*CERTIFICATE OF ANALYSIS*

James Harrison
Veolia
265 First Street
Cambridge, MA 02142

**RE: Annual PP Scan (N/A)**
**ESS Laboratory Work Order Number: 1609506**

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

**REVIEWED**
**By ESS Laboratory at 1:35 pm, Oct 04, 2016**

**Analytical Summary**
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with NELAC Standards, A2LA and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

**Subcontracted Analyses**

| | |
|---|---|
| Pace Analytical - Pittsburgh, PA | Dioxin - TCDD |
| ProScience Analytical Services, Inc. - Woburn, MA | Asbestos |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

## SAMPLE RECEIPT

The following samples were received on September 22, 2016 for the analyses specified on the enclosed Chain of Custody Record.

The sampling for this project was performed by a representative of ESS Laboratory.

**The samples and analyses listed below were analyzed in accordance with the Guidelines Establishing Test Procedures for the Analysis of Pollutants, 40 CFR Part 136, as amended.**

| Lab Number | Sample Name | Matrix | Analysis |
|---|---|---|---|
| 1609506-01 | MB 009 | Waste Water | §, 200.7, 245.1, 3113B, 420.1, 4500CN C,E, 608, 624, 625, 625 SIM |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

## PROJECT NARRATIVE

**624 Volatile Organic Compounds**

CI62839-BS1 **Blank Spike recovery is below lower control limit (B-).**
Acrolein - Screen (54% @ 70-130%)

CI62839-BSD1 **Blank Spike recovery is below lower control limit (B-).**
Acrolein - Screen (37% @ 70-130%)

CI62839-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Acrolein - Screen (37% @ 25%)

CZI0380-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Bromomethane (34% @ 30%)

**625 Semi-Volatile Organic Compounds**

CZI0355-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (93% @ 70-130%), Benzidine (74% @ 0-200%)

CZI0372-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (98% @ 70-130%), Benzidine (82% @ 0-200%)

**No other observations noted.**

**End of Project Narrative.**

## DATA USABILITY LINKS

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

## CURRENT SW-846 METHODOLOGY VERSIONS

**Analytical Methods**

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015D - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH / VPH

**Prep Methods**

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035 - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan
Client Sample ID: MB 009
Date Sampled: 09/22/16 14:00
Percent Solids: N/A

ESS Laboratory Work Order: 1609506
ESS Laboratory Sample ID: 1609506-01
Sample Matrix: Waste Water
Units: mg/L

Extraction Method: 3005A

**All methods used are in accordance with 40 CFR 136.**

## Total Metals

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | I/V | F/V | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.070** (0.050) | | 200.7 | | 1 | KJK | 09/28/16 16:56 | 50 | 50 | CI62713 |
| Arsenic | ND (0.050) | | 200.7 | | 1 | KJK | 09/28/16 16:56 | 50 | 50 | CI62713 |
| **Beryllium** | **0.0013** (0.0010) | | 200.7 | | 1 | KJK | 09/28/16 16:56 | 50 | 50 | CI62713 |
| Cadmium | ND (0.0100) | | 200.7 | | 1 | KJK | 09/28/16 16:56 | 50 | 50 | CI62713 |
| Chromium | ND (0.020) | | 200.7 | | 1 | KJK | 09/28/16 16:56 | 50 | 50 | CI62713 |
| **Copper** | **0.021** (0.020) | | 200.7 | | 1 | KJK | 09/28/16 16:56 | 50 | 50 | CI62713 |
| Lead | ND (0.020) | | 200.7 | | 1 | KJK | 09/28/16 16:56 | 50 | 50 | CI62713 |
| Mercury | ND (0.00020) | | 245.1 | | 1 | BJV | 09/27/16 13:16 | 20 | 40 | CI62611 |
| Nickel | ND (0.050) | | 200.7 | | 1 | KJK | 09/28/16 16:56 | 50 | 50 | CI62713 |
| Selenium | ND (0.010) | | 3113B | | 1 | KJK | 09/30/16 20:24 | 50 | 50 | CI62713 |
| Silver | ND (0.010) | | 200.7 | | 1 | KJK | 09/28/16 16:56 | 50 | 50 | CI62713 |
| Thallium | ND (0.100) | | 200.7 | | 1 | KJK | 09/28/16 16:56 | 50 | 50 | CI62713 |
| **Zinc** | **0.055** (0.050) | | 200.7 | | 1 | KJK | 09/28/16 16:56 | 50 | 50 | CI62713 |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan
Client Sample ID: MB 009
Date Sampled: 09/22/16 14:00
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 1609506
ESS Laboratory Sample ID: 1609506-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: SMR
Prepared: 9/23/16 9:17

**All methods used are in accordance with 40 CFR 136.**

## 608 Polychlorinated Biphenyls (PCB)

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND (0.09) | | 608 | | 1 | 09/23/16 20:56 | | CI62234 |
| Aroclor 1221 | ND (0.09) | | 608 | | 1 | 09/23/16 20:56 | | CI62234 |
| Aroclor 1232 | ND (0.09) | | 608 | | 1 | 09/23/16 20:56 | | CI62234 |
| Aroclor 1242 | ND (0.09) | | 608 | | 1 | 09/23/16 20:56 | | CI62234 |
| Aroclor 1248 | ND (0.09) | | 608 | | 1 | 09/23/16 20:56 | | CI62234 |
| Aroclor 1254 | ND (0.09) | | 608 | | 1 | 09/23/16 20:56 | | CI62234 |
| Aroclor 1260 | ND (0.09) | | 608 | | 1 | 09/23/16 20:56 | | CI62234 |
| Aroclor 1262 | ND (0.09) | | 608 | | 1 | 09/23/16 20:56 | | CI62234 |
| Aroclor 1268 | ND (0.09) | | 608 | | 1 | 09/23/16 20:56 | | CI62234 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *85 %* | | *30-150* |
| *Surrogate: Decachlorobiphenyl [2C]* | *85 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *77 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *78 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan
Client Sample ID: MB 009
Date Sampled: 09/22/16 14:00
Percent Solids: N/A
Initial Volume: 1050
Final Volume: 5
Extraction Method: 3510C

ESS Laboratory Work Order: 1609506
ESS Laboratory Sample ID: 1609506-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: IBM
Prepared: 9/28/16 14:15

**All methods used are in accordance with 40 CFR 136.**

## 608/6630C Organochlorine Pesticides

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 4,4´-DDD | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| 4,4´-DDE | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| 4,4´-DDT | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Aldrin | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| alpha-BHC | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| beta-BHC | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Chlordane (Total) | ND (0.48) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| delta-BHC | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Dieldrin | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Endosulfan I | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Endosulfan II | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Endosulfan Sulfate | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Endrin | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Endrin Aldehyde | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| gamma-BHC (Lindane) | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Heptachlor | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Heptachlor Epoxide | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Methoxychlor | ND (0.05) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |
| Toxaphene | ND (1.24) | | 608 | | 1 | 09/28/16 20:40 | CZI0383 | CI62808 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: Decachlorobiphenyl* | *83 %* | | *30-150* |
| *Surrogate: Tetrachloro-m-xylene* | *75 %* | | *30-150* |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan
Client Sample ID: MB 009
Date Sampled: 09/22/16 14:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1609506
ESS Laboratory Sample ID: 1609506-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: GEM

**All methods used are in accordance with 40 CFR 136.**

## 624 Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| 1,1,2,2-Tetrachloroethane | ND (0.5) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| 1,1,2-Trichloroethane | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| 1,1-Dichloroethane | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| 1,1-Dichloroethene | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| 1,2-Dichlorobenzene | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| 1,2-Dichloroethane | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| 1,2-Dichloropropane | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| 1,3-Dichlorobenzene | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| 1,4-Dichlorobenzene | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| 2-Chloroethyl vinyl ether | ND (10.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Acrolein - Screen | ND (5.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Acrylonitrile - Screen | ND (5.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Benzene | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Bromodichloromethane | ND (0.6) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| **Bromoform** | **4.2** (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Bromomethane | ND (2.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Carbon Tetrachloride | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Chlorobenzene | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Chloroethane | ND (2.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| **Chloroform** | **9.5** (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Chloromethane | ND (2.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| cis-1,2-Dichloroethene | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| cis-1,3-Dichloropropene | ND (0.4) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| **Dibromochloromethane** | **11.2** (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Ethylbenzene | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Methylene Chloride | ND (4.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Tetrachloroethene | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Toluene | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| trans-1,2-Dichloroethene | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| trans-1,3-Dichloropropene | ND (0.5) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| **Trichloroethene** | **1.5** (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan
Client Sample ID: MB 009
Date Sampled: 09/22/16 14:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 1609506
ESS Laboratory Sample ID: 1609506-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: GEM

**All methods used are in accordance with 40 CFR 136.**

## 624 Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Trichlorofluoromethane | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |
| Vinyl Chloride | ND (1.0) | | 624 | | 1 | 09/28/16 19:54 | CZI0380 | CI62839 |

| | %Recovery | Qualifier | Limits |
|---|---|---|---|
| *Surrogate: 1,2-Dichloroethane-d4* | *100 %* | | *70-130* |
| *Surrogate: 4-Bromofluorobenzene* | *89 %* | | *70-130* |
| *Surrogate: Dibromofluoromethane* | *102 %* | | *70-130* |
| *Surrogate: Toluene-d8* | *102 %* | | *70-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan
Client Sample ID: MB 009
Date Sampled: 09/22/16 14:00
Percent Solids: N/A
Initial Volume: 1020
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 1609506
ESS Laboratory Sample ID: 1609506-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: TJ
Prepared: 9/26/16 19:30

**All methods used are in accordance with 40 CFR 136.**

## 625 Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 1,2-Dichlorobenzene | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 1,2-Diphenylhydrazine as Azobenzene | ND (19.6) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 1,3-Dichlorobenzene | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 1,4-Dichlorobenzene | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 2,4,6-Trichlorophenol | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 2,4-Dichlorophenol | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 2,4-Dimethylphenol | ND (49.0) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 2,4-Dinitrophenol | ND (49.0) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 2,4-Dinitrotoluene | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 2,6-Dinitrotoluene | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 2-Chloronaphthalene | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 2-Chlorophenol | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 2-Nitrophenol | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 3,3´-Dichlorobenzidine | ND (19.6) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 4,6-Dinitro-2-Methylphenol | ND (49.0) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 4-Bromophenyl-phenylether | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 4-Chloro-3-Methylphenol | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 4-Chloro-phenyl-phenyl ether | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| 4-Nitrophenol | ND (49.0) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Benzidine | ND (49.0) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| bis(2-Chloroethoxy)methane | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| bis(2-Chloroethyl)ether | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| bis(2-chloroisopropyl)Ether | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| bis(2-Ethylhexyl)phthalate | ND (5.9) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Butylbenzylphthalate | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Diethylphthalate | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Dimethylphthalate | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Di-n-butylphthalate | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Di-n-octylphthalate | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Hexachlorobenzene | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Hexachlorobutadiene | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan
Client Sample ID: MB 009
Date Sampled: 09/22/16 14:00
Percent Solids: N/A
Initial Volume: 1020
Final Volume: 1
Extraction Method: 3520C

ESS Laboratory Work Order: 1609506
ESS Laboratory Sample ID: 1609506-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: TJ
Prepared: 9/26/16 19:30

**All methods used are in accordance with 40 CFR 136.**

## 625 Semi-Volatile Organic Compounds

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | ND (24.5) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Hexachloroethane | ND (4.9) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Isophorone | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Nitrobenzene | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| N-Nitrosodimethylamine | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| N-Nitroso-Di-n-Propylamine | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| N-nitrosodiphenylamine | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Pentachlorophenol | ND (49.0) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |
| Phenol | ND (9.8) | | 625 | | 1 | 09/28/16 15:47 | CZI0372 | CI62619 |

| | *%Recovery* | *Qualifier* | *Limits* |
|---|---|---|---|
| *Surrogate: 1,2-Dichlorobenzene-d4* | *80 %* | | *30-130* |
| *Surrogate: 2,4,6-Tribromophenol* | *81 %* | | *15-110* |
| *Surrogate: 2-Chlorophenol-d4* | *69 %* | | *15-110* |
| *Surrogate: 2-Fluorobiphenyl* | *83 %* | | *30-130* |
| *Surrogate: 2-Fluorophenol* | *53 %* | | *15-110* |
| *Surrogate: Nitrobenzene-d5* | *83 %* | | *30-130* |
| *Surrogate: Phenol-d6* | *67 %* | | *15-110* |
| *Surrogate: p-Terphenyl-d14* | *84 %* | | *30-130* |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan
Client Sample ID: MB 009
Date Sampled: 09/22/16 14:00
Percent Solids: N/A
Initial Volume: 930
Final Volume: 0.25
Extraction Method: 3510C

ESS Laboratory Work Order: 1609506
ESS Laboratory Sample ID: 1609506-01
Sample Matrix: Waste Water
Units: ug/L
Analyst: VSC
Prepared: 9/26/16 15:30

**All methods used are in accordance with 40 CFR 136.**

## 625(SIM) Polynuclear Aromatic Hydrocarbons

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Acenaphthylene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Anthracene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Benzo(a)anthracene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Benzo(a)pyrene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Benzo(b)fluoranthene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Benzo(g,h,i)perylene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Benzo(k)fluoranthene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Chrysene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Dibenzo(a,h)Anthracene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Fluoranthene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Fluorene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Indeno(1,2,3-cd)Pyrene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Naphthalene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Phenanthrene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |
| Pyrene | ND (0.22) | | 625 SIM | | 1 | 09/28/16 21:43 | CZI0378 | CI62618 |

| %Recovery | Qualifier | Limits |
|---|---|---|

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan
Client Sample ID: MB 009
Date Sampled: 09/22/16 14:00

ESS Laboratory Work Order: 1609506
ESS Laboratory Sample ID: 1609506-01
Sample Matrix: Waste Water

**All methods used are in accordance with 40 CFR 136.**

## Classical Chemistry

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Units | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Dioxin** | **See Attached** (N/A) | | | | | | | | |
| Phenols | ND (0.10) | | 420.1 | | 1 | JLK | 09/28/16 19:40 | mg/L | CI62841 |
| Total Cyanide | ND (0.0200) | | 4500CN C,E | | 1 | EEM | 09/27/16 14:00 | mg/L | CI62714 |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan
Client Sample ID: MB 009
Date Sampled: 09/22/16 14:00

ESS Laboratory Work Order: 1609506
ESS Laboratory Sample ID: 1609506-01
Sample Matrix: Waste Water
Units: %

**All methods used are in accordance with 40 CFR 136.**

## Subcontracted Analysis

| Analyte | Results (MRL) | MDL | Method | Limit | DF | Analyst | Analyzed | Sequence | Batch |
|---|---|---|---|---|---|---|---|---|---|
| **Asbestos** | **See Attached** (N/A) | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

## Total Metals

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch CI62611 - 245.1/7470A** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.00020 | mg/L | | | | | | | |
| **Blank** | | | | | | | | | | |
| Mercury | ND | 0.00020 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Mercury | 0.00583 | 0.00020 | mg/L | 0.006000 | | 97 | 85-115 | | | |
| **LCS Dup** | | | | | | | | | | |
| Mercury | 0.00590 | 0.00020 | mg/L | 0.006000 | | 98 | 85-115 | 1 | 20 | |
| **Batch CI62713 - 3005A** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Antimony | ND | 0.050 | mg/L | | | | | | | |
| Arsenic | ND | 0.050 | mg/L | | | | | | | |
| Beryllium | ND | 0.0010 | mg/L | | | | | | | |
| Cadmium | ND | 0.0100 | mg/L | | | | | | | |
| Chromium | ND | 0.020 | mg/L | | | | | | | |
| Copper | ND | 0.020 | mg/L | | | | | | | |
| Lead | 0.023 | 0.020 | mg/L | | | | | | | |
| Nickel | ND | 0.050 | mg/L | | | | | | | |
| Selenium | ND | 0.010 | mg/L | | | | | | | |
| Silver | ND | 0.010 | mg/L | | | | | | | |
| Thallium | ND | 0.100 | mg/L | | | | | | | |
| Zinc | ND | 0.050 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Antimony | 0.525 | 0.050 | mg/L | 0.5000 | | 105 | 85-115 | | | |
| Arsenic | 0.488 | 0.050 | mg/L | 0.5000 | | 98 | 85-115 | | | |
| Beryllium | 0.0494 | 0.0010 | mg/L | 0.05000 | | 99 | 85-115 | | | |
| Cadmium | 0.243 | 0.0100 | mg/L | 0.2500 | | 97 | 85-115 | | | |
| Chromium | 0.502 | 0.020 | mg/L | 0.5000 | | 100 | 85-115 | | | |
| Copper | 0.517 | 0.020 | mg/L | 0.5000 | | 103 | 85-115 | | | |
| Lead | 0.501 | 0.020 | mg/L | 0.5000 | | 100 | 85-115 | | | |
| Nickel | 0.514 | 0.050 | mg/L | 0.5000 | | 103 | 85-115 | | | |
| Selenium | 0.846 | 0.250 | mg/L | 1.000 | | 85 | 85-115 | | | |
| Silver | 0.251 | 0.010 | mg/L | 0.2500 | | 100 | 85-115 | | | |
| Thallium | 0.518 | 0.100 | mg/L | 0.5000 | | 104 | 85-115 | | | |
| Zinc | 0.503 | 0.050 | mg/L | 0.5000 | | 101 | 85-115 | | | |
| **LCS Dup** | | | | | | | | | | |
| Antimony | 0.512 | 0.050 | mg/L | 0.5000 | | 102 | 85-115 | 2 | 20 | |
| Arsenic | 0.478 | 0.050 | mg/L | 0.5000 | | 96 | 85-115 | 2 | 20 | |
| Beryllium | 0.0482 | 0.0010 | mg/L | 0.05000 | | 96 | 85-115 | 2 | 20 | |
| Cadmium | 0.240 | 0.0100 | mg/L | 0.2500 | | 96 | 85-115 | 2 | 20 | |
| Chromium | 0.485 | 0.020 | mg/L | 0.5000 | | 97 | 85-115 | 3 | 20 | |
| Copper | 0.493 | 0.020 | mg/L | 0.5000 | | 99 | 85-115 | 5 | 20 | |
| Lead | 0.494 | 0.020 | mg/L | 0.5000 | | 99 | 85-115 | 1 | 20 | |
| Nickel | 0.492 | 0.050 | mg/L | 0.5000 | | 98 | 85-115 | 4 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals** | | | | | | | | | | |
| **Batch CI62713 - 3005A** | | | | | | | | | | |
| Selenium | 0.921 | 0.250 | mg/L | 1.000 | | 92 | 85-115 | 8 | 20 | |
| Silver | 0.241 | 0.010 | mg/L | 0.2500 | | 96 | 85-115 | 4 | 20 | |
| Thallium | 0.495 | 0.100 | mg/L | 0.5000 | | 99 | 85-115 | 5 | 20 | |
| Zinc | 0.489 | 0.050 | mg/L | 0.5000 | | 98 | 85-115 | 3 | 20 | |
| **608 Polychlorinated Biphenyls (PCB)** | | | | | | | | | | |
| **Batch CI62234 - 3510C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Aroclor 1016 | ND | 0.10 | ug/L | | | | | | | |
| Aroclor 1221 | ND | 0.10 | ug/L | | | | | | | |
| Aroclor 1232 | ND | 0.10 | ug/L | | | | | | | |
| Aroclor 1242 | ND | 0.10 | ug/L | | | | | | | |
| Aroclor 1248 | ND | 0.10 | ug/L | | | | | | | |
| Aroclor 1254 | ND | 0.10 | ug/L | | | | | | | |
| Aroclor 1260 | ND | 0.10 | ug/L | | | | | | | |
| Aroclor 1262 | ND | 0.10 | ug/L | | | | | | | |
| Aroclor 1268 | ND | 0.10 | ug/L | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0332* | | ug/L | *0.05000* | | *66* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0382* | | ug/L | *0.05000* | | *76* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0319* | | ug/L | *0.05000* | | *64* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0374* | | ug/L | *0.05000* | | *75* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| Aroclor 1016 | 1.01 | 0.10 | ug/L | 1.000 | | 101 | 40-140 | | | |
| Aroclor 1260 | 1.00 | 0.10 | ug/L | 1.000 | | 100 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.0335* | | ug/L | *0.05000* | | *67* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0371* | | ug/L | *0.05000* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0382* | | ug/L | *0.05000* | | *76* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0412* | | ug/L | *0.05000* | | *82* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| Aroclor 1016 | 1.04 | 0.10 | ug/L | 1.000 | | 104 | 40-140 | 4 | 50 | |
| Aroclor 1260 | 1.01 | 0.10 | ug/L | 1.000 | | 101 | 40-140 | 1 | 50 | |
| *Surrogate: Decachlorobiphenyl* | *0.0329* | | ug/L | *0.05000* | | *66* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.0372* | | ug/L | *0.05000* | | *74* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.0389* | | ug/L | *0.05000* | | *78* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.0412* | | ug/L | *0.05000* | | *82* | *30-150* | | | |
| **608/6630C Organochlorine Pesticides** | | | | | | | | | | |
| **Batch CI62808 - 3510C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 4,4´-DDD | ND | 0.05 | ug/L | | | | | | | |
| 4,4´-DDD [2C] | ND | 0.05 | ug/L | | | | | | | |
| 4,4´-DDE | ND | 0.05 | ug/L | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 608/6630C Organochlorine Pesticides | | | | | | | | | | |
| **Batch CI62808 - 3510C** | | | | | | | | | | |
| 4,4´-DDE [2C] | ND | 0.05 | ug/L | | | | | | | |
| 4,4´-DDT | ND | 0.05 | ug/L | | | | | | | |
| 4,4´-DDT [2C] | ND | 0.05 | ug/L | | | | | | | |
| Aldrin | ND | 0.05 | ug/L | | | | | | | |
| Aldrin [2C] | ND | 0.05 | ug/L | | | | | | | |
| alpha-BHC | ND | 0.05 | ug/L | | | | | | | |
| alpha-BHC [2C] | ND | 0.05 | ug/L | | | | | | | |
| beta-BHC | ND | 0.05 | ug/L | | | | | | | |
| beta-BHC [2C] | ND | 0.05 | ug/L | | | | | | | |
| Chlordane (Total) | ND | 0.50 | ug/L | | | | | | | |
| Chlordane (Total) [2C] | ND | 0.50 | ug/L | | | | | | | |
| delta-BHC | ND | 0.05 | ug/L | | | | | | | |
| delta-BHC [2C] | ND | 0.05 | ug/L | | | | | | | |
| Dieldrin | ND | 0.05 | ug/L | | | | | | | |
| Dieldrin [2C] | ND | 0.05 | ug/L | | | | | | | |
| Endosulfan I | ND | 0.05 | ug/L | | | | | | | |
| Endosulfan I [2C] | ND | 0.05 | ug/L | | | | | | | |
| Endosulfan II | ND | 0.05 | ug/L | | | | | | | |
| Endosulfan II [2C] | ND | 0.05 | ug/L | | | | | | | |
| Endosulfan Sulfate | ND | 0.05 | ug/L | | | | | | | |
| Endosulfan Sulfate [2C] | ND | 0.05 | ug/L | | | | | | | |
| Endrin | ND | 0.05 | ug/L | | | | | | | |
| Endrin [2C] | ND | 0.05 | ug/L | | | | | | | |
| Endrin Aldehyde | ND | 0.05 | ug/L | | | | | | | |
| Endrin Aldehyde [2C] | ND | 0.05 | ug/L | | | | | | | |
| gamma-BHC (Lindane) | ND | 0.05 | ug/L | | | | | | | |
| gamma-BHC (Lindane) [2C] | ND | 0.05 | ug/L | | | | | | | |
| Heptachlor | ND | 0.05 | ug/L | | | | | | | |
| Heptachlor [2C] | ND | 0.05 | ug/L | | | | | | | |
| Heptachlor Epoxide | ND | 0.05 | ug/L | | | | | | | |
| Heptachlor Epoxide [2C] | ND | 0.05 | ug/L | | | | | | | |
| Methoxychlor | ND | 0.05 | ug/L | | | | | | | |
| Methoxychlor [2C] | ND | 0.05 | ug/L | | | | | | | |
| Toxaphene | ND | 1.30 | ug/L | | | | | | | |
| Toxaphene [2C] | ND | 1.30 | ug/L | | | | | | | |
| *Surrogate: Decachlorobiphenyl* | *0.253* | | ug/L | *0.2500* | | *101* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.222* | | ug/L | *0.2500* | | *89* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.214* | | ug/L | *0.2500* | | *86* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.209* | | ug/L | *0.2500* | | *83* | *30-150* | | | |
| **LCS** | | | | | | | | | | |
| 4,4´-DDD | 0.25 | 0.05 | ug/L | 0.2500 | | 100 | 40-140 | | | |
| 4,4´-DDD [2C] | 0.24 | 0.05 | ug/L | 0.2500 | | 94 | 40-140 | | | |
| 4,4´-DDE | 0.26 | 0.05 | ug/L | 0.2500 | | 104 | 40-140 | | | |
| 4,4´-DDE [2C] | 0.24 | 0.05 | ug/L | 0.2500 | | 94 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 608/6630C Organochlorine Pesticides | | | | | | | | | | |
| **Batch CI62808 - 3510C** | | | | | | | | | | |
| 4,4´-DDT | 0.26 | 0.05 | ug/L | 0.2500 | | 104 | 40-140 | | | |
| 4,4´-DDT [2C] | 0.27 | 0.05 | ug/L | 0.2500 | | 106 | 40-140 | | | |
| Aldrin | 0.23 | 0.05 | ug/L | 0.2500 | | 92 | 40-140 | | | |
| Aldrin [2C] | 0.23 | 0.05 | ug/L | 0.2500 | | 92 | 40-140 | | | |
| alpha-BHC | 0.23 | 0.05 | ug/L | 0.2500 | | 90 | 40-140 | | | |
| alpha-BHC [2C] | 0.22 | 0.05 | ug/L | 0.2500 | | 89 | 40-140 | | | |
| beta-BHC | 0.23 | 0.05 | ug/L | 0.2500 | | 91 | 40-140 | | | |
| beta-BHC [2C] | 0.22 | 0.05 | ug/L | 0.2500 | | 89 | 40-140 | | | |
| delta-BHC | 0.21 | 0.05 | ug/L | 0.2500 | | 85 | 40-140 | | | |
| delta-BHC [2C] | 0.24 | 0.05 | ug/L | 0.2500 | | 95 | 40-140 | | | |
| Dieldrin | 0.26 | 0.05 | ug/L | 0.2500 | | 103 | 40-140 | | | |
| Dieldrin [2C] | 0.25 | 0.05 | ug/L | 0.2500 | | 98 | 40-140 | | | |
| Endosulfan I | 0.24 | 0.05 | ug/L | 0.2500 | | 97 | 40-140 | | | |
| Endosulfan I [2C] | 0.23 | 0.05 | ug/L | 0.2500 | | 93 | 40-140 | | | |
| Endosulfan II | 0.24 | 0.05 | ug/L | 0.2500 | | 97 | 40-140 | | | |
| Endosulfan II [2C] | 0.23 | 0.05 | ug/L | 0.2500 | | 91 | 40-140 | | | |
| Endosulfan Sulfate | 0.26 | 0.05 | ug/L | 0.2500 | | 105 | 40-140 | | | |
| Endosulfan Sulfate [2C] | 0.24 | 0.05 | ug/L | 0.2500 | | 94 | 40-140 | | | |
| Endrin | 0.25 | 0.05 | ug/L | 0.2500 | | 100 | 40-140 | | | |
| Endrin [2C] | 0.24 | 0.05 | ug/L | 0.2500 | | 95 | 40-140 | | | |
| Endrin Aldehyde | 0.25 | 0.05 | ug/L | 0.2500 | | 102 | 40-140 | | | |
| Endrin Aldehyde [2C] | 0.24 | 0.05 | ug/L | 0.2500 | | 97 | 40-140 | | | |
| gamma-BHC (Lindane) | 0.23 | 0.05 | ug/L | 0.2500 | | 91 | 40-140 | | | |
| gamma-BHC (Lindane) [2C] | 0.22 | 0.05 | ug/L | 0.2500 | | 89 | 40-140 | | | |
| Heptachlor | 0.22 | 0.05 | ug/L | 0.2500 | | 87 | 40-140 | | | |
| Heptachlor [2C] | 0.21 | 0.05 | ug/L | 0.2500 | | 85 | 40-140 | | | |
| Heptachlor Epoxide | 0.25 | 0.05 | ug/L | 0.2500 | | 101 | 40-140 | | | |
| Heptachlor Epoxide [2C] | 0.24 | 0.05 | ug/L | 0.2500 | | 97 | 40-140 | | | |
| Methoxychlor | 0.27 | 0.05 | ug/L | 0.2500 | | 108 | 40-140 | | | |
| Methoxychlor [2C] | 0.26 | 0.05 | ug/L | 0.2500 | | 103 | 40-140 | | | |
| *Surrogate: Decachlorobiphenyl* | *0.261* | | ug/L | *0.2500* | | *105* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.249* | | ug/L | *0.2500* | | *100* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.233* | | ug/L | *0.2500* | | *93* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.217* | | ug/L | *0.2500* | | *87* | *30-150* | | | |
| **LCS Dup** | | | | | | | | | | |
| 4,4´-DDD | 0.23 | 0.05 | ug/L | 0.2500 | | 92 | 40-140 | 8 | 20 | |
| 4,4´-DDD [2C] | 0.22 | 0.05 | ug/L | 0.2500 | | 88 | 40-140 | 7 | 20 | |
| 4,4´-DDE | 0.25 | 0.05 | ug/L | 0.2500 | | 100 | 40-140 | 4 | 20 | |
| 4,4´-DDE [2C] | 0.22 | 0.05 | ug/L | 0.2500 | | 88 | 40-140 | 6 | 20 | |
| 4,4´-DDT | 0.24 | 0.05 | ug/L | 0.2500 | | 98 | 40-140 | 6 | 20 | |
| 4,4´-DDT [2C] | 0.25 | 0.05 | ug/L | 0.2500 | | 101 | 40-140 | 5 | 20 | |
| Aldrin | 0.22 | 0.05 | ug/L | 0.2500 | | 88 | 40-140 | 4 | 20 | |
| Aldrin [2C] | 0.22 | 0.05 | ug/L | 0.2500 | | 89 | 40-140 | 3 | 20 | |
| alpha-BHC | 0.21 | 0.05 | ug/L | 0.2500 | | 86 | 40-140 | 5 | 20 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **608/6630C Organochlorine Pesticides** | | | | | | | | | | |
| **Batch CI62808 - 3510C** | | | | | | | | | | |
| alpha-BHC [2C] | 0.22 | 0.05 | ug/L | 0.2500 | | 87 | 40-140 | 2 | 20 | |
| beta-BHC | 0.20 | 0.05 | ug/L | 0.2500 | | 80 | 40-140 | 13 | 20 | |
| beta-BHC [2C] | 0.19 | 0.05 | ug/L | 0.2500 | | 75 | 40-140 | 17 | 20 | |
| delta-BHC | 0.21 | 0.05 | ug/L | 0.2500 | | 83 | 40-140 | 3 | 20 | |
| delta-BHC [2C] | 0.23 | 0.05 | ug/L | 0.2500 | | 94 | 40-140 | 0.8 | 20 | |
| Dieldrin | 0.24 | 0.05 | ug/L | 0.2500 | | 95 | 40-140 | 7 | 20 | |
| Dieldrin [2C] | 0.23 | 0.05 | ug/L | 0.2500 | | 90 | 40-140 | 9 | 20 | |
| Endosulfan I | 0.22 | 0.05 | ug/L | 0.2500 | | 88 | 40-140 | 9 | 20 | |
| Endosulfan I [2C] | 0.22 | 0.05 | ug/L | 0.2500 | | 87 | 40-140 | 7 | 20 | |
| Endosulfan II | 0.22 | 0.05 | ug/L | 0.2500 | | 89 | 40-140 | 9 | 20 | |
| Endosulfan II [2C] | 0.20 | 0.05 | ug/L | 0.2500 | | 82 | 40-140 | 10 | 20 | |
| Endosulfan Sulfate | 0.24 | 0.05 | ug/L | 0.2500 | | 97 | 40-140 | 9 | 20 | |
| Endosulfan Sulfate [2C] | 0.21 | 0.05 | ug/L | 0.2500 | | 86 | 40-140 | 9 | 20 | |
| Endrin | 0.23 | 0.05 | ug/L | 0.2500 | | 92 | 40-140 | 9 | 20 | |
| Endrin [2C] | 0.22 | 0.05 | ug/L | 0.2500 | | 87 | 40-140 | 8 | 20 | |
| Endrin Aldehyde | 0.24 | 0.05 | ug/L | 0.2500 | | 94 | 40-140 | 8 | 20 | |
| Endrin Aldehyde [2C] | 0.23 | 0.05 | ug/L | 0.2500 | | 92 | 40-140 | 5 | 20 | |
| gamma-BHC (Lindane) | 0.21 | 0.05 | ug/L | 0.2500 | | 86 | 40-140 | 6 | 20 | |
| gamma-BHC (Lindane) [2C] | 0.22 | 0.05 | ug/L | 0.2500 | | 86 | 40-140 | 3 | 20 | |
| Heptachlor | 0.21 | 0.05 | ug/L | 0.2500 | | 85 | 40-140 | 2 | 20 | |
| Heptachlor [2C] | 0.21 | 0.05 | ug/L | 0.2500 | | 86 | 40-140 | 1 | 20 | |
| Heptachlor Epoxide | 0.24 | 0.05 | ug/L | 0.2500 | | 95 | 40-140 | 6 | 20 | |
| Heptachlor Epoxide [2C] | 0.23 | 0.05 | ug/L | 0.2500 | | 93 | 40-140 | 5 | 20 | |
| Methoxychlor | 0.26 | 0.05 | ug/L | 0.2500 | | 103 | 40-140 | 5 | 20 | |
| Methoxychlor [2C] | 0.24 | 0.05 | ug/L | 0.2500 | | 97 | 40-140 | 6 | 20 | |
| *Surrogate: Decachlorobiphenyl* | *0.235* | | ug/L | *0.2500* | | *94* | *30-150* | | | |
| *Surrogate: Decachlorobiphenyl [2C]* | *0.220* | | ug/L | *0.2500* | | *88* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene* | *0.207* | | ug/L | *0.2500* | | *83* | *30-150* | | | |
| *Surrogate: Tetrachloro-m-xylene [2C]* | *0.206* | | ug/L | *0.2500* | | *82* | *30-150* | | | |
| **624 Volatile Organic Compounds** | | | | | | | | | | |
| **Batch CI62839 - 5030B** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | ug/L | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | ug/L | | | | | | | |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | ug/L | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | ug/L | | | | | | | |
| 2-Chloroethyl vinyl ether | ND | 10.0 | ug/L | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 624 Volatile Organic Compounds | | | | | | | | | | |
| **Batch CI62839 - 5030B** | | | | | | | | | | |
| Acrolein - Screen | ND | 5.0 | ug/L | | | | | | | |
| Acrylonitrile - Screen | ND | 5.0 | ug/L | | | | | | | |
| Benzene | ND | 1.0 | ug/L | | | | | | | |
| Bromodichloromethane | ND | 0.6 | ug/L | | | | | | | |
| Bromoform | ND | 1.0 | ug/L | | | | | | | |
| Bromomethane | ND | 2.0 | ug/L | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | ug/L | | | | | | | |
| Chlorobenzene | ND | 1.0 | ug/L | | | | | | | |
| Chloroethane | ND | 2.0 | ug/L | | | | | | | |
| Chloroform | ND | 1.0 | ug/L | | | | | | | |
| Chloromethane | ND | 2.0 | ug/L | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.4 | ug/L | | | | | | | |
| Dibromochloromethane | ND | 1.0 | ug/L | | | | | | | |
| Ethylbenzene | ND | 1.0 | ug/L | | | | | | | |
| Methylene Chloride | ND | 4.0 | ug/L | | | | | | | |
| Tetrachloroethene | ND | 1.0 | ug/L | | | | | | | |
| Toluene | ND | 1.0 | ug/L | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.5 | ug/L | | | | | | | |
| Trichloroethene | ND | 1.0 | ug/L | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | | | | | | | |
| Vinyl Chloride | ND | 1.0 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *24.7* | | ug/L | *25.00* | | *99* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *22.7* | | ug/L | *25.00* | | *91* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *24.6* | | ug/L | *25.00* | | *98* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *25.2* | | ug/L | *25.00* | | *101* | *70-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,1,1-Trichloroethane | 9.1 | | ug/L | 10.00 | | 91 | 70-130 | | | |
| 1,1,2,2-Tetrachloroethane | 9.7 | | ug/L | 10.00 | | 97 | 70-130 | | | |
| 1,1,2-Trichloroethane | 9.3 | | ug/L | 10.00 | | 93 | 70-130 | | | |
| 1,1-Dichloroethane | 9.6 | | ug/L | 10.00 | | 96 | 70-130 | | | |
| 1,1-Dichloroethene | 9.6 | | ug/L | 10.00 | | 96 | 70-130 | | | |
| 1,2-Dichlorobenzene | 9.2 | | ug/L | 10.00 | | 92 | 70-130 | | | |
| 1,2-Dichloroethane | 9.6 | | ug/L | 10.00 | | 96 | 70-130 | | | |
| 1,2-Dichloropropane | 9.4 | | ug/L | 10.00 | | 94 | 70-130 | | | |
| 1,3-Dichlorobenzene | 8.9 | | ug/L | 10.00 | | 89 | 70-130 | | | |
| 1,4-Dichlorobenzene | 9.2 | | ug/L | 10.00 | | 92 | 70-130 | | | |
| 2-Chloroethyl vinyl ether | 46.7 | | ug/L | 50.00 | | 93 | 70-130 | | | |
| Acrolein - Screen | 5.4 | | ug/L | 10.00 | | 54 | 70-130 | | | B- |
| Acrylonitrile - Screen | 10.4 | | ug/L | 10.00 | | 104 | 70-130 | | | |
| Benzene | 9.5 | | ug/L | 10.00 | | 95 | 70-130 | | | |
| Bromodichloromethane | 9.0 | | ug/L | 10.00 | | 90 | 70-130 | | | |
| Bromoform | 8.3 | | ug/L | 10.00 | | 83 | 70-130 | | | |
| Bromomethane | 7.6 | | ug/L | 10.00 | | 76 | 70-130 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 624 Volatile Organic Compounds | | | | | | | | | | |
| **Batch CI62839 - 5030B** | | | | | | | | | | |
| Carbon Tetrachloride | 8.7 | | ug/L | 10.00 | | 87 | 70-130 | | | |
| Chlorobenzene | 9.1 | | ug/L | 10.00 | | 91 | 70-130 | | | |
| Chloroethane | 9.3 | | ug/L | 10.00 | | 93 | 70-130 | | | |
| Chloroform | 9.2 | | ug/L | 10.00 | | 92 | 70-130 | | | |
| Chloromethane | 9.8 | | ug/L | 10.00 | | 98 | 70-130 | | | |
| cis-1,2-Dichloroethene | 9.4 | | ug/L | 10.00 | | 94 | 70-130 | | | |
| cis-1,3-Dichloropropene | 9.2 | | ug/L | 10.00 | | 92 | 70-130 | | | |
| Dibromochloromethane | 8.6 | | ug/L | 10.00 | | 86 | 70-130 | | | |
| Ethylbenzene | 9.1 | | ug/L | 10.00 | | 91 | 70-130 | | | |
| Methylene Chloride | 9.7 | | ug/L | 10.00 | | 97 | 70-130 | | | |
| Tetrachloroethene | 9.3 | | ug/L | 10.00 | | 93 | 70-130 | | | |
| Toluene | 9.5 | | ug/L | 10.00 | | 95 | 70-130 | | | |
| trans-1,2-Dichloroethene | 9.7 | | ug/L | 10.00 | | 97 | 70-130 | | | |
| trans-1,3-Dichloropropene | 8.5 | | ug/L | 10.00 | | 85 | 70-130 | | | |
| Trichloroethene | 9.4 | | ug/L | 10.00 | | 94 | 70-130 | | | |
| Trichlorofluoromethane | 8.7 | | ug/L | 10.00 | | 87 | 70-130 | | | |
| Vinyl Chloride | 10.2 | | ug/L | 10.00 | | 102 | 70-130 | | | |
| *Surrogate: 1,2-Dichloroethane-d4* | *25.7* | | ug/L | *25.00* | | *103* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *23.8* | | ug/L | *25.00* | | *95* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *25.3* | | ug/L | *25.00* | | *101* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *25.7* | | ug/L | *25.00* | | *103* | *70-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,1,1-Trichloroethane | 9.2 | | ug/L | 10.00 | | 92 | 70-130 | 1 | 25 | |
| 1,1,2,2-Tetrachloroethane | 9.6 | | ug/L | 10.00 | | 96 | 70-130 | 1 | 25 | |
| 1,1,2-Trichloroethane | 9.2 | | ug/L | 10.00 | | 92 | 70-130 | 2 | 25 | |
| 1,1-Dichloroethane | 9.6 | | ug/L | 10.00 | | 96 | 70-130 | 0.8 | 25 | |
| 1,1-Dichloroethene | 10.0 | | ug/L | 10.00 | | 100 | 70-130 | 4 | 25 | |
| 1,2-Dichlorobenzene | 9.4 | | ug/L | 10.00 | | 94 | 70-130 | 2 | 25 | |
| 1,2-Dichloroethane | 9.7 | | ug/L | 10.00 | | 97 | 70-130 | 0.9 | 25 | |
| 1,2-Dichloropropane | 9.6 | | ug/L | 10.00 | | 96 | 70-130 | 2 | 25 | |
| 1,3-Dichlorobenzene | 9.0 | | ug/L | 10.00 | | 90 | 70-130 | 1 | 25 | |
| 1,4-Dichlorobenzene | 9.3 | | ug/L | 10.00 | | 93 | 70-130 | 0.4 | 25 | |
| 2-Chloroethyl vinyl ether | 47.0 | | ug/L | 50.00 | | 94 | 70-130 | 0.5 | 25 | |
| Acrolein - Screen | 3.7 | | ug/L | 10.00 | | 37 | 70-130 | 37 | 25 | B-, D+ |
| Acrylonitrile - Screen | 11.0 | | ug/L | 10.00 | | 110 | 70-130 | 6 | 20 | |
| Benzene | 9.4 | | ug/L | 10.00 | | 94 | 70-130 | 1 | 25 | |
| Bromodichloromethane | 9.1 | | ug/L | 10.00 | | 91 | 70-130 | 1 | 25 | |
| Bromoform | 7.9 | | ug/L | 10.00 | | 79 | 70-130 | 5 | 25 | |
| Bromomethane | 8.0 | | ug/L | 10.00 | | 80 | 70-130 | 5 | 25 | |
| Carbon Tetrachloride | 8.6 | | ug/L | 10.00 | | 86 | 70-130 | 0.6 | 25 | |
| Chlorobenzene | 9.0 | | ug/L | 10.00 | | 90 | 70-130 | 1 | 25 | |
| Chloroethane | 10.6 | | ug/L | 10.00 | | 106 | 70-130 | 13 | 25 | |
| Chloroform | 9.3 | | ug/L | 10.00 | | 93 | 70-130 | 0.5 | 25 | |
| Chloromethane | 10.5 | | ug/L | 10.00 | | 105 | 70-130 | 7 | 25 | |
| cis-1,2-Dichloroethene | 9.6 | | ug/L | 10.00 | | 96 | 70-130 | 3 | 25 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **624 Volatile Organic Compounds** | | | | | | | | | | |
| **Batch CI62839 - 5030B** | | | | | | | | | | |
| cis-1,3-Dichloropropene | 9.2 | | ug/L | 10.00 | | 92 | 70-130 | 0.3 | 25 | |
| Dibromochloromethane | 8.4 | | ug/L | 10.00 | | 84 | 70-130 | 2 | 25 | |
| Ethylbenzene | 9.0 | | ug/L | 10.00 | | 90 | 70-130 | 1 | 25 | |
| Methylene Chloride | 9.9 | | ug/L | 10.00 | | 99 | 70-130 | 2 | 25 | |
| Tetrachloroethene | 9.1 | | ug/L | 10.00 | | 91 | 70-130 | 1 | 25 | |
| Toluene | 9.5 | | ug/L | 10.00 | | 95 | 70-130 | 0.3 | 25 | |
| trans-1,2-Dichloroethene | 9.9 | | ug/L | 10.00 | | 99 | 70-130 | 2 | 25 | |
| trans-1,3-Dichloropropene | 8.6 | | ug/L | 10.00 | | 86 | 70-130 | 1 | 25 | |
| Trichloroethene | 9.2 | | ug/L | 10.00 | | 92 | 70-130 | 2 | 25 | |
| Trichlorofluoromethane | 8.2 | | ug/L | 10.00 | | 82 | 70-130 | 6 | 25 | |
| Vinyl Chloride | 10.2 | | ug/L | 10.00 | | 102 | 70-130 | 0.1 | 25 | |
| *Surrogate: 1,2-Dichloroethane-d4* | *25.1* | | ug/L | *25.00* | | *100* | *70-130* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *23.1* | | ug/L | *25.00* | | *92* | *70-130* | | | |
| *Surrogate: Dibromofluoromethane* | *25.2* | | ug/L | *25.00* | | *101* | *70-130* | | | |
| *Surrogate: Toluene-d8* | *25.3* | | ug/L | *25.00* | | *101* | *70-130* | | | |
| **625 Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch CI62619 - 3520C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 10.0 | ug/L | | | | | | | |
| 1,2-Dichlorobenzene | ND | 10.0 | ug/L | | | | | | | |
| 1,2-Diphenylhydrazine as Azobenzene | ND | 20.0 | ug/L | | | | | | | |
| 1,3-Dichlorobenzene | ND | 10.0 | ug/L | | | | | | | |
| 1,4-Dichlorobenzene | ND | 10.0 | ug/L | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10.0 | ug/L | | | | | | | |
| 2,4-Dichlorophenol | ND | 10.0 | ug/L | | | | | | | |
| 2,4-Dimethylphenol | ND | 50.0 | ug/L | | | | | | | |
| 2,4-Dinitrophenol | ND | 50.0 | ug/L | | | | | | | |
| 2,4-Dinitrotoluene | ND | 10.0 | ug/L | | | | | | | |
| 2,6-Dinitrotoluene | ND | 10.0 | ug/L | | | | | | | |
| 2-Chloronaphthalene | ND | 10.0 | ug/L | | | | | | | |
| 2-Chlorophenol | ND | 10.0 | ug/L | | | | | | | |
| 2-Nitrophenol | ND | 10.0 | ug/L | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 20.0 | ug/L | | | | | | | |
| 4,6-Dinitro-2-Methylphenol | ND | 50.0 | ug/L | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 10.0 | ug/L | | | | | | | |
| 4-Chloro-3-Methylphenol | ND | 10.0 | ug/L | | | | | | | |
| 4-Chloro-phenyl-phenyl ether | ND | 10.0 | ug/L | | | | | | | |
| 4-Nitrophenol | ND | 50.0 | ug/L | | | | | | | |
| Benzidine | ND | 50.0 | ug/L | | | | | | | |
| bis(2-Chloroethoxy)methane | ND | 10.0 | ug/L | | | | | | | |
| bis(2-Chloroethyl)ether | ND | 10.0 | ug/L | | | | | | | |
| bis(2-chloroisopropyl)Ether | ND | 10.0 | ug/L | | | | | | | |
| bis(2-Ethylhexyl)phthalate | ND | 6.0 | ug/L | | | | | | | |
| Butylbenzylphthalate | ND | 10.0 | ug/L | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| 625 Semi-Volatile Organic Compounds | | | | | | | | | | |
| **Batch CI62619 - 3520C** | | | | | | | | | | |
| Diethylphthalate | ND | 10.0 | ug/L | | | | | | | |
| Dimethylphthalate | ND | 10.0 | ug/L | | | | | | | |
| Di-n-butylphthalate | ND | 10.0 | ug/L | | | | | | | |
| Di-n-octylphthalate | ND | 10.0 | ug/L | | | | | | | |
| Hexachlorobenzene | ND | 10.0 | ug/L | | | | | | | |
| Hexachlorobutadiene | ND | 10.0 | ug/L | | | | | | | |
| Hexachlorocyclopentadiene | ND | 25.0 | ug/L | | | | | | | |
| Hexachloroethane | ND | 5.0 | ug/L | | | | | | | |
| Isophorone | ND | 10.0 | ug/L | | | | | | | |
| Nitrobenzene | ND | 10.0 | ug/L | | | | | | | |
| N-Nitrosodimethylamine | ND | 10.0 | ug/L | | | | | | | |
| N-Nitroso-Di-n-Propylamine | ND | 10.0 | ug/L | | | | | | | |
| N-nitrosodiphenylamine | ND | 10.0 | ug/L | | | | | | | |
| Pentachlorophenol | ND | 50.0 | ug/L | | | | | | | |
| Phenol | ND | 10.0 | ug/L | | | | | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *75.5* | | ug/L | *100.0* | | *76* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *127* | | ug/L | *150.0* | | *85* | *15-110* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *108* | | ug/L | *150.0* | | *72* | *15-110* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *80.6* | | ug/L | *100.0* | | *81* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *98.8* | | ug/L | *150.0* | | *66* | *15-110* | | | |
| *Surrogate: Nitrobenzene-d5* | *80.5* | | ug/L | *100.0* | | *80* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *111* | | ug/L | *150.0* | | *74* | *15-110* | | | |
| *Surrogate: p-Terphenyl-d14* | *95.4* | | ug/L | *100.0* | | *95* | *30-130* | | | |
| **LCS** | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 81.7 | 10.0 | ug/L | 100.0 | | 82 | 40-140 | | | |
| 1,2-Dichlorobenzene | 77.2 | 10.0 | ug/L | 100.0 | | 77 | 40-140 | | | |
| 1,2-Diphenylhydrazine as Azobenzene | 90.5 | 20.0 | ug/L | 100.0 | | 90 | 40-140 | | | |
| 1,3-Dichlorobenzene | 77.4 | 10.0 | ug/L | 100.0 | | 77 | 40-140 | | | |
| 1,4-Dichlorobenzene | 75.4 | 10.0 | ug/L | 100.0 | | 75 | 40-140 | | | |
| 2,4,6-Trichlorophenol | 90.6 | 10.0 | ug/L | 100.0 | | 91 | 30-130 | | | |
| 2,4-Dichlorophenol | 85.7 | 10.0 | ug/L | 100.0 | | 86 | 30-130 | | | |
| 2,4-Dimethylphenol | 80.1 | 50.0 | ug/L | 100.0 | | 80 | 30-130 | | | |
| 2,4-Dinitrophenol | 90.3 | 50.0 | ug/L | 100.0 | | 90 | 30-130 | | | |
| 2,4-Dinitrotoluene | 98.0 | 10.0 | ug/L | 100.0 | | 98 | 40-140 | | | |
| 2,6-Dinitrotoluene | 91.1 | 10.0 | ug/L | 100.0 | | 91 | 40-140 | | | |
| 2-Chloronaphthalene | 80.5 | 10.0 | ug/L | 100.0 | | 81 | 40-140 | | | |
| 2-Chlorophenol | 74.5 | 10.0 | ug/L | 100.0 | | 74 | 30-130 | | | |
| 2-Nitrophenol | 82.6 | 10.0 | ug/L | 100.0 | | 83 | 30-130 | | | |
| 3,3´-Dichlorobenzidine | 85.2 | 20.0 | ug/L | 100.0 | | 85 | 40-140 | | | |
| 4,6-Dinitro-2-Methylphenol | 91.8 | 50.0 | ug/L | 100.0 | | 92 | 30-130 | | | |
| 4-Bromophenyl-phenylether | 89.7 | 10.0 | ug/L | 100.0 | | 90 | 40-140 | | | |
| 4-Chloro-3-Methylphenol | 89.9 | 10.0 | ug/L | 100.0 | | 90 | 30-130 | | | |
| 4-Chloro-phenyl-phenyl ether | 87.7 | 10.0 | ug/L | 100.0 | | 88 | 40-140 | | | |
| 4-Nitrophenol | 90.9 | 50.0 | ug/L | 100.0 | | 91 | 30-130 | | | |
| bis(2-Chloroethoxy)methane | 85.6 | 10.0 | ug/L | 100.0 | | 86 | 40-140 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **625 Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch CI62619 - 3520C** | | | | | | | | | | |
| bis(2-Chloroethyl)ether | 81.0 | 10.0 | ug/L | 100.0 | | 81 | 40-140 | | | |
| bis(2-chloroisopropyl)Ether | 83.9 | 10.0 | ug/L | 100.0 | | 84 | 40-140 | | | |
| bis(2-Ethylhexyl)phthalate | 93.3 | 6.0 | ug/L | 100.0 | | 93 | 40-140 | | | |
| Butylbenzylphthalate | 98.9 | 10.0 | ug/L | 100.0 | | 99 | 40-140 | | | |
| Diethylphthalate | 90.4 | 10.0 | ug/L | 100.0 | | 90 | 40-140 | | | |
| Dimethylphthalate | 89.5 | 10.0 | ug/L | 100.0 | | 90 | 40-140 | | | |
| Di-n-butylphthalate | 98.3 | 10.0 | ug/L | 100.0 | | 98 | 40-140 | | | |
| Di-n-octylphthalate | 102 | 10.0 | ug/L | 100.0 | | 102 | 40-140 | | | |
| Hexachlorobenzene | 90.7 | 10.0 | ug/L | 100.0 | | 91 | 40-140 | | | |
| Hexachlorobutadiene | 80.8 | 10.0 | ug/L | 100.0 | | 81 | 40-140 | | | |
| Hexachlorocyclopentadiene | 91.7 | 25.0 | ug/L | 100.0 | | 92 | 40-140 | | | |
| Hexachloroethane | 77.5 | 5.0 | ug/L | 100.0 | | 78 | 40-140 | | | |
| Isophorone | 87.5 | 10.0 | ug/L | 100.0 | | 88 | 40-140 | | | |
| Nitrobenzene | 85.1 | 10.0 | ug/L | 100.0 | | 85 | 40-140 | | | |
| N-Nitrosodimethylamine | 78.8 | 10.0 | ug/L | 100.0 | | 79 | 40-140 | | | |
| N-Nitroso-Di-n-Propylamine | 89.2 | 10.0 | ug/L | 100.0 | | 89 | 40-140 | | | |
| N-nitrosodiphenylamine | 94.6 | 10.0 | ug/L | 100.0 | | 95 | 40-140 | | | |
| Pentachlorophenol | 96.2 | 50.0 | ug/L | 100.0 | | 96 | 30-130 | | | |
| Phenol | 96.8 | 10.0 | ug/L | 100.0 | | 97 | 30-130 | | | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *79.9* | | ug/L | *100.0* | | *80* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *136* | | ug/L | *150.0* | | *90* | *15-110* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *112* | | ug/L | *150.0* | | *75* | *15-110* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *87.3* | | ug/L | *100.0* | | *87* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *94.1* | | ug/L | *150.0* | | *63* | *15-110* | | | |
| *Surrogate: Nitrobenzene-d5* | *85.4* | | ug/L | *100.0* | | *85* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *117* | | ug/L | *150.0* | | *78* | *15-110* | | | |
| *Surrogate: p-Terphenyl-d14* | *99.6* | | ug/L | *100.0* | | *100* | *30-130* | | | |
| **LCS Dup** | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 78.6 | 10.0 | ug/L | 100.0 | | 79 | 40-140 | 4 | 200 | |
| 1,2-Dichlorobenzene | 74.2 | 10.0 | ug/L | 100.0 | | 74 | 40-140 | 4 | 200 | |
| 1,2-Diphenylhydrazine as Azobenzene | 87.9 | 20.0 | ug/L | 100.0 | | 88 | 40-140 | 3 | 200 | |
| 1,3-Dichlorobenzene | 74.2 | 10.0 | ug/L | 100.0 | | 74 | 40-140 | 4 | 200 | |
| 1,4-Dichlorobenzene | 73.4 | 10.0 | ug/L | 100.0 | | 73 | 40-140 | 3 | 200 | |
| 2,4,6-Trichlorophenol | 87.5 | 10.0 | ug/L | 100.0 | | 87 | 30-130 | 4 | 200 | |
| 2,4-Dichlorophenol | 83.5 | 10.0 | ug/L | 100.0 | | 84 | 30-130 | 3 | 200 | |
| 2,4-Dimethylphenol | 79.4 | 50.0 | ug/L | 100.0 | | 79 | 30-130 | 0.9 | 200 | |
| 2,4-Dinitrophenol | 86.5 | 50.0 | ug/L | 100.0 | | 86 | 30-130 | 4 | 200 | |
| 2,4-Dinitrotoluene | 95.2 | 10.0 | ug/L | 100.0 | | 95 | 40-140 | 3 | 200 | |
| 2,6-Dinitrotoluene | 87.3 | 10.0 | ug/L | 100.0 | | 87 | 40-140 | 4 | 200 | |
| 2-Chloronaphthalene | 77.2 | 10.0 | ug/L | 100.0 | | 77 | 40-140 | 4 | 200 | |
| 2-Chlorophenol | 73.2 | 10.0 | ug/L | 100.0 | | 73 | 30-130 | 2 | 200 | |
| 2-Nitrophenol | 81.3 | 10.0 | ug/L | 100.0 | | 81 | 30-130 | 2 | 200 | |
| 3,3´-Dichlorobenzidine | 83.6 | 20.0 | ug/L | 100.0 | | 84 | 40-140 | 2 | 200 | |
| 4,6-Dinitro-2-Methylphenol | 87.1 | 50.0 | ug/L | 100.0 | | 87 | 30-130 | 5 | 200 | |
| 4-Bromophenyl-phenylether | 88.1 | 10.0 | ug/L | 100.0 | | 88 | 40-140 | 2 | 200 | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **625 Semi-Volatile Organic Compounds** | | | | | | | | | | |
| **Batch CI62619 - 3520C** | | | | | | | | | | |
| 4-Chloro-3-Methylphenol | 86.4 | 10.0 | ug/L | 100.0 | | 86 | 30-130 | 4 | 200 | |
| 4-Chloro-phenyl-phenyl ether | 84.5 | 10.0 | ug/L | 100.0 | | 84 | 40-140 | 4 | 200 | |
| 4-Nitrophenol | 87.2 | 50.0 | ug/L | 100.0 | | 87 | 30-130 | 4 | 200 | |
| bis(2-Chloroethoxy)methane | 81.5 | 10.0 | ug/L | 100.0 | | 81 | 40-140 | 5 | 200 | |
| bis(2-Chloroethyl)ether | 75.4 | 10.0 | ug/L | 100.0 | | 75 | 40-140 | 7 | 200 | |
| bis(2-chloroisopropyl)Ether | 78.2 | 10.0 | ug/L | 100.0 | | 78 | 40-140 | 7 | 200 | |
| bis(2-Ethylhexyl)phthalate | 90.6 | 6.0 | ug/L | 100.0 | | 91 | 40-140 | 3 | 200 | |
| Butylbenzylphthalate | 95.8 | 10.0 | ug/L | 100.0 | | 96 | 40-140 | 3 | 200 | |
| Diethylphthalate | 87.8 | 10.0 | ug/L | 100.0 | | 88 | 40-140 | 3 | 200 | |
| Dimethylphthalate | 87.4 | 10.0 | ug/L | 100.0 | | 87 | 40-140 | 2 | 200 | |
| Di-n-butylphthalate | 96.9 | 10.0 | ug/L | 100.0 | | 97 | 40-140 | 1 | 200 | |
| Di-n-octylphthalate | 99.0 | 10.0 | ug/L | 100.0 | | 99 | 40-140 | 3 | 200 | |
| Hexachlorobenzene | 88.5 | 10.0 | ug/L | 100.0 | | 89 | 40-140 | 2 | 200 | |
| Hexachlorobutadiene | 78.2 | 10.0 | ug/L | 100.0 | | 78 | 40-140 | 3 | 200 | |
| Hexachlorocyclopentadiene | 86.1 | 25.0 | ug/L | 100.0 | | 86 | 40-140 | 6 | 200 | |
| Hexachloroethane | 73.9 | 5.0 | ug/L | 100.0 | | 74 | 40-140 | 5 | 200 | |
| Isophorone | 84.0 | 10.0 | ug/L | 100.0 | | 84 | 40-140 | 4 | 200 | |
| Nitrobenzene | 81.0 | 10.0 | ug/L | 100.0 | | 81 | 40-140 | 5 | 200 | |
| N-Nitrosodimethylamine | 73.8 | 10.0 | ug/L | 100.0 | | 74 | 40-140 | 7 | 200 | |
| N-Nitroso-Di-n-Propylamine | 82.8 | 10.0 | ug/L | 100.0 | | 83 | 40-140 | 7 | 200 | |
| N-nitrosodiphenylamine | 92.3 | 10.0 | ug/L | 100.0 | | 92 | 40-140 | 2 | 200 | |
| Pentachlorophenol | 92.1 | 50.0 | ug/L | 100.0 | | 92 | 30-130 | 4 | 200 | |
| Phenol | 78.5 | 10.0 | ug/L | 100.0 | | 79 | 30-130 | 21 | 200 | |
| *Surrogate: 1,2-Dichlorobenzene-d4* | *75.0* | | ug/L | *100.0* | | *75* | *30-130* | | | |
| *Surrogate: 2,4,6-Tribromophenol* | *132* | | ug/L | *150.0* | | *88* | *15-110* | | | |
| *Surrogate: 2-Chlorophenol-d4* | *107* | | ug/L | *150.0* | | *71* | *15-110* | | | |
| *Surrogate: 2-Fluorobiphenyl* | *82.0* | | ug/L | *100.0* | | *82* | *30-130* | | | |
| *Surrogate: 2-Fluorophenol* | *96.6* | | ug/L | *150.0* | | *64* | *15-110* | | | |
| *Surrogate: Nitrobenzene-d5* | *81.2* | | ug/L | *100.0* | | *81* | *30-130* | | | |
| *Surrogate: Phenol-d6* | *109* | | ug/L | *150.0* | | *73* | *15-110* | | | |
| *Surrogate: p-Terphenyl-d14* | *97.4* | | ug/L | *100.0* | | *97* | *30-130* | | | |
| **625(SIM) Polynuclear Aromatic Hydrocarbons** | | | | | | | | | | |
| **Batch CI62618 - 3510C** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Acenaphthene | ND | 0.20 | ug/L | | | | | | | |
| Acenaphthylene | ND | 0.20 | ug/L | | | | | | | |
| Anthracene | ND | 0.20 | ug/L | | | | | | | |
| Benzo(a)anthracene | ND | 0.20 | ug/L | | | | | | | |
| Benzo(a)pyrene | ND | 0.20 | ug/L | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.20 | ug/L | | | | | | | |
| Benzo(g,h,i)perylene | ND | 0.20 | ug/L | | | | | | | |
| Benzo(k)fluoranthene | ND | 0.20 | ug/L | | | | | | | |
| Chrysene | ND | 0.20 | ug/L | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **625(SIM) Polynuclear Aromatic Hydrocarbons** | | | | | | | | | | |
| **Batch CI62618 - 3510C** | | | | | | | | | | |
| Dibenzo(a,h)Anthracene | ND | 0.20 | ug/L | | | | | | | |
| Fluoranthene | ND | 0.20 | ug/L | | | | | | | |
| Fluorene | ND | 0.20 | ug/L | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | ND | 0.20 | ug/L | | | | | | | |
| Naphthalene | ND | 0.20 | ug/L | | | | | | | |
| Phenanthrene | ND | 0.20 | ug/L | | | | | | | |
| Pyrene | ND | 0.20 | ug/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Acenaphthene | 2.57 | 0.20 | ug/L | 4.000 | | 64 | 40-140 | | | |
| Acenaphthylene | 2.53 | 0.20 | ug/L | 4.000 | | 63 | 40-140 | | | |
| Anthracene | 2.91 | 0.20 | ug/L | 4.000 | | 73 | 40-140 | | | |
| Benzo(a)anthracene | 2.80 | 0.20 | ug/L | 4.000 | | 70 | 40-140 | | | |
| Benzo(a)pyrene | 2.99 | 0.20 | ug/L | 4.000 | | 75 | 40-140 | | | |
| Benzo(b)fluoranthene | 2.89 | 0.20 | ug/L | 4.000 | | 72 | 40-140 | | | |
| Benzo(g,h,i)perylene | 3.05 | 0.20 | ug/L | 4.000 | | 76 | 40-140 | | | |
| Benzo(k)fluoranthene | 2.99 | 0.20 | ug/L | 4.000 | | 75 | 40-140 | | | |
| Chrysene | 3.00 | 0.20 | ug/L | 4.000 | | 75 | 40-140 | | | |
| Dibenzo(a,h)Anthracene | 3.09 | 0.20 | ug/L | 4.000 | | 77 | 40-140 | | | |
| Fluoranthene | 3.12 | 0.20 | ug/L | 4.000 | | 78 | 40-140 | | | |
| Fluorene | 2.74 | 0.20 | ug/L | 4.000 | | 69 | 40-140 | | | |
| Indeno(1,2,3-cd)Pyrene | 3.03 | 0.20 | ug/L | 4.000 | | 76 | 40-140 | | | |
| Naphthalene | 2.04 | 0.20 | ug/L | 4.000 | | 51 | 40-140 | | | |
| Phenanthrene | 2.91 | 0.20 | ug/L | 4.000 | | 73 | 40-140 | | | |
| Pyrene | 3.03 | 0.20 | ug/L | 4.000 | | 76 | 40-140 | | | |
| **LCS Dup** | | | | | | | | | | |
| Acenaphthene | 2.39 | 0.20 | ug/L | 4.000 | | 60 | 40-140 | 7 | 20 | |
| Acenaphthylene | 2.34 | 0.20 | ug/L | 4.000 | | 59 | 40-140 | 8 | 20 | |
| Anthracene | 2.61 | 0.20 | ug/L | 4.000 | | 65 | 40-140 | 11 | 20 | |
| Benzo(a)anthracene | 2.62 | 0.20 | ug/L | 4.000 | | 66 | 40-140 | 6 | 20 | |
| Benzo(a)pyrene | 2.90 | 0.20 | ug/L | 4.000 | | 73 | 40-140 | 3 | 20 | |
| Benzo(b)fluoranthene | 2.91 | 0.20 | ug/L | 4.000 | | 73 | 40-140 | 0.6 | 20 | |
| Benzo(g,h,i)perylene | 2.98 | 0.20 | ug/L | 4.000 | | 74 | 40-140 | 2 | 20 | |
| Benzo(k)fluoranthene | 2.79 | 0.20 | ug/L | 4.000 | | 70 | 40-140 | 7 | 20 | |
| Chrysene | 2.83 | 0.20 | ug/L | 4.000 | | 71 | 40-140 | 6 | 20 | |
| Dibenzo(a,h)Anthracene | 3.00 | 0.20 | ug/L | 4.000 | | 75 | 40-140 | 3 | 20 | |
| Fluoranthene | 2.76 | 0.20 | ug/L | 4.000 | | 69 | 40-140 | 12 | 20 | |
| Fluorene | 2.50 | 0.20 | ug/L | 4.000 | | 63 | 40-140 | 9 | 20 | |
| Indeno(1,2,3-cd)Pyrene | 3.06 | 0.20 | ug/L | 4.000 | | 76 | 40-140 | 0.8 | 20 | |
| Naphthalene | 1.93 | 0.20 | ug/L | 4.000 | | 48 | 40-140 | 5 | 20 | |
| Phenanthrene | 2.63 | 0.20 | ug/L | 4.000 | | 66 | 40-140 | 10 | 20 | |
| Pyrene | 2.83 | 0.20 | ug/L | 4.000 | | 71 | 40-140 | 7 | 20 | |
| **Classical Chemistry** | | | | | | | | | | |
| **Batch CI62714 - TCN Prep** | | | | | | | | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

# Quality Control Data

| Analyte | Result | MRL | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Qualifier |
|---|---|---|---|---|---|---|---|---|---|---|
| **Classical Chemistry** | | | | | | | | | | |
| **Batch CI62714 - TCN Prep** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Total Cyanide | ND | 0.0200 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Total Cyanide | 0.0210 | 0.0200 | mg/L | 0.02006 | | 105 | 90-110 | | | |
| **LCS** | | | | | | | | | | |
| Total Cyanide | 0.150 | 0.0200 | mg/L | 0.1504 | | 99 | 90-110 | | | |
| **LCS Dup** | | | | | | | | | | |
| Total Cyanide | 0.149 | 0.0200 | mg/L | 0.1504 | | 99 | 90-110 | 0.4 | 20 | |
| **Batch CI62841 - General Preparation** | | | | | | | | | | |
| **Blank** | | | | | | | | | | |
| Phenols | ND | 0.10 | mg/L | | | | | | | |
| **LCS** | | | | | | | | | | |
| Phenols | 0.09 | 0.10 | mg/L | 0.1000 | | 90 | 80-120 | | | |
| **LCS** | | | | | | | | | | |
| Phenols | 1.02 | 0.10 | mg/L | 1.000 | | 102 | 80-120 | | | |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

**Notes and Definitions**

| | |
|---|---|
| Z-08 | See Attached |
| U | Analyte included in the analysis, but not detected |
| Q | Calibration required quadratic regression (Q). |
| D+ | Relative percent difference for duplicate is outside of criteria (D+). |
| D | Diluted. |
| CD- | Continuing Calibration %Diff/Drift is below control limit (CD-). |
| B- | Blank Spike recovery is below lower control limit (B-). |
| ND | Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes |
| dry | Sample results reported on a dry weight basis |
| RPD | Relative Percent Difference |
| MDL | Method Detection Limit |
| MRL | Method Reporting Limit |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| DL | Detection Limit |
| I/V | Initial Volume |
| F/V | Final Volume |
| § | Subcontracted analysis; see attached report |
| 1 | Range result excludes concentrations of surrogates and/or internal standards eluting in that range. |
| 2 | Range result excludes concentrations of target analytes eluting in that range. |
| 3 | Range result excludes the concentration of the C9-C10 aromatic range. |
| Avg | Results reported as a mathematical average. |
| NR | No Recovery |
| [CALC] | Calculated Analyte |
| SUB | Subcontracted analysis; see attached report |

*CERTIFICATE OF ANALYSIS*

Client Name: Veolia
Client Project ID: Annual PP Scan

ESS Laboratory Work Order: 1609506

**ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS**

**ENVIRONMENTAL**

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/documents/AllLabs.xls

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.depweb.state.pa.us/portal/server.pt/community/labs/13780/laboratory_accreditation_program/590095

# ProScience Analytical Services, Inc

Shawn Morrell
ESS Laboratory
185 Frances Ave.
Cranston, RI 02910

September 29, 2016

Dear Shawn Morrell:

Results of samples you described and submitted to ProScience Analytical Services, Inc. are shown on the enclosed data sheets. The analytical results in this report apply to the items tested only.

The listed samples were prepared and analyzed in compliance with EPA-600/4-83-043, Analytical Method for Determination of Asbestos Fibers in Water. Analysis was performed using a Philips 300/G transmission electron microscope equipped with selected area electron diffraction (SAED) and an Evex energy dispersive x-ray analyzer.

The quality control data related to the samples analyzed are available for review upon the written request of the client. ProScience Analytical Services, Inc. and its personnel assume no responsibility for potential sample contamination, misuse, misinformation, or misrepresentation by the client. All calculations are based on collection volumes supplied by the client. Samples are retained for a period of 2 months.

The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP.

This report may not be reproduced, except in its entirety, without the permission of ProScience Analytical Services, Inc., laboratory Director.

Please contact me if you have any questions regarding this report or related information.

Sincerely,

Mark Derosier, Senior Analyst
Aimee Cormier, Laboratory Manager

Enclosure:
BATCH NUMBER : WW 16115 CLIENT PROJECT ID: 1609506
Client Ref: N/A
NVLAP Lab Code 200090-0; CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; ME ID# LA-056; AIHA ID# 102754; VT ID# AL016876; PH ID# 218(TEM,PLM); ELAP ID# 11632; RI ID# 186.

*22 Cummings Park • Woburn, Massachusetts • 01801 • Phone (781)935-3212*

**ProScience Analytical Services, Inc.**
22 Cummings Park, Woburn, Massachusetts 01801
781-935-3212 ~ Fax: 781-932-4857 ~ E-Mail general@proscience.net

# Laboratory Report

Client Project #: 1609506
Client Reference: N/A
PO #: B02412
Client #: 2118
Client Name: ESS Laboratory

**Batch:** **WW 16115**
Method: Waste Water
Date Received: 9/23/2016
Date Analyzed: 9/29/2016
Date of Report: 9/29/2016

| Lab ID | Client ID | Description | Filter Area | Aliquot (mL) | Grid Area | # G.O. | Analytical Sensitivity | Total # Fibers | MFL >= 5 um | Total MFL | Analyzed |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WW122190 | 1609506-01 | Waste Water | 201 | 3 | .010229 | 20 | 0.33 | NSD | NSD | NSD | Yes |

**Comments:**

NSD = No Structures Detected

Mark Derosier, Analyst

WW16115

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

185 Frances Avenue,Cranston RI 02910-2211
Tel. (401)461-7181 Fax (401)461-4486
www.esslaboratory.com

**PROSCIENCE** CHAIN OF CUSTODY

ESS Lab # 1609506

Turn Time Standard **DUE 9/29/16**

Regulatory State: **MA** RI CT NH NJ NY ME Other_____

Reporting Limits - Region 1

Is this project for any of the following:(please circle)
MA-MCP Navy USACE CT DEP Other_____

Electonic Deliverables **Excel** Access **PDF**

Co. Name: **ESS Laboratory**

Project #:

Project Name: **1609506**

Contact Person: **Shawn Morrell**

Proj. Location:

Address:

City , State:

Zip:

PO #: B02412

Tel.:

email: smorrell@thielsch.com

| ESS Lab ID | Date | Collection Time | Grab -G Composite-C | Matrix | Sample ID | Pres Code | # of Containers | Type of Container | Vol of Container | Analysis: Asbestos PLM (EPA Screening Protocol) |
|---|---|---|---|---|---|---|---|---|---|---|
| | 9/22/16 | 1400 | G | WW | 1609506-01 | 1 | 1 | P | 1L | X |

Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present _____Yes _____No

Seals Intact ____ Yes _____No NA:____

Cooler Temperature: _____

Internal Use Only

[ ] Pickup

[ ] Technician____

Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-_____

Sampled by :

Comments:

| Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) | Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) |
|---|---|---|---|
| 9/23/16 11:00 | Kathy Ritone 9-23-16 @ 11AM | | |
| Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) | Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) |
| | | | |

* By circling MA-MCP, client acknowledges sampels were collected in accordance with MADEP CAM VIIA

Please fax to the laboratory all changes to Chain of Custody

**Report Method Blank & Laboratory Control Sample Results**

ProScience Analytical Services, Inc. 22 Cummings Park Woburn, MA 01801

**Drinking Water and Waste Water, Analysis Worksheet Chatfield (EPA 600)**

| | | | |
|---|---|---|---|
| P.O.# | B02412 | | |
| Client Project #: | 1609506 | Grid Opening Size | .010229 |
| Client job site: | N/A | Filter Area W: | 201 |
| **Batch No.** | 16115 | No. of Grid Openings | 20 |
| Lab Sample ID | 122190 | Analytical Sensitivity | 0.33 |
| Client Sample ID | 1609506-01 | Pore Size/Filter Type | 0.22 MCE |
| Client | ESS Laboratory | Instrument / Voltage | Philips CM12/100KeV |
| Client Number | 2118 | Magnification | ~18750 |
| Sample Description | Waste Water | Analyst: | MAH |
| Aliquot | 3 | Date Analyzed | 9-26-16 |
| Grid Box Location | 2150 5B | Quality Of Prep | ✓ |
| Date Logged In | 9/26/2016 | Scope # | 1 |
| Volume (L) | 1 | Comments: | |

| Location | G.S.O. | Str.# | Str. Type | Species | SAED | EDAX | Length | Width |
|---|---|---|---|---|---|---|---|---|
| 5B | I2 | NSD | | | | | | |
| | I6 | | | | | | | |
| | I8 | | | | | | | |
| | H3 | | | | | | | |
| | H5 | | | | | | | |
| | J2 | | | | | | | |
| | J4 | | | | | | | |
| 5C | I2 | | | | | | | |
| | I4 | | | | | | | |
| | I6 | | | | | | | |
| | I8 | | | | | | | |
| | P1 | | | | | | | |
| | P4 | | | | | | | |
| | P6 | | | | | | | |
| 5D | Q2 | | | | | | | |
| | Q5 | | | | | | | |
| | X1 | | | | | | | |
| | I2 | | | | | | | |
| | I4 | | | | | | | |
| | I8 | | | | | | | |

Total Asbestos Str. _____

NSD = No Structures Detected F = Fiber

# ESS Laboratory

*Division of Thielsch Engineering, Inc.*

185 Frances Avenue,Cranston RI 02910-2211
Tel. (401)461-7181 Fax (401)461-4486
www.esslaboratory.com

**PROSCIENCE** CHAIN OF CUSTODY

ESS Lab # 1609506

Turn Time Standard **DUE 9/29/16**

Regulatory State: **MA** RI CT NH NJ NY ME Other_____

Reporting Limits - Region 1

Is this project for any of the following:(please circle)
MA-MCP Navy USACE CT DEP Other_____

Electonic Deliverables **Excel** Access **PDF**

| | |
|---|---|
| Co. Name | **ESS Laboratory** |
| Contact Person | **Shawn Morrell** |
| Address | |
| Tel. | |
| Project # | |
| Project Name | **1609506** |
| Proj. Location | |
| City , State | |
| Zip | |
| PO # | B02412 |
| email: | smorrell@thielsch.com |

| ESS Lab ID | Date | Collection Time | Grab -G Composite-C | Matrix | Sample ID | Pres Code | # of Containers | Type of Container | Vol of Container | Analysis: Asbestos PLM (EPA Screening Protocol) |
|---|---|---|---|---|---|---|---|---|---|---|
| | **9/22/16** | **1400** | **G** | **WW** | **1609506-01** | **1** | **1** | **P** | 1L | **X** |

Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present _____Yes _____No

Seals Intact ____ Yes _____No NA:____

Cooler Temperature: _____

Internal Use Only

[ ] Pickup

[ ] Technician____

Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-_____

Sampled by :

Comments:

| Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) | Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) |
|---|---|---|---|
| 9/23/16 11:00 | Kathy Artone 9-23-16 @ 11AM | | |
| Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) | Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) |
| | | | |

* By circling MA-MCP, client acknowledges sampels were collected in accordance with MADEP CAM VIIA

Please fax to the laboratory all changes to Chain of Custody

**Report Method Blank & Laboratory Control Sample Results**

**Pace Analytical Services, Inc.**
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

## Report Prepared for:

Shawn Morrell
ESS Laboratory
185 Frances Avenue
Cranston RI 02910-2211

# REPORT OF LABORATORY ANALYSIS FOR TCDD

**Report Prepared Date:**

October 4, 2016

## Report Information:

**Pace Project #: 10363602**
**Sample Receipt Date: 09/24/2016**
**Client Project #: 1609506**
**Client Sub PO #: B02407**
**State Cert #: N/A**

### Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 2,3,7,8-TCDD Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Joanne Richardson, your Pace Project Manager.

### This report has been reviewed by:

Joanne Richardson

October 04, 2016

Joanne Richardson,
(612) 607-6453
(612) 607-6444 (fax)

## Report of Laboratory Analysis

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The results relate only to the samples included in this report.

**Pace Analytical Services, Inc.**
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

## DISCUSSION

This report presents the results from the analysis performed on one sample submitted by a representative of ESS Laboratory. The sample was analyzed for the presence or absence of 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) using USEPA Method 1613B. The reporting limits were set to correspond to the lowest calibration point and a nominal 1-Liter sample amount.

The isotopically-labeled TCDD internal standard in the sample extract was recovered at 93%. All of the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1613B. Also, since the quantification of the native TCDD was based on isotope dilution, the data were automatically corrected for recovery and accurate values were obtained.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to be free of 2,3,7,8-TCDD at the reporting limit.

Laboratory spike samples were also prepared using clean reference matrix that had been fortified with native standard material. The results show that the spiked native TCDD was recovered at 86-88% with a relative percent difference of 2.3%. These results were within the target ranges for the method. Matrix spikes were not prepared with the sample batch.



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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

# Minnesota Laboratory Certifications

| Authority | Certificate # | Authority | Certificate # |
|---|---|---|---|
| A2LA | 2926.01 | Mississippi | MN00064 |
| Alabama | 40770 | Montana | 92 |
| Alaska | MN00064 | Nebraska | NE-OS-18-06 |
| Arizona | AZ0014 | Nevada | MN_00064_200 |
| Arkansas | 88-0680 | New Jersey (NE | MN002 |
| California | 01155CA | New York (NEL | 11647 |
| Colorado | MN00064 | North Carolina | 27700 |
| Connecticut | PH-0256 | North Dakota | R-036 |
| EPA Region 8 | 8TMS-Q | Ohio | 4150 |
| Florida (NELAP | E87605 | Oklahoma | D9922 |
| Georgia (DNR) | 959 | Oregon (ELAP) | MN200001-005 |
| Guam | 959 | Oregon (OREL | MN300001-001 |
| Hawaii | SLD | Pennsylvania | 68-00563 |
| Idaho | MN00064 | Puerto Rico | MN00064 |
| Illinois | 200012 | Saipan | MP0003 |
| Indiana | C-MN-01 | South Carolina | 74003001 |
| Indiana | C-MN-01 | Tennessee | TN02818 |
| Iowa | 368 | Texas | T104704192-08 |
| Kansas | E-10167 | Utah (NELAP) | MN00064 |
| Kentucky | 90062 | Virginia | 00251 |
| Louisiana | 03086 | Washington | C755 |
| Maine | 2007029 | West Virginia # | 9952C |
| Maryland | 322 | West Virginia D | 382 |
| Michigan | 9909 | Wisconsin | 999407970 |
| Minnesota | 027-053-137 | Wyoming | 8TMS-Q |

## REPORT OF LABORATORY ANALYSIS

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Report No.....10363602

# Appendix A

Sample Management

10363602

Report No....10363602_1613B

# ESS Laboratory PACE

*Division of Thielsch Engineering, Inc.*

185 Frances Avenue,Cranston RI 02910-2211
Tel. (401)461-7181 Fax (401)461-4486
www.esslaboratory.com

## CHAIN OF CUSTODY

ESS Lab # 1609506

Turn Time (Standard) DUE 9/29/16

Reporting Limits - _____

Regulatory State: **MA** RI CT NH NJ NY ME Other

Is this project for any of the following:(please circle)
MA-MCP Navy USACE CT DEP Other_____

Electonic Deliverables *Excel Access *PDF

| | | | |
|---|---|---|---|
| Co. Name: ESS Laboratory | Project #: | Project Name: 1609506 | |
| Contact Person: Shawn Morrell | Proj. Location: | | |
| Address: ext 3083 | City , State: | Zip: | PO #: B02407 |
| Tel. | email: smorrell@thielsch.com | | |

| ESS Lab ID | Date | Collection Time | Grab -G Composite-C | Matrix | Sample ID | Pres Code | # of Containers | Type of Container | Vol of Container | Analysis: Dioxin TCDD | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9/22/16 | 1400 | G | WW | 1609506-01 | 1 | 2 | AG | 1L | X | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | |

001

Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present ✓ Yes ____ No

Seals Intact ____ Yes ✓ No NA:____

Cooler Temperature: 4.2°C

Internal Use Only

[ ] Pickup

[ ] Technician____

Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-_____

Sampled by :

Comments: ***Please provide electronic deliverables**

| Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) | Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) |
|---|---|---|---|
| 9/23/16 1130 | UPS | | |
| Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) | Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) |
| | Shawn Morrell Pace 9/24/16 1005 | | |

* By circling MA-MCP, client acknowledges sampels were collected in accordance with MADEP CAM VIIA

Please fax to the laboratory all changes to Chain of Custody

**Report Method Blank & Laboratory Control Sample Results**

# ESS Laboratory — PACE

*Division of Thielsch Engineering, Inc.*

185 Frances Avenue, Cranston RI 02910-2211
Tel (401)461-7181 Fax (401)461-4486
www.esslaboratory.com

# CHAIN OF CUSTODY

ESS Lab # 1609506

Turn Time (Standard) DUE 9/29/16

Reporting Limits - _____

Regulatory State: **MA** RI CT NH NJ NY ME Other

Is this project for any of the following:(please circle)
MA-MCP Navy USACE CT DEP Other_____

Electonic Deliverables *Excel Access *PDF

| | | | |
|---|---|---|---|
| Co. Name | ESS Laboratory | Project # | Project Name: 1609506 |
| Contact Person | Shawn Morrell | Proj. Location | |
| Address | ext 3083 | City , State | Zip / PO # B02407 |
| Tel. | | email: smorrell@thielsch.com | |

| ESS Lab ID | Date | Collection Time | Grab -G Composite-C | Matrix | Sample ID | Pres Code | # of Containers | Type of Container | Vol of Container | Analysis: Dioxin TCDD method 1613 *cmt 9/27/16 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 9/22/16 | 1400 | G | WW | 1609506-01 | 1 | 2 | AG | 1L | X | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | |

Container Type: P-Poly G-Glass AG-Amber Glass S-Sterile V-VOA

Matrix: S-Soil SD-Solid D-Sludge WW-Wastewater GW-Groundwater SW-Surface Water DW-Drinking Water O-Oil W-Wipes F-Filter

Cooler Present _____Yes _____No

Seals Intact ____ Yes _____No NA:____

Cooler Temperature: _____

Internal Use Only

[ ] Pickup

[ ] Technician____

Preservation Code: 1-NP, 2-HCl, 3-H2SO4, 4-HNO3, 5-NaOH, 6-MeOH, 7-Asorbic Acid, 8-ZnAct, 9-_____

Sampled by :

Comments: ***Please provide electronic deliverables**

| Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) | Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) |
|---|---|---|---|
| 9/23/16 1130 | UPS | | |
| Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) | Relinquished by: (Signature, Date & Time) | Received by: (Signature, Date & Time) |
| | | | |

* By circling MA-MCP, client acknowledges sampels were collected in accordance with MADEP CAM VIIA

Please fax to the laboratory all changes to Chain of Custody

**Report Method Blank & Laboratory Control Sample Results**

Report No: 0336092_151355 Page 6 of 140

| Pace Analytical® | Document Name: **Sample Condition Upon Receipt Form** | Document Revised: 02Aug2016 Page 1 of 2 |
|---|---|---|
| | Document No.: **F-MN-L-213-rev.17** | Issuing Authority: Pace Minnesota Quality Office |

**Sample Condition Upon Receipt**

**Client Name:** ESS Laboratory

**Project #:** WO#: 10363602 (10363602)

**Courier:** ☐ Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ SpeeDee ☐ Other:

**Tracking Number:** 1Z 037 497 44 4603 7863

**Custody Seal on Cooler/Box Present?** ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No

**Optional:** Proj. Due Date: Proj. Name:

**Packing Material:** ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: **Temp Blank?** ☑ Yes ☐ No

**Thermometer Used:** ☐ 151401163 ☐ B88A912167504 ☑ 151401164 ☐ B88A0143310098 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

**Cooler Temp Read (°C):** 4.3 **Cooler Temp Corrected (°C):** 4.2 **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C **Correction Factor:** **Date and Initials of Person Examining Contents:** 9/24/16 SG

**USDA Regulated Soil** ( ☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

**If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.**

| | | | | COMMENTS: |
|---|---|---|---|---|
| Chain of Custody Present? | ☑ Yes | ☐ No | ☐ N/A | 1. |
| Chain of Custody Filled Out? | ☑ Yes | ☐ No | ☐ N/A | 2. |
| Chain of Custody Relinquished? | ☑ Yes | ☐ No | ☐ N/A | 3. |
| Sampler Name and/or Signature on COC? 9/24/16 SG | ☑ Yes | ☑ No | ☐ N/A | 4. |
| Samples Arrived within Hold Time? | ☑ Yes | ☐ No | ☐ N/A | 5. |
| **Short Hold Time Analysis (<72 hr)?** | ☐ Yes | ☑ No | ☐ N/A | 6. |
| **Rush Turn Around Time Requested?** | ☐ Yes | ☑ No | ☐ N/A | 7. |
| Sufficient Volume? | ☑ Yes | ☐ No | ☐ N/A | 8. |
| Correct Containers Used? | ☑ Yes | ☐ No | ☐ N/A | 9. |
| -Pace Containers Used? | ☑ Yes | ☐ No | ☐ N/A | |
| Containers Intact? | ☑ Yes | ☐ No | ☐ N/A | 10. |
| Filtered Volume Received for Dissolved Tests? | ☐ Yes | ☐ No | ☑ N/A | 11. Note if sediment is visible in the dissolved container |
| Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT | ☐ Yes | ☑ No | ☐ N/A | 12 No time on labels. |
| All containers needing acid/base preservation have been checked? | ☐ Yes | ☐ No | ☑ N/A | 13. ☐ $HNO_3$ ☐ $H_2SO_4$ ☐ NaOH ☐ HCl Sample # |
| All containers needing preservation are found to be in compliance with EPA recommendation? ($HNO_3$, $H_2SO_4$, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) | ☐ Yes | ☐ No | ☑ N/A | |
| Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC | ☐ Yes | ☐ No | ☑ N/A | Initial when completed: Lot # of added preservative: |
| Headspace in VOA Vials ( >6mm)? | ☐ Yes | ☐ No | ☑ N/A | 14. |
| Trip Blank Present? | ☐ Yes | ☐ No | ☑ N/A | 15. |
| Trip Blank Custody Seals Present? | ☐ Yes | ☐ No | ☑ N/A | |
| Pace Trip Blank Lot # (if purchased): | | | | |

**CLIENT NOTIFICATION/RESOLUTION** **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution: Revised chain of custody provided by Christine Taylor on 9-27-16.

**Project Manager Review:** Joanne Richardson **Date:** 9-27-16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

# Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion



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# Appendix B

Sample Analysis  Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

# Method 1613B Sample Analysis Results

Client - ESS Laboratory

| | | | |
|---|---|---|---|
| Client's Sample ID | 1609506-01 | | |
| Lab Sample ID | 10363602001 | | |
| Filename | Y161002A_05 | | |
| Injected By | BAL | | |
| Total Amount Extracted | 1020 mL | Matrix | Water |
| % Moisture | NA | Dilution | NA |
| Dry Weight Extracted | NA | Collected | 09/22/2016 14:00 |
| ICAL ID | Y160816A | Received | 09/24/2016 10:05 |
| CCal Filename(s) | Y161001B_17 | Extracted | 09/29/2016 13:25 |
| Method Blank ID | BLANK-52176 | Analyzed | 10/02/2016 04:57 |

| Native Isomers | Conc pg/L | EMPC pg/L | RL pg/L | Internal Standards | ng's Added | Percent Recovery |
|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | ----- | 10 | 2,3,7,8-TCDD-13C | 2.00 | 93 |
| | | | | Recovery Standard<br>1,2,3,4-TCDD-13C | 2.00 | NA |
| | | | | Cleanup Standard<br>2,3,7,8-TCDD-37Cl4 | 0.20 | 92 |

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

R = Recovery outside target range
E = Exceeds calibration range

## REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

# Method 1613B Blank Analysis Results

| | | | |
|---|---|---|---|
| Lab Sample ID | BLANK-52176 | Matrix | Water |
| Filename | U160930B_09 | Dilution | NA |
| Total Amount Extracted | 1050 mL | Extracted | 09/29/2016 13:25 |
| ICAL ID | U160819 | Analyzed | 10/01/2016 04:58 |
| CCal Filename(s) | U160930B_01 | Injected By | CVS |

| **Native Isomers** | **Conc** pg/L | **EMPC** pg/L | **RL** pg/L | **Internal Standards** | **ng's Added** | **Percent Recovery** |
|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | ----- | 10 | 2,3,7,8-TCDD-13C | 2.00 | 81 |
| | | | | Recovery Standard 1,2,3,4-TCDD-13C | 2.00 | NA |
| | | | | Cleanup Standard 2,3,7,8-TCDD-37Cl4 | 0.20 | 98 |

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

R = Recovery outside target range
E = Exceeds calibration range

## REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

## Method 1613B Laboratory Control Spike Results

| | | | |
|---|---|---|---|
| Lab Sample ID | LCS-52177 | | |
| Filename | U160930B_02 | Matrix | Water |
| Total Amount Extracted | 1040 mL | Dilution | NA |
| ICAL ID | U160819 | Extracted | 09/29/2016 13:25 |
| CCal Filename | U160930B_01 | Analyzed | 09/30/2016 23:28 |
| Method Blank ID | BLANK-52176 | Injected By | CVS |

| Compound | Cs | Cr | Lower Limit | Upper Limit | % Rec. |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 10 | 8.8 | 7.3 | 14.6 | 88 |
| 2,3,7,8-TCDD-37Cl4 | 10 | 11 | 3.7 | 15.8 | 106 |
| 2,3,7,8-TCDD-13C | 100 | 110 | 25.0 | 141.0 | 108 |

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion



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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

## Method 1613B Laboratory Control Spike Results

| | | | |
|---|---|---|---|
| Lab Sample ID | LCSD-52178 | | |
| Filename | U160930B_03 | Matrix | Water |
| Total Amount Extracted | 1050 mL | Dilution | NA |
| ICAL ID | U160819 | Extracted | 09/29/2016 13:25 |
| CCal Filename | U160930B_01 | Analyzed | 10/01/2016 00:15 |
| Method Blank ID | BLANK-52176 | Injected By | CVS |

| Compound | Cs | Cr | Lower Limit | Upper Limit | % Rec. |
|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 10 | 8.6 | 7.3 | 14.6 | 86 |
| 2,3,7,8-TCDD-37Cl4 | 10 | 9.9 | 3.7 | 15.8 | 99 |
| 2,3,7,8-TCDD-13C | 100 | 100 | 25.0 | 141.0 | 103 |

Cs = Concentration Spiked (ng/mL)
Cr = Concentration Recovered (ng/mL)
Rec. = Recovery (Expressed as Percent)
Control Limit Reference: Method 1613, Table 6, 10/94 Revision
R = Recovery outside of control limits
Nn = Value obtained from additional analysis
* = See Discussion



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## Method 1613B

## Spike Recovery Relative Percent Difference (RPD) Results

| | | | |
|---|---|---|---|
| Client | ESS Laboratory | | |
| Spike 1 ID | LCS-52177 | Spike 2 ID | LCSD-52178 |
| Spike 1 Filename | U160930B_02 | Spike 2 Filename | U160930B_03 |

| Compound | Spike 1 %REC | Spike 2 %REC | %RPD |
|---|---|---|---|
| 2,3,7,8-TCDD | 88 | 86 | 2.3 |

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

## REPORT OF LABORATORY ANALYSIS

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# CHAIN OF CUSTODY

| | | |
|---|---|---|
| Turn Time | 5 | Days |
| Regulatory State | Massachusetts | |

Is this project for any of the following?: ○ CT RCP ○ MA MCP ○ RGP

ESS Lab # 1609506

Reporting Limits

Electonic Deliverables: ☐ Data Checker ☐ Excel ☐ Other (Please Specify →)

| Company Name | Project # | Project Name |
|---|---|---|
| Veolia | | Annual PP Scan |

| Contact Person | Address |
|---|---|
| James Harrison | 265 First Street |

| City | State | Zip Code | PO # |
|---|---|---|---|
| Cambridge | MA | 02142 | |

| Telephone Number | FAX Number | Email Address |
|---|---|---|
| (617) 679-4803 | | james.harrison@veolia.com |

| ESS Lab ID | Collection Date | Collection Time | Sample Type | Sample Matrix | Sample ID | VOA 624 | SVOC 625 | Pest 608 | PCB 608 | Metals PP-13 | TCN | Phenol | Asbestos | Dioxin TCDD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 9/22/16 | 14:00 | Grab | Waste Water | MB 009 | X | X | X | X | X | X | X | X | X |
| **Container Type:** | AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial | | | | | V | AG | AG | AG | P | P | AG | P | AG |
| **Container Volume:** | 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* | | | | | 11 | 6 | 6 | 6 | 3 | 3 | 6 | 6 | 6 |
| **Preservation Code:** | 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-MeOH 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* | | | | | 2 | 1 | 1 | 1 | 4 | 5 | 3 | 1 | 1 |
| | | | | | **Number of Containers:** | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |

**Laboratory Use Only**

Cooler Present: ✓ ⊙ Drop Off
Seals Intact: ✓ Pickup
Cooler Temperature: 2.0 ice RB **WW Technician →** JJ

**Sampled by :** Jim Johnston - ESS Laboratory

**Comments:** **Please specify "Other" preservative and containers types in this space**

Field pH Analysis: _____ S.U.
Field Flow: _____ GPD
Field Temperature: _____ °C
Field TRC: _____ mg/L
Field Dissolved Oxygen: _____ mg/L

See Appendix A to 40 CFR, Part 423--126 Priority Pollutants (Attached)

| Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) | Relinquished By: (Signature, Date & Time) | Received By: (Signature, Date & Time) |
|---|---|---|---|
| 9-22-16 1505 | ESS Fridge 9-22-16 1505 | Fridge 9/22/16 16:00 | 9/22/16 16:00 |
| **Relinquished By: (Signature, Date & Time)** | **Received By: (Signature, Date & Time)** | **Relinquished By: (Signature, Date & Time)** | **Received By: (Signature, Date & Time)** |
| 9/22/16 17:10 | 9/22/16 1717 | | |

1609506

# Appendix A to 40 CFR, Part 423--126 Priority Pollutants

001 Acenaphthene
002 Acrolein
003 Acrylonitrile
004 Benzene
005 Benzidine
006 Carbon tetrachloride (tetrachloromethane)
007 Chlorobenzene
008 1,2,4-trichlorobenzene
009 Hexachlorobenzene
010 1,2-dichloroethane
011 1,1,1-trichloreothane
012 Hexachloroethane
013 1,1-dichloroethane
014 1,1,2-trichloroethane
015 1,1,2,2-tetrachloroethane
016 Chloroethane
018 Bis(2-chloroethyl) ether
019 2-chloroethyl vinyl ether (mixed)
020 2-chloronaphthalene
021 2,4, 6-trichlorophenol
022 Parachlorometa cresol
023 Chloroform (trichloromethane)
024 2-chlorophenol
025 1,2-dichlorobenzene
026 1,3-dichlorobenzene
027 1,4-dichlorobenzene
028 3,3-dichlorobenzidine
029 1,1-dichloroethylene
030 1,2-trans-dichloroethylene
031 2,4-dichlorophenol
032 1,2-dichloropropane
033 1,2-dichloropropylene (1,3-dichloropropene)
034 2,4-dimethylphenol
035 2,4-dinitrotoluene
036 2,6-dinitrotoluene
037 1,2-diphenylhydrazine
038 Ethylbenzene
039 Fluoranthene
040 4-chlorophenyl phenyl ether
041 4-bromophenyl phenyl ether
042 Bis(2-chloroisopropyl) ether
043 Bis(2-chloroethoxy) methane
044 Methylene chloride (dichloromethane)
045 Methyl chloride (dichloromethane)
046 Methyl bromide (bromomethane)
047 Bromoform (tribromomethane)
048 Dichlorobromomethane
051 Chlorodibromomethane
052 Hexachlorobutadiene
053 Hexachloromyclopentadiene
054 Isophorone
055 Naphthalene
056 Nitrobenzene
057 2-nitrophenol
058 4-nitrophenol
059 2,4-dinitrophenol
060 4,6-dinitro-o-cresol
061 N-nitrosodimethylamine
062 N-nitrosodiphenylamine
063 N-nitrosodi-n-propylamin
064 Pentachlorophenol
065 Phenol
066 Bis(2-ethylhexyl) phthalate
067 Butyl benzyl phthalate
068 Di-N-Butyl Phthalate
069 Di-n-octyl phthalate
070 Diethyl Phthalate
071 Dimethyl phthalate
072 1,2-benzanthracene (benzo(a) anthracene
073 Benzo(a)pyrene (3,4-benzo-pyrene)
074 3,4-Benzofluoranthene (benzo(b) fluoranthene)
075 11,12-benzofluoranthene (benzo(b) fluoranthene)
076 Chrysene
077 Acenaphthylene
078 Anthracene
079 1,12-benzoperylene (benzo(ghi) perylene)
080 Fluorene
081 Phenanthrene
082 1,2,5,6-dibenzanthracene (dibenzo(,h) anthracene)
083 Indeno (,1,2,3-cd) pyrene (2,3-o-pheynylene pyrene)
084 Pyrene
085 Tetrachloroethylene
086 Toluene
087 Trichloroethylene
088 Vinyl chloride (chloroethylene)
089 Aldrin
090 Dieldrin
091 Chlordane (technical mixture and metabolites)
092 4,4-DDT
093 4,4-DDE (p,p-DDX)
094 4,4-DDD (p,p-TDE)
095 Alpha-endosulfan
096 Beta-endosulfan
097 Endosulfan sulfate
098 Endrin
099 Endrin aldehyde
100 Heptachlor
101 Heptachlor epoxide (BHC-hexachlorocyclohexane)
102 Alpha-BHC
103 Beta-BHC
104 Gamma-BHC (lindane)
105 Delta-BHC (PCB-polychlorinated biphenyls)
106 PCB-1242 (Arochlor 1242)
107 PCB-1254 (Arochlor 1254)
108 PCB-1221 (Arochlor 1221)
109 PCB-1232 (Arochlor 1232)
110 PCB-1248 (Arochlor 1248)
111 PCB-1260 (Arochlor 1260)
112 PCB-1016 (Arochlor 1016)
113 Toxaphene
114 Antimony
115 Arsenic
116 Asbestos
117 Beryllium
118 Cadmium
119 Chromium
120 Copper
121 Cyanide, Total
122 Lead
123 Mercury
124 Nickel
125 Selenium
126 Silver
127 Thallium
126 Silver
128 Zinc
129 2,3,7,8-tetrachloro-dibenzo-p-dioxin (TCDD)