.0	1.0	1	03/04/15 13:00	03/05/15 14:17	7440-43-9	
Chromium	33.0	ug/L	5.0	1.5	1	03/04/15 13:00	03/05/15 14:17	7440-47-3	
Lead	977	ug/L	7.5	1.6	1	03/04/15 13:00	03/05/15 14:17	7439-92-1	
Selenium	<6.8	ug/L	20.0	6.8	1	03/04/15 13:00	03/05/15 14:17	7782-49-2	
Silver	<3.2	ug/L	10.0	3.2	1	03/04/15 13:00	03/05/15 14:17	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	0.72	ug/L	0.20	0.10	1	03/04/15 09:25	03/04/15 14:57	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
Acenaphthene	<63.4	ug/L	236	63.4	50	02/26/15 08:15	03/04/15 10:32	83-32-9	
Acenaphthylene	<44.1	ug/L	236	44.1	50	02/26/15 08:15	03/04/15 10:32	208-96-8	
Anthracene	<26.6	ug/L	236	26.6	50	02/26/15 08:15	03/04/15 10:32	120-12-7	
Benzo(a)anthracene	<43.0	ug/L	236	43.0	50	02/26/15 08:15	03/04/15 10:32	56-55-3	
Benzo(a)pyrene	<60.8	ug/L	236	60.8	50	02/26/15 08:15	03/04/15 10:32	50-32-8	
Benzo(b)fluoranthene	<32.9	ug/L	236	32.9	50	02/26/15 08:15	03/04/15 10:32	205-99-2	
Benzo(g,h,i)perylene	<100	ug/L	236	100	50	02/26/15 08:15	03/04/15 10:32	191-24-2	
Benzo(k)fluoranthene	<67.9	ug/L	236	67.9	50	02/26/15 08:15	03/04/15 10:32	207-08-9	
4-Bromophenylphenyl ether	<23.7	ug/L	236	23.7	50	02/26/15 08:15	03/04/15 10:32	101-55-3	
Butylbenzylphthalate	<35.9	ug/L	236	35.9	50	02/26/15 08:15	03/04/15 10:32	85-68-7	
Carbazole	<48.0	ug/L	236	48.0	50	02/26/15 08:15	03/04/15 10:32	86-74-8	
4-Chloro-3-methylphenol	<67.5	ug/L	236	67.5	50	02/26/15 08:15	03/04/15 10:32	59-50-7	
4-Chloroaniline	<73.8	ug/L	236	73.8	50	02/26/15 08:15	03/04/15 10:32	106-47-8	
bis(2-Chloroethoxy)methane	<47.5	ug/L	236	47.5	50	02/26/15 08:15	03/04/15 10:32	111-91-1	
bis(2-Chloroethyl) ether	<34.7	ug/L	236	34.7	50	02/26/15 08:15	03/04/15 10:32	111-44-4	
2-Chloronaphthalene	<49.9	ug/L	236	49.9	50	02/26/15 08:15	03/04/15 10:32	91-58-7	
2-Chlorophenol	<48.7	ug/L	236	48.7	50	02/26/15 08:15	03/04/15 10:32	95-57-8	
4-Chlorophenylphenyl ether	<44.5	ug/L	236	44.5	50	02/26/15 08:15	03/04/15 10:32	7005-72-3	
Chrysene	<49.0	ug/L	236	49.0	50	02/26/15 08:15	03/04/15 10:32	218-01-9	
Dibenz(a,h)anthracene	<47.1	ug/L	236	47.1	50	02/26/15 08:15	03/04/15 10:32	53-70-3	
Dibenzofuran	<48.1	ug/L	236	48.1	50	02/26/15 08:15	03/04/15 10:32	132-64-9	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

Sample: 41GT15.078-001 Lab ID: 40110939001 Collected: 02/23/15 11:00 Received: 02/25/15 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic Analytical Method: EPA 8270 Preparation Method: EPA 3510									
1,2-Dichlorobenzene	<86.7	ug/L	236	86.7	50	02/26/15 08:15	03/04/15 10:32	95-50-1	
1,3-Dichlorobenzene	<77.6	ug/L	236	77.6	50	02/26/15 08:15	03/04/15 10:32	541-73-1	
1,4-Dichlorobenzene	<91.4	ug/L	236	91.4	50	02/26/15 08:15	03/04/15 10:32	106-46-7	
3,3'-Dichlorobenzidine	<63.5	ug/L	236	63.5	50	02/26/15 08:15	03/04/15 10:32	91-94-1	
2,4-Dichlorophenol	<56.3	ug/L	236	56.3	50	02/26/15 08:15	03/04/15 10:32	120-83-2	
Diethylphthalate	<25.3	ug/L	236	25.3	50	02/26/15 08:15	03/04/15 10:32	84-66-2	
2,4-Dimethylphenol	<44.0	ug/L	236	44.0	50	02/26/15 08:15	03/04/15 10:32	105-67-9	
Dimethylphthalate	<34.2	ug/L	236	34.2	50	02/26/15 08:15	03/04/15 10:32	131-11-3	
Di-n-butylphthalate	<44.8	ug/L	236	44.8	50	02/26/15 08:15	03/04/15 10:32	84-74-2	
4,6-Dinitro-2-methylphenol	<29.4	ug/L	236	29.4	50	02/26/15 08:15	03/04/15 10:32	534-52-1	
2,4-Dinitrophenol	<40.6	ug/L	472	40.6	50	02/26/15 08:15	03/04/15 10:32	51-28-5	
2,4-Dinitrotoluene	<47.0	ug/L	236	47.0	50	02/26/15 08:15	03/04/15 10:32	121-14-2	
2,6-Dinitrotoluene	<72.9	ug/L	236	72.9	50	02/26/15 08:15	03/04/15 10:32	606-20-2	
Di-n-octylphthalate	<68.1	ug/L	236	68.1	50	02/26/15 08:15	03/04/15 10:32	117-84-0	
bis(2-Ethylhexyl)phthalate	<36.3	ug/L	236	36.3	50	02/26/15 08:15	03/04/15 10:32	117-81-7	
Fluoranthene	<64.8	ug/L	236	64.8	50	02/26/15 08:15	03/04/15 10:32	206-44-0	
Fluorene	<41.5	ug/L	236	41.5	50	02/26/15 08:15	03/04/15 10:32	86-73-7	
Hexachloro-1,3-butadiene	<85.6	ug/L	472	85.6	50	02/26/15 08:15	03/04/15 10:32	87-68-3	
Hexachlorobenzene	<26.9	ug/L	236	26.9	50	02/26/15 08:15	03/04/15 10:32	118-74-1	
Hexachlorocyclopentadiene	<42.4	ug/L	236	42.4	50	02/26/15 08:15	03/04/15 10:32	77-47-4	
Hexachloroethane	<69.9	ug/L	236	69.9	50	02/26/15 08:15	03/04/15 10:32	67-72-1	
Indeno(1,2,3-cd)pyrene	<99.2	ug/L	236	99.2	50	02/26/15 08:15	03/04/15 10:32	193-39-5	
Isophorone	<48.4	ug/L	236	48.4	50	02/26/15 08:15	03/04/15 10:32	78-59-1	
2-Methylnaphthalene	<78.3	ug/L	236	78.3	50	02/26/15 08:15	03/04/15 10:32	91-57-6	
2-Methylphenol(o-Cresol)	<45.2	ug/L	236	45.2	50	02/26/15 08:15	03/04/15 10:32	95-48-7	
3&4-Methylphenol(m&p Cresol)	<60.3	ug/L	236	60.3	50	02/26/15 08:15	03/04/15 10:32		
Naphthalene	<70.9	ug/L	236	70.9	50	02/26/15 08:15	03/04/15 10:32	91-20-3	
2-Nitroaniline	<60.6	ug/L	236	60.6	50	02/26/15 08:15	03/04/15 10:32	88-74-4	
3-Nitroaniline	<59.8	ug/L	236	59.8	50	02/26/15 08:15	03/04/15 10:32	99-09-2	
4-Nitroaniline	<105	ug/L	236	105	50	02/26/15 08:15	03/04/15 10:32	100-01-6	
Nitrobenzene	<48.4	ug/L	236	48.4	50	02/26/15 08:15	03/04/15 10:32	98-95-3	
2-Nitrophenol	<40.2	ug/L	236	40.2	50	02/26/15 08:15	03/04/15 10:32	88-75-5	
4-Nitrophenol	<27.8	ug/L	472	27.8	50	02/26/15 08:15	03/04/15 10:32	100-02-7	
N-Nitroso-di-n-propylamine	<48.0	ug/L	236	48.0	50	02/26/15 08:15	03/04/15 10:32	621-64-7	
N-Nitrosodiphenylamine	<103	ug/L	472	103	50	02/26/15 08:15	03/04/15 10:32	86-30-6	
2,2'-Oxybis(1-chloropropane)	<53.1	ug/L	236	53.1	50	02/26/15 08:15	03/04/15 10:32	108-60-1	
Pentachlorophenol	<35.2	ug/L	472	35.2	50	02/26/15 08:15	03/04/15 10:32	87-86-5	
Phenanthrene	<25.0	ug/L	236	25.0	50	02/26/15 08:15	03/04/15 10:32	85-01-8	
Phenol	<25.5	ug/L	236	25.5	50	02/26/15 08:15	03/04/15 10:32	108-95-2	D3
Pyrene	<35.1	ug/L	236	35.1	50	02/26/15 08:15	03/04/15 10:32	129-00-0	
1,2,4-Trichlorobenzene	<68.7	ug/L	236	68.7	50	02/26/15 08:15	03/04/15 10:32	120-82-1	
2,4,5-Trichlorophenol	<36.0	ug/L	236	36.0	50	02/26/15 08:15	03/04/15 10:32	95-95-4	
2,4,6-Trichlorophenol	<49.7	ug/L	236	49.7	50	02/26/15 08:15	03/04/15 10:32	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	0	%	53-130		50	02/26/15 08:15	03/04/15 10:32	4165-60-0	S4
2-Fluorobiphenyl (S)	0	%	50-130		50	02/26/15 08:15	03/04/15 10:32	321-60-8	S4

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

Sample: 41GT15.078-001 Lab ID: 40110939001 Collected: 02/23/15 11:00 Received: 02/25/15 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic		Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Surrogates									
Terphenyl-d14 (S)	0	%	36-158		50	02/26/15 08:15	03/04/15 10:32	1718-51-0	S4
Phenol-d6 (S)	0	%	23-130		50	02/26/15 08:15	03/04/15 10:32	13127-88-3	S4
2-Fluorophenol (S)	0	%	36-130		50	02/26/15 08:15	03/04/15 10:32	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	47-139		50	02/26/15 08:15	03/04/15 10:32	118-79-6	S4
8260 MSV		Analytical Method: EPA 8260							
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		02/26/15 11:40	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		02/26/15 11:40	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		02/26/15 11:40	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		02/26/15 11:40	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		02/26/15 11:40	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		02/26/15 11:40	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		02/26/15 11:40	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		02/26/15 11:40	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		02/26/15 11:40	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		02/26/15 11:40	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		02/26/15 11:40	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		02/26/15 11:40	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		02/26/15 11:40	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		02/26/15 11:40	106-43-4	
Benzene	6.0	ug/L	1.0	0.50	1		02/26/15 11:40	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		02/26/15 11:40	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		02/26/15 11:40	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		02/26/15 11:40	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		02/26/15 11:40	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		02/26/15 11:40	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		02/26/15 11:40	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		02/26/15 11:40	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	100-41-4	

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ANALYTICAL RESULTS

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

Sample: 41GT15.078-001 Lab ID: 40110939001 Collected: 02/23/15 11:00 Received: 02/25/15 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		02/26/15 11:40	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		02/26/15 11:40	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		02/26/15 11:40	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		02/26/15 11:40	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		02/26/15 11:40	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	127-18-4	
Toluene	8.8	ug/L	1.0	0.50	1		02/26/15 11:40	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		02/26/15 11:40	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		02/26/15 11:40	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		02/26/15 11:40	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		02/26/15 11:40	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		02/26/15 11:40	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		02/26/15 11:40	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		02/26/15 11:40	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		02/26/15 11:40	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		02/26/15 11:40	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		02/26/15 11:40	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	87	%	59-130		1		02/26/15 11:40	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		02/26/15 11:40	1868-53-7	
Toluene-d8 (S)	97	%	70-130		1		02/26/15 11:40	2037-26-5	
1010 Flashpoint,Closed Cup	Analytical Method: EPA 1010								
Flashpoint	>210	deg F			1		03/03/15 14:34		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B								
pH	7.6	Std. Units	0.10	0.010	1		02/25/15 19:40		H6

Sample: TRIP BLANK Lab ID: 40110939002 Collected: 02/23/15 11:00 Received: 02/25/15 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		02/26/15 16:38	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		02/26/15 16:38	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		02/26/15 16:38	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		02/26/15 16:38	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		02/26/15 16:38	75-35-4	

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ANALYTICAL RESULTS

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

Sample: TRIP BLANK Lab ID: 40110939002 Collected: 02/23/15 11:00 Received: 02/25/15 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		02/26/15 16:38	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		02/26/15 16:38	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		02/26/15 16:38	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		02/26/15 16:38	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		02/26/15 16:38	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		02/26/15 16:38	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		02/26/15 16:38	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		02/26/15 16:38	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		02/26/15 16:38	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		02/26/15 16:38	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		02/26/15 16:38	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		02/26/15 16:38	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		02/26/15 16:38	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		02/26/15 16:38	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		02/26/15 16:38	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		02/26/15 16:38	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		02/26/15 16:38	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		02/26/15 16:38	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		02/26/15 16:38	1634-04-4	
Methylene Chloride	0.48J	ug/L	1.0	0.23	1		02/26/15 16:38	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		02/26/15 16:38	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	127-18-4	
Toluene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		02/26/15 16:38	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		02/26/15 16:38	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		02/26/15 16:38	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		02/26/15 16:38	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	10061-01-5	

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ANALYTICAL RESULTS

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

Sample: TRIP BLANK Lab ID: 40110939002 Collected: 02/23/15 11:00 Received: 02/25/15 09:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		02/26/15 16:38	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		02/26/15 16:38	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		02/26/15 16:38	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		02/26/15 16:38	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		02/26/15 16:38	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		02/26/15 16:38	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	86	%	59-130		1		02/26/15 16:38	460-00-4	
Dibromofluoromethane (S)	114	%	70-130		1		02/26/15 16:38	1868-53-7	
Toluene-d8 (S)	96	%	70-130		1		02/26/15 16:38	2037-26-5	

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

QC Batch:	MERP/4774	Analysis Method:	EPA 7470
QC Batch Method:	EPA 7470	Analysis Description:	7470 Mercury
Associated Lab Samples:	40110939001		

METHOD BLANK: 1123455 Matrix: Water

Associated Lab Samples: 40110939001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.10	0.20	03/04/15 14:42	

LABORATORY CONTROL SAMPLE: 1123456

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.4	108	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1123457 1123458

Parameter	Units	40111175001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Mercury	ug/L	<0.10	5	5	5.5	5.4	109	108	85-115	2	20	

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

QC Batch:	MPRP/11529	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET
Associated Lab Samples:	40110939001		

METHOD BLANK: 1123649 Matrix: Water

Associated Lab Samples: 40110939001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<6.8	20.0	03/05/15 13:46	
Barium	ug/L	<1.7	5.0	03/05/15 13:46	
Cadmium	ug/L	<1.0	5.0	03/05/15 13:46	
Chromium	ug/L	<1.5	5.0	03/05/15 13:46	
Lead	ug/L	<1.6	7.5	03/05/15 13:46	
Selenium	ug/L	<6.8	20.0	03/05/15 13:46	
Silver	ug/L	<3.2	10.0	03/05/15 13:46	

LABORATORY CONTROL SAMPLE: 1123650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	476	95	80-120	
Barium	ug/L	500	480	96	80-120	
Cadmium	ug/L	500	474	95	80-120	
Chromium	ug/L	500	482	96	80-120	
Lead	ug/L	500	498	100	80-120	
Selenium	ug/L	500	482	96	80-120	
Silver	ug/L	250	242	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1123651 1123652

Parameter	Units	MS		MSD		MS Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	RPD	Max Qual
		40110953002	Spike Result	Spike Conc.	Conc.							
Arsenic	ug/L	<6.8	500	500	492	485	98	97	75-125	1	20	
Barium	ug/L	70.3	500	500	545	549	95	96	75-125	1	20	
Cadmium	ug/L	<1.0	500	500	484	482	97	96	75-125	0	20	
Chromium	ug/L	457	500	500	961	993	101	107	75-125	3	20	
Lead	ug/L	2.6J	500	500	494	492	98	98	75-125	0	20	
Selenium	ug/L	<6.8	500	500	490	492	97	97	75-125	0	20	
Silver	ug/L	<3.2	250	250	247	254	99	102	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

QC Batch: MSV/27562 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40110939001, 40110939002

METHOD BLANK: 1121429 Matrix: Water

Associated Lab Samples: 40110939001, 40110939002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	02/26/15 07:27	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	02/26/15 07:27	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	02/26/15 07:27	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	02/26/15 07:27	
1,1-Dichloroethane	ug/L	<0.24	1.0	02/26/15 07:27	
1,1-Dichloroethene	ug/L	<0.41	1.0	02/26/15 07:27	
1,1-Dichloropropene	ug/L	<0.44	1.0	02/26/15 07:27	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	02/26/15 07:27	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	02/26/15 07:27	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	02/26/15 07:27	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	02/26/15 07:27	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	02/26/15 07:27	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	02/26/15 07:27	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	02/26/15 07:27	
1,2-Dichloroethane	ug/L	<0.17	1.0	02/26/15 07:27	
1,2-Dichloropropane	ug/L	<0.23	1.0	02/26/15 07:27	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	02/26/15 07:27	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	02/26/15 07:27	
1,3-Dichloropropane	ug/L	<0.50	1.0	02/26/15 07:27	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	02/26/15 07:27	
2,2-Dichloropropane	ug/L	<0.48	1.0	02/26/15 07:27	
2-Chlorotoluene	ug/L	<0.50	1.0	02/26/15 07:27	
4-Chlorotoluene	ug/L	<0.21	1.0	02/26/15 07:27	
Benzene	ug/L	<0.50	1.0	02/26/15 07:27	
Bromobenzene	ug/L	<0.23	1.0	02/26/15 07:27	
Bromochloromethane	ug/L	<0.34	1.0	02/26/15 07:27	
Bromodichloromethane	ug/L	<0.50	1.0	02/26/15 07:27	
Bromoform	ug/L	<0.50	1.0	02/26/15 07:27	
Bromomethane	ug/L	<2.4	5.0	02/26/15 07:27	
Carbon tetrachloride	ug/L	<0.50	1.0	02/26/15 07:27	
Chlorobenzene	ug/L	<0.50	1.0	02/26/15 07:27	
Chloroethane	ug/L	<0.37	1.0	02/26/15 07:27	
Chloroform	ug/L	<2.5	5.0	02/26/15 07:27	
Chloromethane	ug/L	<0.50	1.0	02/26/15 07:27	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	02/26/15 07:27	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	02/26/15 07:27	
Dibromochloromethane	ug/L	<0.50	1.0	02/26/15 07:27	
Dibromomethane	ug/L	<0.43	1.0	02/26/15 07:27	
Dichlorodifluoromethane	ug/L	<0.22	1.0	02/26/15 07:27	
Diisopropyl ether	ug/L	<0.50	1.0	02/26/15 07:27	
Ethylbenzene	ug/L	<0.50	1.0	02/26/15 07:27	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

METHOD BLANK: 1121429

Matrix: Water

Associated Lab Samples: 40110939001, 40110939002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	02/26/15 07:27	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	02/26/15 07:27	
m&p-Xylene	ug/L	<1.0	2.0	02/26/15 07:27	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	02/26/15 07:27	
Methylene Chloride	ug/L	<0.23	1.0	02/26/15 07:27	
n-Butylbenzene	ug/L	<0.50	1.0	02/26/15 07:27	
n-Propylbenzene	ug/L	<0.50	1.0	02/26/15 07:27	
Naphthalene	ug/L	<2.5	5.0	02/26/15 07:27	
o-Xylene	ug/L	<0.50	1.0	02/26/15 07:27	
p-Isopropyltoluene	ug/L	<0.50	1.0	02/26/15 07:27	
sec-Butylbenzene	ug/L	<2.2	5.0	02/26/15 07:27	
Styrene	ug/L	<0.50	1.0	02/26/15 07:27	
tert-Butylbenzene	ug/L	<0.18	1.0	02/26/15 07:27	
Tetrachloroethene	ug/L	<0.50	1.0	02/26/15 07:27	
Toluene	ug/L	<0.50	1.0	02/26/15 07:27	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	02/26/15 07:27	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	02/26/15 07:27	
Trichloroethene	ug/L	<0.33	1.0	02/26/15 07:27	
Trichlorofluoromethane	ug/L	<0.18	1.0	02/26/15 07:27	
Vinyl chloride	ug/L	<0.18	1.0	02/26/15 07:27	
4-Bromofluorobenzene (S)	%	89	59-130	02/26/15 07:27	
Dibromofluoromethane (S)	%	107	70-130	02/26/15 07:27	
Toluene-d8 (S)	%	95	70-130	02/26/15 07:27	

LABORATORY CONTROL SAMPLE & LCSD: 1121430

1121431

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	53.2	55.5	106	111	70-130	4	20	
1,1,2,2-Tetrachloroethane	ug/L	50	51.1	50.8	102	102	70-130	0	20	
1,1,2-Trichloroethane	ug/L	50	43.7	43.1	87	86	70-130	1	20	
1,1-Dichloroethane	ug/L	50	58.4	59.1	117	118	70-130	1	20	
1,1-Dichloroethene	ug/L	50	50.1	51.6	100	103	70-132	3	20	
1,2,4-Trichlorobenzene	ug/L	50	47.5	48.1	95	96	70-130	1	20	
1,2-Dibromo-3-chloropropane	ug/L	50	42.1	39.4	84	79	50-150	7	20	
1,2-Dibromoethane (EDB)	ug/L	50	48.2	47.3	96	95	70-130	2	20	
1,2-Dichlorobenzene	ug/L	50	49.6	50.3	99	101	70-130	1	20	
1,2-Dichloroethane	ug/L	50	59.4	63.5	119	127	70-130	7	20	
1,2-Dichloropropane	ug/L	50	44.5	44.9	89	90	70-130	1	20	
1,3-Dichlorobenzene	ug/L	50	48.9	49.1	98	98	70-130	0	20	
1,4-Dichlorobenzene	ug/L	50	46.3	46.4	93	93	70-130	0	20	
Benzene	ug/L	50	54.7	55.5	109	111	70-130	1	20	
Bromodichloromethane	ug/L	50	45.6	44.9	91	90	70-130	1	20	
Bromoform	ug/L	50	53.3	52.4	107	105	70-130	2	20	
Bromomethane	ug/L	50	27.1	29.1	54	58	34-157	7	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

LABORATORY CONTROL SAMPLE & LCSD: 1121430

Parameter	Units	Spike	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max	Qualifiers
		Conc.	Result	Result	% Rec	% Rec	Limits		RPD	
Carbon tetrachloride	ug/L	50	64.6	65.9	129	132	70-132	2	20	
Chlorobenzene	ug/L	50	50.2	50.5	100	101	70-130	1	20	
Chloroethane	ug/L	50	59.7	59.4	119	119	60-143	1	20	
Chloroform	ug/L	50	48.8	51.4	98	103	70-130	5	20	
Chloromethane	ug/L	50	57.3	60.8	115	122	43-148	6	20	
cis-1,2-Dichloroethene	ug/L	50	48.8	50.6	98	101	51-133	3	20	
cis-1,3-Dichloropropene	ug/L	50	41.7	41.4	83	83	70-130	1	20	
Dibromochloromethane	ug/L	50	50.4	51.1	101	102	70-130	1	20	
Dichlorodifluoromethane	ug/L	50	48.8	53.4	98	107	10-174	9	20	
Ethylbenzene	ug/L	50	46.1	46.2	92	92	70-130	0	20	
Isopropylbenzene (Cumene)	ug/L	50	48.7	48.8	97	98	70-136	0	20	
m&p-Xylene	ug/L	100	93.9	97.4	94	97	70-131	4	20	
Methyl-tert-butyl ether	ug/L	50	48.2	48.6	96	97	54-139	1	20	
Methylene Chloride	ug/L	50	50.1	53.2	100	106	70-130	6	20	
o-Xylene	ug/L	50	48.0	48.8	96	98	70-130	2	20	
Styrene	ug/L	50	47.7	49.4	95	99	70-130	4	20	
Tetrachloroethene	ug/L	50	53.6	54.2	107	108	70-130	1	20	
Toluene	ug/L	50	44.4	45.9	89	92	70-130	3	20	
trans-1,2-Dichloroethene	ug/L	50	49.5	51.9	99	104	70-130	5	20	
trans-1,3-Dichloropropene	ug/L	50	40.4	40.8	81	82	70-130	1	20	
Trichloroethene	ug/L	50	44.1	43.5	88	87	70-130	1	20	
Trichlorofluoromethane	ug/L	50	53.0	55.0	106	110	50-150	4	20	
Vinyl chloride	ug/L	50	62.6	64.6	125	129	59-157	3	20	
4-Bromofluorobenzene (S)	%				96	96	59-130			
Dibromofluoromethane (S)	%				111	112	70-130			
Toluene-d8 (S)	%				95	95	70-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1121474

Parameter	Units	MS		MSD		MS		MSD		% Rec	RPD	Max
		40110923002	Spike	Spike	Conc.	MS	MSD	Result	% Rec			
1,1,1-Trichloroethane	ug/L	<0.50	50	50	53.2	55.8	106	112	70-130	5	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	50.6	51.4	101	103	70-130	2	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	41.6	42.4	83	85	70-130	2	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	57.5	59.1	115	118	70-130	3	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	50.3	51.5	101	103	70-138	2	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	49.9	50.1	100	100	70-130	0	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	40.9	41.3	82	83	50-150	1	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	45.2	47.4	90	95	70-130	5	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	49.4	50.1	99	100	70-130	1	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	59.9	63.3	120	127	70-130	6	20	
1,2-Dichloropropene	ug/L	<0.23	50	50	42.3	43.1	85	86	70-130	2	20	
1,3-Dichlorobenzene	ug/L	<0.50	50	50	50.3	49.7	101	99	70-130	1	20	
1,4-Dichlorobenzene	ug/L	<0.50	50	50	46.2	46.0	92	92	70-130	0	20	

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

Parameter	Units	40110923002		MS		MSD		1121475					
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max			
										RPD	RPD	Qual	
Benzene	ug/L	<0.50	50	50	52.8	56.1	106	112	70-130	6	20		
Bromodichloromethane	ug/L	<0.50	50	50	43.0	43.9	86	88	70-130	2	20		
Bromoform	ug/L	<0.50	50	50	50.7	52.3	101	105	70-130	3	20		
Bromomethane	ug/L	<2.4	50	50	28.3	30.9	57	62	34-159	9	20		
Carbon tetrachloride	ug/L	<0.50	50	50	63.9	67.4	128	135	70-132	5	20	M1	
Chlorobenzene	ug/L	<0.50	50	50	48.3	50.1	97	100	70-130	4	20		
Chloroethane	ug/L	<0.37	50	50	60.0	61.4	120	123	60-143	2	20		
Chloroform	ug/L	<2.5	50	50	48.5	51.3	97	103	70-130	6	20		
Chloromethane	ug/L	<0.50	50	50	54.2	56.5	108	113	43-149	4	20		
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	48.5	51.0	97	102	48-137	5	33		
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	39.1	40.3	78	81	70-130	3	20		
Dibromochloromethane	ug/L	<0.50	50	50	48.2	49.9	96	100	70-130	3	20		
Dichlorodifluoromethane	ug/L	<0.22	50	50	46.6	49.2	93	98	10-174	5	20		
Ethylbenzene	ug/L	<0.50	50	50	44.7	46.6	89	93	70-130	4	20		
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	47.6	49.3	95	99	70-136	3	20		
m&p-Xylene	ug/L	<1.0	100	100	93.6	96.2	94	96	70-135	3	20		
Methyl-tert-butyl ether	ug/L	<0.17	50	50	46.7	50.0	93	100	54-139	7	20		
Methylene Chloride	ug/L	<0.23	50	50	50.4	54.1	101	108	70-133	7	20		
o-Xylene	ug/L	<0.50	50	50	46.3	48.7	93	97	70-130	5	20		
Styrene	ug/L	<0.50	50	50	46.2	48.4	92	97	70-130	5	20		
Tetrachloroethene	ug/L	<0.50	50	50	50.8	54.4	102	109	70-130	7	20		
Toluene	ug/L	<0.50	50	50	43.2	45.3	86	91	70-130	5	20		
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	48.3	51.5	97	103	70-130	6	20		
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	39.6	41.1	79	82	70-130	4	20		
Trichloroethene	ug/L	<0.33	50	50	40.7	42.8	81	86	70-130	5	20		
Trichlorofluoromethane	ug/L	<0.18	50	50	52.0	54.6	104	109	50-150	5	20		
Vinyl chloride	ug/L	<0.18	50	50	60.5	62.7	121	125	59-158	4	20		
4-Bromofluorobenzene (S)	%						94	96	59-130				
Dibromofluoromethane (S)	%							112	114	70-130			
Toluene-d8 (S)	%							94	94	70-130			

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

QC Batch:	OEXT/25913	Analysis Method:	EPA 8082
QC Batch Method:	EPA 3510	Analysis Description:	8082 GCS PCB
Associated Lab Samples:	40110939001		

METHOD BLANK: 1121525 Matrix: Water

Associated Lab Samples: 40110939001

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
PCB-1016 (Aroclor 1016)	ug/L	<0.25	0.50	02/26/15 20:15	
PCB-1221 (Aroclor 1221)	ug/L	<0.25	0.50	02/26/15 20:15	
PCB-1232 (Aroclor 1232)	ug/L	<0.25	0.50	02/26/15 20:15	
PCB-1242 (Aroclor 1242)	ug/L	<0.25	0.50	02/26/15 20:15	
PCB-1248 (Aroclor 1248)	ug/L	<0.25	0.50	02/26/15 20:15	
PCB-1254 (Aroclor 1254)	ug/L	<0.25	0.50	02/26/15 20:15	
PCB-1260 (Aroclor 1260)	ug/L	<0.25	0.50	02/26/15 20:15	
Decachlorobiphenyl (S)	%	61	34-130	02/26/15 20:15	
Tetrachloro-m-xylene (S)	%	80	55-130	02/26/15 20:15	

LABORATORY CONTROL SAMPLE & LCSD: 1121526

1121527

Parameter	Units	Spike	LCS	LCSD	LCS	LCSD	% Rec	Max	RPD	Qualifiers
		Conc.	Result	Result	% Rec	% Rec	Limits			
PCB-1016 (Aroclor 1016)	ug/L		<0.25	<0.25				20		
PCB-1221 (Aroclor 1221)	ug/L		<0.25	<0.25				20		
PCB-1232 (Aroclor 1232)	ug/L		<0.25	<0.25				20		
PCB-1242 (Aroclor 1242)	ug/L		<0.25	<0.25				20		
PCB-1248 (Aroclor 1248)	ug/L		<0.25	<0.25				20		
PCB-1254 (Aroclor 1254)	ug/L		<0.25	<0.25				20		
PCB-1260 (Aroclor 1260)	ug/L	5	3.8	3.8	76	76	63-130	0	20	
Decachlorobiphenyl (S)	%				75	63	34-130			
Tetrachloro-m-xylene (S)	%				82	83	55-130			

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

QC Batch: OEXT/25912

QC Batch Method: EPA 3510

Associated Lab Samples: 40110939001

METHOD BLANK: 1121511

Matrix: Water

Associated Lab Samples: 40110939001

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
1,2,4-Trichlorobenzene	ug/L	<1.5	5.0	02/26/15 16:50	
1,2-Dichlorobenzene	ug/L	<1.8	5.0	02/26/15 16:50	
1,3-Dichlorobenzene	ug/L	<1.6	5.0	02/26/15 16:50	
1,4-Dichlorobenzene	ug/L	<1.9	5.0	02/26/15 16:50	
2,2'-Oxybis(1-chloropropane)	ug/L	<1.1	5.0	02/26/15 16:50	
2,4,5-Trichlorophenol	ug/L	<0.76	5.0	02/26/15 16:50	
2,4,6-Trichlorophenol	ug/L	<1.1	5.0	02/26/15 16:50	
2,4-Dichlorophenol	ug/L	<1.2	5.0	02/26/15 16:50	
2,4-Dimethylphenol	ug/L	<0.93	5.0	02/26/15 16:50	
2,4-Dinitrophenol	ug/L	<0.86	10.0	02/26/15 16:50	
2,4-Dinitrotoluene	ug/L	<1.0	5.0	02/26/15 16:50	
2,6-Dinitrotoluene	ug/L	<1.5	5.0	02/26/15 16:50	
2-Chloronaphthalene	ug/L	<1.1	5.0	02/26/15 16:50	
2-Chlorophenol	ug/L	<1.0	5.0	02/26/15 16:50	
2-Methylnaphthalene	ug/L	<1.7	5.0	02/26/15 16:50	
2-Methylphenol(o-Cresol)	ug/L	<0.96	5.0	02/26/15 16:50	
2-Nitroaniline	ug/L	<1.3	5.0	02/26/15 16:50	
2-Nitrophenol	ug/L	<0.85	5.0	02/26/15 16:50	
3&4-Methylphenol(m&p Cresol)	ug/L	<1.3	5.0	02/26/15 16:50	
3,3'-Dichlorobenzidine	ug/L	<1.3	5.0	02/26/15 16:50	
3-Nitroaniline	ug/L	<1.3	5.0	02/26/15 16:50	
4,6-Dinitro-2-methylphenol	ug/L	<0.62	5.0	02/26/15 16:50	
4-Bromophenylphenyl ether	ug/L	<0.50	5.0	02/26/15 16:50	
4-Chloro-3-methylphenol	ug/L	<1.4	5.0	02/26/15 16:50	
4-Chloroaniline	ug/L	<1.6	5.0	02/26/15 16:50	
4-Chlorophenylphenyl ether	ug/L	<0.94	5.0	02/26/15 16:50	
4-Nitroaniline	ug/L	<2.2	5.0	02/26/15 16:50	
4-Nitrophenol	ug/L	<0.59	10.0	02/26/15 16:50	
Acenaphthene	ug/L	<1.3	5.0	02/26/15 16:50	
Acenaphthylene	ug/L	<0.94	5.0	02/26/15 16:50	
Anthracene	ug/L	<0.56	5.0	02/26/15 16:50	
Benzo(a)anthracene	ug/L	<0.91	5.0	02/26/15 16:50	
Benzo(a)pyrene	ug/L	<1.3	5.0	02/26/15 16:50	
Benzo(b)fluoranthene	ug/L	<0.70	5.0	02/26/15 16:50	
Benzo(g,h,i)perylene	ug/L	<2.1	5.0	02/26/15 16:50	
Benzo(k)fluoranthene	ug/L	<1.4	5.0	02/26/15 16:50	
bis(2-Chloroethoxy)methane	ug/L	<1.0	5.0	02/26/15 16:50	
bis(2-Chloroethyl) ether	ug/L	<0.74	5.0	02/26/15 16:50	
bis(2-Ethylhexyl)phthalate	ug/L	<0.77	5.0	02/26/15 16:50	
Butylbenzylphthalate	ug/L	<0.76	5.0	02/26/15 16:50	
Carbazole	ug/L	<1.0	5.0	02/26/15 16:50	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

METHOD BLANK: 1121511

Matrix: Water

Associated Lab Samples: 40110939001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chrysene	ug/L	<1.0	5.0	02/26/15 16:50	
Di-n-butylphthalate	ug/L	<0.95	5.0	02/26/15 16:50	
Di-n-octylphthalate	ug/L	<1.4	5.0	02/26/15 16:50	
Dibenz(a,h)anthracene	ug/L	<1.0	5.0	02/26/15 16:50	
Dibenzofuran	ug/L	<1.0	5.0	02/26/15 16:50	
Diethylphthalate	ug/L	<0.54	5.0	02/26/15 16:50	
Dimethylphthalate	ug/L	<0.73	5.0	02/26/15 16:50	
Fluoranthene	ug/L	<1.4	5.0	02/26/15 16:50	
Fluorene	ug/L	<0.88	5.0	02/26/15 16:50	
Hexachloro-1,3-butadiene	ug/L	<1.8	10.0	02/26/15 16:50	
Hexachlorobenzene	ug/L	<0.57	5.0	02/26/15 16:50	
Hexachlorocyclopentadiene	ug/L	<0.90	5.0	02/26/15 16:50	
Hexachloroethane	ug/L	<1.5	5.0	02/26/15 16:50	
Indeno(1,2,3-cd)pyrene	ug/L	<2.1	5.0	02/26/15 16:50	
Isophorone	ug/L	<1.0	5.0	02/26/15 16:50	
N-Nitroso-di-n-propylamine	ug/L	<1.0	5.0	02/26/15 16:50	
N-Nitrosodiphenylamine	ug/L	<2.2	10.0	02/26/15 16:50	
Naphthalene	ug/L	<1.5	5.0	02/26/15 16:50	
Nitrobenzene	ug/L	<1.0	5.0	02/26/15 16:50	
Pentachlorophenol	ug/L	<0.75	10.0	02/26/15 16:50	
Phenanthrone	ug/L	<0.53	5.0	02/26/15 16:50	
Phenol	ug/L	<0.54	5.0	02/26/15 16:50	
Pyrene	ug/L	<0.74	5.0	02/26/15 16:50	
2,4,6-Tribromophenol (S)	%	99	47-139	02/26/15 16:50	
2-Fluorobiphenyl (S)	%	75	50-130	02/26/15 16:50	
2-Fluorophenol (S)	%	50	36-130	02/26/15 16:50	
Nitrobenzene-d5 (S)	%	74	53-130	02/26/15 16:50	
Phenol-d6 (S)	%	32	23-130	02/26/15 16:50	
Terphenyl-d14 (S)	%	118	36-158	02/26/15 16:50	

LABORATORY CONTROL SAMPLE & LCSD: 1121512

1121513

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	41.6	40.7	83	81	70-130	2	20	
1,2-Dichlorobenzene	ug/L	50	37.5	38.8	75	78	55-130	3	23	
1,3-Dichlorobenzene	ug/L	50	35.5	36.5	71	73	52-130	3	25	
1,4-Dichlorobenzene	ug/L	50	36.0	35.9	72	72	53-130	0	20	
2,2'-Oxybis(1-chloropropane)	ug/L	50	44.6	46.6	89	93	51-130	4	20	
2,4,5-Trichlorophenol	ug/L	50	55.8	57.3	112	115	70-130	3	20	
2,4,6-Trichlorophenol	ug/L	50	51.4	49.6	103	99	70-130	4	20	
2,4-Dichlorophenol	ug/L	50	41.3	42.3	83	85	67-130	2	21	
2,4-Dimethylphenol	ug/L	50	34.7	31.9	69	64	35-130	8	34	
2,4-Dinitrophenol	ug/L	50	51.9	46.5	104	93	18-171	11	29	
2,4-Dinitrotoluene	ug/L	50	59.0	59.9	118	120	65-138	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

Parameter	Units	Spike	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max	Qualifiers
		Conc.	Result	% Rec	% Rec	% Rec	Limits		RPD	
2,6-Dinitrotoluene	ug/L	50	58.8	57.6	118	115	60-147	2	20	
2-Chloronaphthalene	ug/L	50	46.7	45.4	93	91	70-130	3	20	
2-Chlorophenol	ug/L	50	41.4	40.8	83	82	60-130	2	24	
2-Methylnaphthalene	ug/L	50	44.2	43.0	88	86	68-130	3	20	
2-Methylphenol(o-Cresol)	ug/L	50	40.1	40.3	80	81	55-130	0	27	
2-Nitroaniline	ug/L	50	61.2	58.6	122	117	47-132	4	20	
2-Nitrophenol	ug/L	50	42.0	41.7	84	83	69-130	1	20	
3&4-Methylphenol(m&p Cresol)	ug/L	50	35.3	35.7	71	71	46-130	1	26	
3,3'-Dichlorobenzidine	ug/L	50	30.2	28.2	60	56	42-130	7	24	
3-Nitroaniline	ug/L	50	46.5	42.2	93	84	52-130	10	20	
4,6-Dinitro-2-methylphenol	ug/L	50	42.2	43.5	84	87	52-153	3	22	
4-Bromophenylphenyl ether	ug/L	50	44.1	44.7	88	89	70-134	1	20	
4-Chloro-3-methylphenol	ug/L	50	50.8	50.7	102	101	63-130	0	24	
4-Chloroaniline	ug/L	50	41.8	42.5	84	85	45-130	2	20	
4-Chlorophenylphenyl ether	ug/L	50	52.5	49.8	105	100	70-130	5	20	
4-Nitroaniline	ug/L	50	52.5	49.5	105	99	54-134	6	24	
4-Nitrophenol	ug/L	50	23.9	23.4	48	47	11-130	2	30	
Acenaphthene	ug/L	50	52.6	49.8	105	100	69-130	6	20	
Acenaphthylene	ug/L	50	50.9	50.5	102	101	70-130	1	20	
Anthracene	ug/L	50	45.5	47.3	91	95	70-130	4	20	
Benzo(a)anthracene	ug/L	50	48.4	48.4	97	97	70-130	0	20	
Benzo(a)pyrene	ug/L	50	42.2	44.6	84	89	61-130	6	20	
Benzo(b)fluoranthene	ug/L	50	42.3	46.2	85	92	60-130	9	20	
Benzo(g,h,i)perylene	ug/L	50	41.9	44.0	84	88	45-131	5	24	
Benzo(k)fluoranthene	ug/L	50	43.2	47.1	86	94	55-142	9	20	
bis(2-Chloroethoxy)methane	ug/L	50	45.7	45.0	91	90	66-130	1	20	
bis(2-Chloroethyl) ether	ug/L	50	45.8	47.3	92	95	55-130	3	20	
bis(2-Ethylhexyl)phthalate	ug/L	50	55.9	58.1	112	116	60-136	4	20	
Butylbenzylphthalate	ug/L	50	57.6	60.5	115	121	70-130	5	20	
Carbazole	ug/L	50	45.5	47.3	91	95	60-133	4	20	
Chrysene	ug/L	50	46.2	47.3	92	95	70-130	2	20	
Di-n-butylphthalate	ug/L	50	47.0	49.4	94	99	67-130	5	20	
Di-n-octylphthalate	ug/L	50	52.5	53.0	105	106	59-138	1	20	
Dibenz(a,h)anthracene	ug/L	50	20.1	20.8	40	42	10-130	3	27	
Dibenzofuran	ug/L	50	51.7	49.1	103	98	70-130	5	20	
Diethylphthalate	ug/L	50	56.3	54.5	113	109	68-130	3	20	
Dimethylphthalate	ug/L	50	55.6	54.3	111	109	70-130	2	20	
Fluoranthene	ug/L	50	45.7	45.9	91	92	65-130	1	20	
Fluorene	ug/L	50	56.4	53.6	113	107	69-130	5	20	
Hexachloro-1,3-butadiene	ug/L	50	39.9	37.7	80	75	57-130	6	20	
Hexachlorobenzene	ug/L	50	41.3	43.9	83	88	69-130	6	20	
Hexachlorocyclopentadiene	ug/L	50	18.7	12.6	37	25	18-130	39	37 R1	
Hexachloroethane	ug/L	50	37.1	36.2	74	72	46-130	2	20	
Indeno(1,2,3-cd)pyrene	ug/L	50	37.0	36.4	74	73	34-133	2	25	
Isophorone	ug/L	50	54.1	54.3	108	109	58-144	0	20	
N-Nitroso-di-n-propylamine	ug/L	50	49.2	49.8	98	100	54-130	1	20	
N-Nitrosodiphenylamine	ug/L	50	58.6	59.7	117	119	70-151	2	25	

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

Parameter	Units	Spike	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max	Qualifiers
		Conc.	Result	Result	% Rec	% Rec	Limits		RPD	
Naphthalene	ug/L	50	43.2	43.3	86	87	70-130	0	20	
Nitrobenzene	ug/L	50	46.2	47.2	92	94	66-136	2	20	
Pentachlorophenol	ug/L	50	39.7	43.0	79	86	38-130	8	25	
Phenanthrene	ug/L	50	46.4	47.6	93	95	70-130	2	20	
Phenol	ug/L	50	19.8	20.1	40	40	28-130	2	20	
Pyrene	ug/L	50	54.7	58.4	109	117	64-130	7	20	
2,4,6-Tribromophenol (S)	%				116	114	47-139			
2-Fluorobiphenyl (S)	%				81	80	50-130			
2-Fluorophenol (S)	%				52	53	36-130			
Nitrobenzene-d5 (S)	%				74	81	53-130			
Phenol-d6 (S)	%				34	36	23-130			
Terphenyl-d14 (S)	%				105	113	36-158			

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

QC Batch:	WET/21345	Analysis Method:	EPA 1010
QC Batch Method:	EPA 1010	Analysis Description:	1010 Flash Point, Closed Cup
Associated Lab Samples: 40110939001			

LABORATORY CONTROL SAMPLE: 1123026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		82.5			

LABORATORY CONTROL SAMPLE: 1123221

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Flashpoint	deg F		82.1			

SAMPLE DUPLICATE: 1123318

Parameter	Units	10298076001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

SAMPLE DUPLICATE: 1123340

Parameter	Units	10298131001 Result	Dup Result	RPD	Max RPD	Qualifiers
Flashpoint	deg F	>210	>210			

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QUALITY CONTROL DATA

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

QC Batch: WET/21311 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 40110939001

SAMPLE DUPLICATE: 1121486

Parameter	Units	Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.6	7.6	1	5	H6

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QUALIFIERS

Project: 41GT15.078 SYMBIONT

Pace Project No.: 40110939

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: GCSV/12627

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSSV/7669

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

P4 Sample field preservation does not meet EPA or method recommendations for this analysis.

R1 RPD value was outside control limits.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 41GT15.078 SYMBIONT
 Pace Project No.: 40110939

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40110939001	41GT15.078-001	EPA 3510	OEXT/25913	EPA 8082	GCSV/12627
40110939001	41GT15.078-001	EPA 3010	MPRP/11529	EPA 6010	ICP/10242
40110939001	41GT15.078-001	EPA 7470	MERP/4774	EPA 7470	MERC/6464
40110939001	41GT15.078-001	EPA 3510	OEXT/25912	EPA 8270	MSSV/7669
40110939001	41GT15.078-001	EPA 8260	MSV/27562		
40110939002	TRIP BLANK	EPA 8260	MSV/27562		
40110939001	41GT15.078-001	EPA 1010	WET/21345		
40110939001	41GT15.078-001	SM 4500-H+B	WET/21311		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a **LEGAL DOCUMENT**. All relevant fields must be completed accurately.

40113928
Page 3

Page 26 of 27

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company: Veolia ES Industrial Services	Report To: damon.brattset@veoliases.com			Attention: Damon Brattset	
N104W13275 Donges Bay Road	Copy To:			Company Name:Veolia ES Industrial Services	
Germantown, WI				Address:N104W13275 Donges Bay Road, Germantown, WI 53022	
Email To: damon.brattset@veoliases.com	Purchase Order No.: <i>10122-317</i>			Pace Quote Reference:	
Phone: (262) 512-8020	Project Name: Symbiont			Pace Project Manager: Brian Bastien	
Requested Due Date/TAT: Standard TAT	Project Number: 41GT15 078			Page Profile #:	
REGULATORY AGENCY					
<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER					
<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER _____					
SITE <input type="checkbox"/> 3A <input type="checkbox"/> IL <input type="checkbox"/> N <input type="checkbox"/> M <input type="checkbox"/> C					
LOCATION <input type="checkbox"/> OH <input type="checkbox"/> SC <input checked="" type="checkbox"/> MI <input type="checkbox"/> OTHER _____					

Additional Comments

* included in shipment
added to coc by lab.

KW 2-25-15

SAMPLER NAME AND SIG

Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project #

WO# : 40110939

Client Name: Veolia

Courier: FedEx UPS Client Pace Other: CS Logistics
Tracking #: _____

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no

Custody Seal on Samples Present: yes no Seals intact: yes no

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer Used: N/A

Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI /Corr: _____

Biological Tissue is Frozen: yes



40110939

Temp Blank Present: yes no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

no

Person examining contents:

Date: 2-25-15

Initials: KEW

			Comments:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2. Trip blanks added to COC by lab KW 2-25-15	
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:	
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. ID's on labels are 078-001 (doesn't include project #) KW 2-25-15	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.	
-Includes date/time/ID/Analysis Matrix:	<u>(W)</u>	15.	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2, NaOH+ZnAct ≥9, NaOH ≥12)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lab Std #/ID of preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Date/Time:	
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.	
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.	
Pace Trip Blank Lot # (if purchased):	<u>280</u>		

Client Notification/ Resolution:

If checked, see attached form for additional comments

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: bj

Date: 2-25-15