Non responsive based on revised scope

November 19, 2019

Non responsive based on revised scope
Environmental Restoration, LLC
1666 Fabick Drive
Fenton, MO 63026

# Certificate of Analysis

| | | | |
|---|---|---|---|
| Project Name: | **2019-UHC CONTAMINANT LIST** | Workorder: | **3065932** |
| Purchase Order: | | Workorder ID: | **Shiloh Church Rd/3-5467** |

Dear Non responsive based on rev:

Enclosed are the analytical results for samples received by the laboratory on Thursday, October 24, 2019.

The Non respons Environmental laboratory in Non responsive based on revised scope is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Non responsive based on revised scope Non responsive based on revised scope.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the Non responsive based on revised scope.

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*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Project Coordinator

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## SAMPLE SUMMARY

Workorder: 3065932 Shiloh Church Rd/3-5467

| Lab ID | Sample ID | Matrix | Date Collected | Date Received | Collected By |
|---|---|---|---|---|---|
| 3065932001 | UHC-01 | Solid | 10/23/2019 16:30 | 10/24/2019 16:25 | Collected by Client |

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[redacted]

## SAMPLE SUMMARY

Workorder: 3065932 Shiloh Church Rd/3-5467

**Notes**

- Samples collected by [redacted] personnel are done so in accordance with the procedures set forth in the [redacted] Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All L brary Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

**Standard Acronyms/Flags**

| | |
|---|---|
| J | Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte |
| U | Indicates that the analyte was Not Detected (ND) |
| N | Indicates presumptive evidence of the presence of a compound |
| MDL | Method Detection Limit |
| PQL | Practical Quantitation Limit |
| RDL | Reporting Detection Limit |
| ND | Not Detected - indicates that the analyte was Not Detected at the RDL |
| Cntr | Analysis was performed using this container |
| RegLmt | Regulatory Limit |
| LCS | Laboratory Control Sample |
| MS | Matrix Sp ke |
| MSD | Matrix Sp ke Duplicate |
| DUP | Sample Duplicate |
| %Rec | Percent Recovery |
| RPD | Relative Percent Difference |
| LOD | DoD Limit of Detection |
| LOQ | DoD Limit of Quantitation |
| DL | DoD Detection Limit |
| I | Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL) |
| (S) | Surrogate Compound |
| NC | Not Calculated |
| * | Result outside of QC limits |

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## PROJECT SUMMARY

Workorder: 3065932 Shiloh Church Rd/3-5467

**Workorder Comments**

Please see attached 8141 results from [redacted] 11/14/19

Please see attached TCLP VOC results from [redacted] 11/14/19

Please see attached 8316/8290/8270 results from [redacted] 11/19/19

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[redacted]

## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

Lab ID: **3065932001** Date Collected: 10/23/2019 16:30 Matrix: Solid

Sample ID: **UHC-01** Date Received: 10/24/2019 16:25

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS** | | | | | | | | | Non responsive to | |
| Acetone | ND | | ug/kg | 18.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Acetonitrile | ND | | ug/kg | 18.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Acrolein | ND | | ug/kg | 93.5 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Acrylonitrile | ND | | ug/kg | 18.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Benzene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Bromodichloromethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Bromoform | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Bromomethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 2-Butanone | ND | | ug/kg | 18.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Carbon Tetrachloride | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Chlorobenzene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Chlorodibromomethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Chloroethane | ND | | ug/kg | 9.4 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 2-Chloroethylvinyl ether | ND | | ug/kg | 281 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Chloroform | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Chloromethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Chloroprene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 3-Chloro-1-propene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 1,2-Dibromo-3-chloropropane | ND | | ug/kg | 9.4 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 1,2-Dibromoethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| D bromomethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 1,2-Dichlorobenzene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 1,3-Dichlorobenzene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 1,4-Dichlorobenzene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Dichlorodifluoromethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 1,1-Dichloroethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 1,2-Dichloroethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 1,1-Dichloroethene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| trans-1,2-Dichloroethene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| 1,2-Dichloropropane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| cis-1,3-Dichloropropene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| trans-1,3-Dichloropropene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Ethyl Ether | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Ethyl Acetate | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Ethylbenzene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |
| Freon 113 | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | [redacted] | A2 |

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[redacted]

## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

Lab ID: **3065932001** Date Collected: 10/23/2019 16:30 Matrix: Solid

Sample ID: **UHC-01** Date Received: 10/24/2019 16:25

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| Hexachloroethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | Non respons | A2 |
| 2-Hexanone | ND | | ug/kg | 18.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Iodomethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Isobutyl alcohol | ND | | ug/kg | 93.5 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Isopropylbenzene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Methacrylonitrile | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Methyl methacrylate | ND | | ug/kg | 9.4 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| 4-Methyl-2-Pentanone(MIBK) | ND | | ug/kg | 18.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Methylene Chloride | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Propionitrile | ND | | ug/kg | 18.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| 1,1,1,2-Tetrachloroethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| 1,1,2,2-Tetrachloroethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Tetrachloroethene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Toluene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Total Xylenes | ND | | ug/kg | 11.2 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| 1,2,4-Trichlorobenzene | ND | | ug/kg | 9.4 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| 1,1,1-Trichloroethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| 1,1,2-Trichloroethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Trichloroethene | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Trichlorofluoromethane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| 1,2,3-Trichloropropane | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Vinyl Chloride | ND | | ug/kg | 3.7 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | | *Cntr* |
| 1,2-Dichloroethane-d4 (S) | 99.6 | | % | 56 - 124 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| 4-Bromofluorobenzene (S) | 87.8 | | % | 51 - 128 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| D bromofluoromethane (S) | 101 | | % | 62 - 123 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| Toluene-d8 (S) | 90.5 | | % | 59 - 131 | SW846 8260B | 10/25/19 10:30 | DPC | 10/30/19 15:18 | | A2 |
| **LIBRARY SEARCH - VOLATILES** | | | | | | | | | | |
| No TIC's Detected | . | | | | Lib Search VOC | | | 10/30/19 15:18 | | G |
| **Library Search - SemiVolatiles** | | | | | | | | | | |
| 1,1-Biphenyl, 2,3,4,6-tet | 18700 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 2,2,3,4-tet | 8320 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 3,3,4,4-te | 7450 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 2,2,4,5,5- | 30300 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 2,3,3,4,6- | 8610 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 2,3,3,4,4- | 43600 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |

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## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

Lab ID: **3065932001** Date Collected: 10/23/2019 16:30 Matrix: Solid

Sample ID: **UHC-01** Date Received: 10/24/2019 16:25

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Biphenyl, 2,3,4,4,5- | 14600 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | Non responsiv | A |
| 1,1-Biphenyl, 2,3,3,4,4- | 11000 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 2,2,3,4,5- | 8040 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 2,2,4,4,5- | 18200 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 2,3,4,5,5- | 22400 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 2,2,3,3,4, | 8530 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 2,2,3,4,6-P | 10800 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 2,3,4,4,5, | 13900 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 1,1-Biphenyl, 3,3,4,4,5, | 3550 | J N | ug/kg | | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| **SEMIVOLATILES** | | | | | | | | | | |
| Acenaphthene | ND | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Acenaphthylene | ND | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Acetophenone | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 2-Acetylaminofluorene | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | | A |
| 4-Aminobiphenyl | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | | A |
| Aniline | ND | 5,6, 7,8 | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Anthracene | ND | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Aramite | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | | A |
| Benzo(a)anthracene | 72.6 | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Benzo(a)pyrene | 78.8 | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Benzo(b)fluoranthene | 83.2 | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Benzo(g,h,i)perylene | 153 | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Benzo(k)fluoranthene | ND | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 4-Bromophenyl-phenylether | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Butylbenzylphthalate | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 4-Chloro-3-methylphenol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 4-Chloroaniline | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Chlorobenzilate | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | | A |
| bis(2-Chloroethoxy)methane | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| bis(2-Chloroethyl)ether | ND | 9 | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 2-Chloronaphthalene | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| 2-Chlorophenol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Chrysene | 94.9 | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| mp-Cresol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| o-Cresol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Di-n-Butylphthalate | 2390 | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |
| Di-n-Octylphthalate | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | | A |

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[redacted]

## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

Lab ID: **3065932001** Date Collected: 10/23/2019 16:30 Matrix: Solid

Sample ID: **UHC-01** Date Received: 10/24/2019 16:25

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| Diallate | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| D benzo(a,h)anthracene | ND | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 2,4-Dichlorophenol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 2,6-Dichlorophenol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| O,O-Diethyl O-pyrazinylphoshor | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Diethylphthalate | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| p-(Dimethylamino)azobenzene | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 7,12-Dimethylbenz(a)anthracene | ND | 23 | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 3,3'-Dimethylbenzidine | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 2,4-Dimethylphenol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| a,a-Dimethylphenethylamine | ND | | ug/kg | 1150 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Dimethylphthalate | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 1,4-Dinitrobenzene | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 2,4-Dinitrophenol | ND | 13,14 | ug/kg | 486 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 2,4-Dinitrotoluene | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 2,6-Dinitrotoluene | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 1,4-Dioxane | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Diphenylamine | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 1,2-Diphenylhydrazine | ND | 20 | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Disulfoton | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Ethyl methanesulfonate | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| bis(2-Ethylhexyl)phthalate | 3070 | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Famphur | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Fluoranthene | 82.8 | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Fluorene | ND | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Hexachlorobenzene | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Hexachlorobutadiene | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Hexachlorocyclopentadiene | ND | 10,11,12 | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Hexachloropropene | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Indeno(1,2,3-cd)pyrene | ND | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Isodrin | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Isosafrole | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Kepone | ND | | ug/kg | 1150 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Methapyriline | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |

Non responsive based on revised scope

Non responsive based on revised scope

[redacted]

## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

Lab ID: **3065932001** Date Collected: 10/23/2019 16:30 Matrix: Solid

Sample ID: **UHC-01** Date Received: 10/24/2019 16:25

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|
| Methyl Parathion | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | Non responsive [redacted] | A |
| 2-Methyl-4,6-dinitrophenol | ND | 17,18 | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 3-Methylcholanthrene | ND | 24 | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Methyl methanesulfonate | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 1,4-Naphthoquinone | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 1-Naphthylamine | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 2-Naphthylamine | ND | 15,16 | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Naphthalene | ND | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 5-Nitro-o-Toluidine | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 2-Nitroaniline | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 3-Nitroaniline | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Nitrobenzene | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 2-Nitrophenol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 4-Nitrophenol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Nitroquinoline-N-oxide | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| N-Nitrosodi-n-butylamine | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| N-Nitrosodiethylamine | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| N-Nitrosodimethylamine | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| N-Nitroso-di-n-propylamine | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| N-Nitrosodiphenylamine | ND | 19 | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| N-Nitrosomethylethylamine | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| N-Nitrosomorpholine | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| N-Nitrosopiperidine | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Parathion | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Pentachlorobenzene | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Pentachloroethane | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Pentachloronitrobenzene | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Phenacetin | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Phenanthrene | 74.1 | | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Phenol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| p-Phenylenediamine | ND | | ug/kg | 1150 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Phorate | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 2-Picoline | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Pronamide | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Pyrene | 95.9 | 1 | ug/kg | 60.8 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Pyridine | ND | 3,4 | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |

Non responsive based on revised scope

Non responsive based on revised scope

[redacted]

## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

Lab ID: **3065932001** Date Collected: 10/23/2019 16:30 Matrix: Solid

Sample ID: **UHC-01** Date Received: 10/24/2019 16:25

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| Safrole | ND | 21 | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Sulfotep | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 1,2,4,5-Tetrachlorobenzene | ND | | ug/kg | 122 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 2,3,4,6-Tetrachlorophenol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| o-Toluidine | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 2,4,5-Trichlorophenol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 2,4,6-Trichlorophenol | ND | | ug/kg | 243 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| O,O,O-Triethylphosphorothioate | ND | | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 1,3,5-Trinitrobenzene | ND | 22 | ug/kg | 346 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | | *Cntr* |
| 2,4,6-Tr bromophenol (S) | 85.7 | | % | 19 - 132 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 2-Fluorobiphenyl (S) | 71.3 | | % | 40 - 110 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| 2-Fluorophenol (S) | 64.4 | | % | 26 - 116 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Nitrobenzene-d5 (S) | 69.5 | | % | 38 - 112 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Phenol-d5 (S) | 65.4 | | % | 35 - 111 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| Terphenyl-d14 (S) | 81.9 | | % | 45 - 126 | SW846 8270D | 10/27/19 18:20 | J1H | 10/29/19 04:00 | [redacted] | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | | *Cntr* |
| 2,4,6-Tr bromophenol (S) | 49.8 | | % | 19 - 132 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 2-Fluorobiphenyl (S) | 40.5 | | % | 40 - 110 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 2-Fluorophenol (S) | 30 | | % | 26 - 116 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Nitrobenzene-d5 (S) | 37.8 | 26 | % | 38 - 112 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Phenol-d5 (S) | 34.4 | 25 | % | 35 - 111 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Terphenyl-d14 (S) | 51.7 | | % | 45 - 126 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | | *Cntr* |
| 2,4,6-Tr bromophenol (S) | 52.1 | | % | 19 - 132 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 2-Fluorobiphenyl (S) | 40.6 | | % | 40 - 110 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| 2-Fluorophenol (S) | 30.6 | | % | 26 - 116 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Nitrobenzene-d5 (S) | 37.5 | 27 | % | 38 - 112 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Phenol-d5 (S) | 35.1 | | % | 35 - 111 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| Terphenyl-d14 (S) | 51.2 | | % | 45 - 126 | SW846 8270D | 10/28/19 17:55 | J1H | 10/29/19 13:20 | [redacted] | A |
| **PCBs** | | | | | | | | | | |
| Total Polychlorinated Biphenyl | 410 | | mg/kg | 173 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |
| Aroclor-1016 | ND | 36 | mg/kg | 19.0 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |
| Aroclor-1221 | ND | | mg/kg | 19.0 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |

Non responsive based on revised scope

Non responsive based on revised scope

[redacted]

## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

Lab ID: **3065932001** Date Collected: 10/23/2019 16:30 Matrix: Solid

Sample ID: **UHC-01** Date Received: 10/24/2019 16:25

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1232 | ND | | mg/kg | 19.0 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |
| Aroclor-1242 | ND | | mg/kg | 19.0 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |
| Aroclor-1248 | ND | | mg/kg | 19.0 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |
| Aroclor-1254 | 410 | | mg/kg | 19.0 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |
| Aroclor-1260 | ND | | mg/kg | 19.0 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |
| Aroclor-1262 | ND | | mg/kg | 19.0 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |
| Aroclor-1268 | ND | | mg/kg | 19.0 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | [redacted] | *ntr* |
| Decachlorobiphenyl (S) | 0 | | % | 49 - 115 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |
| Tetrachloro-m-xylene (S) | 0 | | % | 27 - 137 | SW846 8082A | 10/27/19 14:55 | J1H | 10/29/19 02:14 | [redacted] | G |
| **PESTICIDES** | | | | | | | | | | |
| Aldrin | ND | 28,29 | ug/kg | 9.8 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| beta-BHC | ND | | ug/kg | 9.8 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| delta-BHC | ND | | ug/kg | 9.8 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| gamma-BHC | ND | | ug/kg | 9.8 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| Chlordane | ND | | ug/kg | 202 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| alpha-Chlordane | ND | | ug/kg | 9.8 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| gamma-Chlordane | ND | | ug/kg | 9.8 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| 4,4'-DDD | ND | | ug/kg | 762 | SW846 8081B | 10/27/19 14:55 | J1H | 10/29/19 14:04 | [redacted] | A |
| 4,4'-DDE | ND | | ug/kg | 762 | SW846 8081B | 10/27/19 14:55 | J1H | 10/29/19 14:04 | [redacted] | A |
| 4,4'-DDT | ND | | ug/kg | 762 | SW846 8081B | 10/27/19 14:55 | J1H | 10/29/19 14:04 | [redacted] | A |
| Dieldrin | ND | | ug/kg | 19.0 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| Endosulfan I | ND | | ug/kg | 392 | SW846 8081B | 10/27/19 14:55 | J1H | 10/29/19 14:04 | [redacted] | A |
| Endosulfan II | ND | | ug/kg | 19.0 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| Endosulfan Sulfate | ND | | ug/kg | 19.0 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| Endrin | ND | | ug/kg | 19.0 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| Endrin Aldehyde | ND | | ug/kg | 19.0 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| alpha-HCH (alpha-BHC) | ND | | ug/kg | 9.8 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| Heptachlor | ND | | ug/kg | 9.8 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| Heptachlor Epoxide | ND | | ug/kg | 9.8 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| Methoxychlor | ND | | ug/kg | 762 | SW846 8081B | 10/27/19 14:55 | J1H | 10/29/19 14:04 | [redacted] | A |
| Toxaphene | ND | | ug/kg | 202 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | [redacted] | *ntr* |
| Decachlorobiphenyl (S) | 98.2 | | % | 30 - 135 | SW846 8081B | 10/27/19 14:55 | J1H | 10/29/19 14:04 | [redacted] | A |
| Decachlorobiphenyl (S) | 47.1 | | % | 30 - 135 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |
| Tetrachloro-m-xylene (S) | 53.7 | | % | 30 - 111 | SW846 8081B | 10/27/19 14:55 | J1H | 10/28/19 19:50 | [redacted] | A |

Non responsive based on revised scope

Non responsive based on revised scope

[redacted]

## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

Lab ID: **3065932001** Date Collected: 10/23/2019 16:30 Matrix: Solid

Sample ID: **UHC-01** Date Received: 10/24/2019 16:25

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | Cntr |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Non respo | |
| Tetrachloro-m-xylene (S) | 49.7 | | % | 30 - 111 | SW846 8081B | 10/27/19 14:55 | J1H | 10/29/19 14:04 | | A |
| **ALCOHOLS AND ACETATES** | | | | | | | | | | |
| n-Butanol | ND | | mg/kg | 24.0 | SW846 8015C | 10/28/19 00:15 | EGO | 10/28/19 07:11 | | A |
| Methanol | ND | | mg/kg | 24.0 | SW846 8015C | 10/28/19 00:15 | EGO | 10/28/19 07:11 | | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | | *Cntr* |
| Amyl Alcohol (S) | 90.6 | | % | 70 - 130 | SW846 8015C | 10/28/19 00:15 | EGO | 10/28/19 07:11 | | A |
| **HERBICIDES** | | | | | | | | | | |
| 2,4-D | ND | | ug/kg | 122 | SW846 8151A | 10/26/19 00:40 | S7M | 10/30/19 14:20 | | A |
| Dinoseb | ND | | ug/kg | 207 | SW846 8151A | 10/26/19 00:40 | S7M | 10/30/19 14:20 | | A |
| 2,4,5-T | ND | | ug/kg | 207 | SW846 8151A | 10/26/19 00:40 | S7M | 10/30/19 14:20 | | A |
| 2,4,5-TP | ND | | ug/kg | 122 | SW846 8151A | 10/26/19 00:40 | S7M | 10/30/19 14:20 | | A |
| *Surrogate Recoveries* | *Results* | *Flag* | *Units* | *Limits* | *Method* | *Prepared* | *By* | *Analyzed* | | *Cntr* |
| 2,4-Dichlorophenylacetic acid (S) | 51.8 | | % | 36 - 113 | SW846 8151A | 10/26/19 00:40 | S7M | 10/30/19 14:20 | | A |
| **SUBCONTRACTED ANALYSIS** | | | | | | | | | | |
| Method SW846 8141 | see attached | | | | SW846 8141B | | | 11/14/19 07:25 | | G |
| Subcontracted Analysis | See attached | | | | Subcontract | | | 11/19/19 14:43 | | G |
| **WET CHEMISTRY** | | | | | | | | | | |
| Acid Soluble Sulfide | ND | | mg/kg | 24.5 | SW846 9034r0-96 | 10/26/19 12:30 | MXO | 10/26/19 15:37 | | G |
| Cyanide, Amenable | 0.61 | | mg/kg | 0.25 | SW846 9012B | 11/1/19 11:00 | LXB | 11/5/19 10:56 | | A |
| Cyanide, Total | 1.5 | 37,38 | mg/kg | 0.31 | SW846 9012B | 10/30/19 14:45 | LXB | 10/31/19 13:59 | | A |
| Fluoride | ND | | mg/kg | 2.4 | SW846 9056A | 10/31/19 09:30 | CHW | 10/31/19 14:46 | | A2 |
| Moisture | 18.3 | | % | 0.1 | S2540G-11 | | | 10/28/19 09:00 | | |
| Total Solids | 81.7 | | % | 0.1 | S2540G-11 | | | 10/28/19 09:00 | | |
| **TCLP METALS** | | | | | | | | | | |
| Antimony, Total | ND | | mg/L | 0.15 | SW846 6010C | 10/29/19 16:05 | SXC | 10/30/19 09:19 | | A1 |
| Nickel, Total | 0.39 | | mg/L | 0.11 | SW846 6010C | 10/29/19 16:05 | SXC | 10/30/19 09:19 | | A1 |
| Thallium, Total | ND | | mg/L | 0.11 | SW846 6010C | 10/29/19 16:05 | SXC | 10/30/19 09:19 | | A1 |
| Vanadium, Total | ND | | mg/L | 0.028 | SW846 6010C | 10/29/19 16:05 | SXC | 10/30/19 09:19 | | A1 |
| Zinc, Total | 19.9 | | mg/L | 0.11 | SW846 6010C | 10/29/19 16:05 | SXC | 10/30/19 09:19 | | A1 |

Non responsive based on revised scope

Non responsive based on revised scope

[redacted]

## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

| | | | | | |
|---|---|---|---|---|---|
| Lab ID: | **3065932001** | Date Collected: | 10/23/2019 16:30 | Matrix: | Solid |
| Sample ID: | **UHC-01** | Date Received: | 10/24/2019 16:25 | | |

| Parameters | Results | Flag | Units | RDL | Method | Prepared | By | Analyzed | By | *Cntr* |
|---|---|---|---|---|---|---|---|---|---|---|

Non responsive based on revised scope

[redacted]

Project Coordinator

Non responsive based on revised scope

Non responsive based on revised scope

[redacted]

## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

### PARAMETER QUALIFIERS

| Lab ID | # | Sample ID | Analytical Method | Analyte |
|---|---|---|---|---|
| **3065932001** | 1 | UHC-01 | SW846 8270D | Pyrene |
| The QC sample type LCS for method SW846 8270D was outside the control limits for the analyte Pyrene. The % Recovery was reported as 119 and the control limits were 60 to 114. | | | | |
| **3065932001** | 3 | UHC-01 | SW846 8270D | Pyridine |
| The QC sample type MS for method SW846 8270D was outside the control limits for the analyte Pyridine. The % Recovery was reported as 42.6 and the control limits were 46 to 104. | | | | |
| **3065932001** | 4 | UHC-01 | SW846 8270D | Pyridine |
| The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Pyridine. The % Recovery was reported as 45 and the control limits were 46 to 104. | | | | |
| **3065932001** | 5 | UHC-01 | SW846 8270D | Aniline |
| The QC sample type LCS for method SW846 8270D was outside the control limits for the analyte Aniline. The % Recovery was reported as 111 and the control limits were 39 to 110. | | | | |
| **3065932001** | 6 | UHC-01 | SW846 8270D | Aniline |
| The QC sample type MS for method SW846 8270D was outside the control limits for the analyte Aniline. The % Recovery was reported as 0 and the control limits were 39 to 110. | | | | |
| **3065932001** | 7 | UHC-01 | SW846 8270D | Aniline |
| The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Aniline. The % Recovery was reported as 2.74 and the control limits were 39 to 110. | | | | |
| **3065932001** | 8 | UHC-01 | SW846 8270D | Aniline |
| The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Aniline. The RPD was reported as 200 and the upper control limit is 23. | | | | |
| **3065932001** | 9 | UHC-01 | SW846 8270D | bis(2-Chloroethyl)ether |
| The QC sample type MS for method SW846 8270D was outside the control limits for the analyte bis(2-Chloroethyl)ether. The % Recovery was reported as 106 and the control limits were 51 to 105. | | | | |
| **3065932001** | 10 | UHC-01 | SW846 8270D | Hexachlorocyclopentadiene |
| The QC sample type MS for method SW846 8270D was outside the control limits for the analyte Hexachlorocyclopentadiene. The % Recovery was reported as 1.23 and the control limits were 33 to 109. | | | | |
| **3065932001** | 11 | UHC-01 | SW846 8270D | Hexachlorocyclopentadiene |
| The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Hexachlorocyclopentadiene. The % Recovery was reported as 9.54 and the control limits were 33 to 109. | | | | |
| **3065932001** | 12 | UHC-01 | SW846 8270D | Hexachlorocyclopentadiene |
| The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte Hexachlorocyclopentadiene. The RPD was reported as 155 and the upper control limit is 29. | | | | |
| **3065932001** | 13 | UHC-01 | SW846 8270D | 2,4-Dinitrophenol |
| The QC sample type MS for method SW846 8270D was outside the control limits for the analyte 2,4-Dinitrophenol. The % Recovery was reported as 12.3 and the control limits were 36 to 131. | | | | |
| **3065932001** | 14 | UHC-01 | SW846 8270D | 2,4-Dinitrophenol |
| The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte 2,4-Dinitrophenol. The % Recovery was reported as 12.4 and the control limits were 36 to 131. | | | | |
| **3065932001** | 15 | UHC-01 | SW846 8270D | 2-Naphthylamine |
| The QC sample type MS for method SW846 8270D was outside the control limits for the analyte 2-Naphthylamine. The % Recovery was reported as 3.5 and the control limits were 15 to 116. | | | | |

Non responsive based on revised scope

Non responsive based on revised scope

[redacted]

## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

| | | | | |
|---|---|---|---|---|
| **3065932001** | 16 | UHC-01 | SW846 8270D | 2-Naphthylamine |

The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte 2-Naphthylamine. The % Recovery was reported as 2.8 and the control limits were 15 to 116.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 17 | UHC-01 | SW846 8270D | 2-Methyl-4,6-dinitrophenol |

The QC sample type MS for method SW846 8270D was outside the control limits for the analyte 2-Methyl-4,6-dinitrophenol. The % Recovery was reported as 22.2 and the control limits were 53 to 131.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 18 | UHC-01 | SW846 8270D | 2-Methyl-4,6-dinitrophenol |

The QC sample type MSD for method SW846 8270D was outside the control limits for the analyte 2-Methyl-4,6-dinitrophenol. The % Recovery was reported as 21.1 and the control limits were 53 to 131.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 19 | UHC-01 | SW846 8270D | N-Nitrosodiphenylamine |

The QC sample type LCS for method SW846 8270D was outside the control limits for the analyte N-Nitrosodiphenylamine. The % Recovery was reported as 135 and the control limits were 65 to 134.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 20 | UHC-01 | SW846 8270D | 1,2-Diphenylhydrazine |

The QC sample type LCS for method SW846 8270D was outside the control limits for the analyte 1,2-Diphenylhydrazine. The % Recovery was reported as 123 and the control limits were 59 to 122.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 21 | UHC-01 | SW846 8270D | Safrole |

The QC sample type LCS_AB for method SW846 8270D was outside the control limits for the analyte Safrole. The % Recovery was reported as 55.7 and the control limits were 59 to 104.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 22 | UHC-01 | SW846 8270D | 1,3,5-Trinitrobenzene |

The QC sample type CCV for method SW846 8270D was outside the control limits for the analyte 1,3,5-Trinitrobenzene. The % Recovery was reported as 121.9 and the control limits were 80 to 120.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 23 | UHC-01 | SW846 8270D | 7,12-Dimethylbenz(a)anthracene |

The QC sample type LCS_AB for method SW846 8270D was outside the control limits for the analyte 7,12-Dimethy benz(a)anthracene. The % Recovery was reported as 21.3 and the control limits were 58 to 112.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 24 | UHC-01 | SW846 8270D | 3-Methylcholanthrene |

The QC sample type LCS_AB for method SW846 8270D was outside the control limits for the analyte 3-Methylcholanthrene. The % Recovery was reported as 21.8 and the control limits were 59 to 107.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 25 | UHC-01 | SW846 8270D | Phenol-d5 |

The surrogate Phenol-d5 for method SW846 8270D was outside of control limits. The % Recovery was reported as 34.4 and the control limits were 35 to 111. This result was reported at a dilution of 1.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 26 | UHC-01 | SW846 8270D | Nitrobenzene-d5 |

The surrogate Nitrobenzene-d5 for method SW846 8270D was outside of control limits. The % Recovery was reported as 37.8 and the control limits were 38 to 112. This result was reported at a dilution of 1.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 27 | UHC-01 | SW846 8270D | Nitrobenzene-d5 |

The surrogate Nitrobenzene-d5 for method SW846 8270D was outside of control limits. The % Recovery was reported as 37.5 and the control limits were 38 to 112. This result was reported at a dilution of 1.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 28 | UHC-01 | SW846 8081B | Aldrin |

This sample was analyzed at a dilution in the 8081 Pesticide analysis. Reporting limits were adjusted accordingly.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 29 | UHC-01 | SW846 8081B | Aldrin |

Method criteria requires continuing cal bration verification (CCV) standards be less than or equal to 20% of the initial calibration for the 8081 analysis. The following compounds were biased low in the bracketing CCV: Endosulfan Sulfate (-24%) and Decachlorobiphenyl (-44%).

| | | | | |
|---|---|---|---|---|
| **3065932001** | 36 | UHC-01 | SW846 8082A | Aroclor-1016 |

This sample was analyzed at a dilution in the 8082 PCB analysis due to the level of Aroclor detected. Reporting limits were adjusted accordingly. One or more of the surrogates could not be evaluated as a result of the dilution.

| | | | | |
|---|---|---|---|---|
| **3065932001** | 37 | UHC-01 | SW846 9012B | Cyanide, Total |

The QC sample type MS for method SW846 9012B was outside the control limits for the analyte Cyanide, Total. The % Recovery was reported as -5.5 and the control limits were 80 to 120.

Non responsive based on revised scope

Non responsive based on revised scope

[redacted]

## ANALYTICAL RESULTS

Workorder: 3065932 Shiloh Church Rd/3-5467

| | | | | |
|---|---|---|---|---|
| **3065932001** | 38 | UHC-01 | SW846 9012B | Cyanide, Total |

The QC sample type MSD for method SW846 9012B was outside the control limits for the analyte Cyanide, Total. The % Recovery was reported as -2 and the control limits were 80 to 120.

Non responsive based on revised scope

Non responsive based on revised scope

[redacted]

## ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3065932 Shiloh Church Rd/3-5467

| Lab ID | Sample ID | Analysis Method | Prep Method |
|---|---|---|---|
| 3065932001 | UHC-01 | L b Search SV | |
| 3065932001 | UHC-01 | L b Search VOC | |
| 3065932001 | UHC-01 | S2540G-11 | |
| 3065932001 | UHC-01 | SW846 6010C | SW846 3015 |
| 3065932001 | UHC-01 | SW846 8015C | In House |
| 3065932001 | UHC-01 | SW846 8081B | SW846 3546 |
| 3065932001 | UHC-01 | SW846 8082A | SW846 3546 |
| 3065932001 | UHC-01 | SW846 8141B | |
| 3065932001 | UHC-01 | SW846 8151A | SW846 8151A |
| 3065932001 | UHC-01 | SW846 8260B | SW846 5035 |
| 3065932001 | UHC-01 | SW846 8270D | SW846 3546 |
| 3065932001 | UHC-01 | SW846 9012B | SW846 9012B |
| 3065932001 | UHC-01 | SW846 9034r0-96 | SW846 9030Br2-96 |
| 3065932001 | UHC-01 | SW846 9056A | SW846 9056A |
| 3065932001 | UHC-01 | Subcontract | |

Non responsive based on revised scope

[redacted]

# CHAIN OF CUSTODY
## REQUEST FOR ANALYS[redacted]

[redacted] ALL SHADED AREAS MUST BE COMPLE[redacted] SAMPLER. INSTRUCTIONS ON [redacted]

*3065932*

C #: 5932 016 | 1 of 1
Quote #:

| | |
|---|---|
| Client Name: | ENVIRONMENTAL RESTORATION |
| Address: | 1666 Fabick Dr. FENTON, MO 63026 |
| Contact: | [redacted] |
| Phone#: | [redacted] |
| Project Name/#: | Shiloh Church Rd / 3-5467 |
| Bill To: | |
| TAT | ☒ Normal-Standard TAT is 10-12 business days. ☐ Rush-Subject to [redacted] approval and surcharges |
| Date Required: | [redacted] |
| Email? | ☒ -Y[redacted] |
| Fax? | ☐ -Y[redacted] |

| Container Type | Clear Glass |
|---|---|
| Container Size | 16 oz |
| Preservative | N/A |

ANALYSES/METHOD REQUESTED: UHC

| | Sample Description/Location (as it will appear on the lab report) | Date Collected mm/dd/yy | Time hh:mm | *G or C | **Matrix | UHC |
|---|---|---|---|---|---|---|
| 1 | UHC-01 | 10/23/19 | 16:30 | C | SO | 6 |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |

Enter Number of Containers Per Sample or Field Results Below.

Receipt Information (completed by Receiving Lab)
W.O. Temp: 1°C Therm ID: 402
Analyst Initials:
Courier/Tracking #:
Purchase Order #:
Project Comments: Dioxin Analysis [redacted] 3849
[redacted] ☐ Pickup ☐ Labor
☐ Composite Sampling ☐ Rental Equipment
Other:

Sample/COC Comments
Hold Sample for 60 Days
[redacted] 10/21/19
UHC - Underlying Hazardous Constituents

SAMPLED BY (Please Print): NJD and START

Sampler Comments: REPORT DUE NLT 11/15/19

| | Relinquished By Company Name | Date | Time | | Received By Company Name | Date | Time |
|---|---|---|---|---|---|---|---|
| 1 | [redacted] | 10/24/19 | 0900 | 2 | [redacted], Weston | 10/24/19 | 0905 |
| 3 | | | | 4 | | 10/24/19 | 1625 |
| 5 | | | | 6 | | | |
| 7 | | | | 8 | | | |
| 9 | | | | 10 | | | |

Data Deliverables: ☒ Standard ☐ CLP-like ☐ USACE/DOD
Special Processing: USACE ☐
State Samples Collected In: ☐ NY ☐ NJ ☐ PA ☒ N/A other
Reportable to PADEP? Yes ☐ No ☒
PWSID #
Sample Disposal: Lab ☒ Special ☐
EDDS: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

[redacted]

Rev 04/19

[redacted]

Non responsive based on revised scope

[redacted]

# Condition of Sample Receipt Form

Client: Environmental Restoration

Work Order #: 30105932

Initials: Non responsive based [redacted]

Date: 10/25

| | | | |
|---|---|---|---|
| 1. Were airbills / tracking numbers present and recorded? | NONE | YES | NO |
| Tracking number: | | | |
| 2. Are Custody Seals on shipping containers intact? | NONE | YES | NO |
| 3. Are Custody Seals on sample containers intact? | NONE | YES | NO |
| 4. Is there a COC (Chain-of-Custody) present? | | YES | NO |
| 5. Are the COC and bottle labels complete, legible and in agreement? | | YES | NO |
| 5a. Does the COC contain sample locations? | | YES | NO |
| 5b. Does the COC contain date and time of sample collection for all samples? | | YES | NO |
| 5c. Does the COC contain sample collectors name? | | YES | NO |
| 5d. Does the COC note the type(s) of preservation for all bottles? | | YES | NO |
| 5e. Does the COC note the number of bottles submitted for each sample? | | YES | NO |
| 5f. Does the COC note the type of sample, composite or grab? | | YES | NO |
| 5g. Does the COC note the matrix of the sample(s)? | | YES | NO |
| 6. Are all aqueous samples requiring preservation preserved correctly? | N/A | YES | NO |
| 7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume? | | YES | NO |
| 8. Are all samples within holding times for the requested analyses? | | YES | NO |
| 9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.) | | YES | NO |
| 10. Did we receive trip blanks ( applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)? | N/A | YES | NO |
| 11. Were the samples received on ice? | | YES | NO |
| 12. Were sample temperatures measured at 0.0-6.0°C | | YES | NO |
| 13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below | | YES | NO |
| 13a. Are the samples required for SDWA compliance reporting? | N/A | YES | NO |
| 13b. Did the client provide a SDWA PWS ID#? | N/A | YES | NO |
| 13c. Are all aqueous unpreserved SDWA samples pH 5-9? | N/A | YES | NO |
| 13d. Did the client provide the SDWA sample location ID/Description? | N/A | YES | NO |
| 13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)? | N/A | YES | NO |

Cooler #:

Temperature (°C): 1

Thermometer ID: 1/C3

Radiological (µCi):

COMMENTS (Required for all NO responses above and any sample non-conformance):

Rev. 4/29/2019

Non responsive based on re [redacted]

Non responsive based on revised scope [redacted]

Non responsive based on revised scope [redacted]

November 18, 2019

Non responsive based on revised scope [redacted]

Work Order: **HS19101778**

Laboratory Results for: **3065932**

Dear Non responsive based [redacted]

Non responsive based on revised scope [redacted] received 1 sample(s) on Oct 30, 2019 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by Non responsive based on revised scope [redacted] and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by Non responsive based on revised scope [redacted] Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Non responsive based on revised scope [redacted]

Project Manager

**Client:** Non responsive based on revised scope [redacted]
**Project:** 3065932
**Work Order:** HS19101778

## SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | Tag No | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| HS19101778-01 | 3065932001 | Solid | | 23-Oct-2019 16:30 | 30-Oct-2019 09:30 | ☐ |

**Client:** Non responsive based on revised scope [redacted]
**Project:** 3065932
**Work Order:** HS19101778

**CASE NARRATIVE**

## Work Order Comments

- The analysis for Dioxins/Furans was subcontracted to our Non responsive based on revised scope. Final report attached.

## GCMS Semivolatiles by Method SW8270

### Batch ID: 147228

**Sample ID: HS19101626-01MS**

- MS and MSD are for an unrelated sample

**Sample ID: LCS-147228**

- Under our analytical conditions phthalic acid and phthalic anhydride cannot be differentiated. The total is reported as phthalic acid.

**Sample ID: 3065932001 (HS19101778-01)**

- The GCMS semi-volatile extract of this sample was run at a dilution due to a high level of matrix interference.
- Under our analytical conditions phthalic acid and phthalic anhydride cannot be differentiated. The total is reported as phthalic acid.

## GCMS Volatiles by Method SW8260

### Batch ID: R349528

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## HPLC by Method SW8316

### Batch ID: 147047

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Non responsive based on revised scope [redacted]
Project: 3065932
Sample ID: 3065932001
Collection Date: 23-Oct-2019 16:30

**ANALYTICAL REPORT**
WorkOrder:HS19101778
Lab ID:HS19101778-01
Matrix:Solid

| ANALYSES | RESULT | QUAL | DL | LOD | LOQ | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | | | Analyst: Non respons [redacted] |
| 2-Chloro-1,3-butadiene | 1.2 | U | 0.48 | 1.2 | 4.8 | ug/Kg | 1 | 31-Oct-2019 13:33 |
| *Surr: 1,2-Dichloroethane-d4* | *105* | | | **0** | *70-126* | *%REC* | *1* | *31-Oct-2019 13:33* |
| *Surr: 4-Bromofluorobenzene* | *100* | | | **0** | *70-130* | *%REC* | *1* | *31-Oct-2019 13:33* |
| *Surr: Dibromofluoromethane* | *100* | | | **0** | *70-130* | *%REC* | *1* | *31-Oct-2019 13:33* |
| *Surr: Toluene-d8* | *97.5* | | | **0** | *70-130* | *%REC* | *1* | *31-Oct-2019 13:33* |
| **LOW-LEVEL SEMIVOLATILES BY 8270D** | | **Method:SW8270** | | | | Prep:SW3541 / 06-Nov-2019 | | Analyst: Non respo [redacted] |
| 1,3-Phenylenediamine | 66 | U | 66 | 66 | 66 | ug/Kg | 10 | 07-Nov-2019 14:51 |
| 2,4-Dimethylaniline | 66 | U | 66 | 66 | 66 | ug/Kg | 10 | 07-Nov-2019 14:51 |
| 4,4'-Methylene-bis(2-chloroaniline) | 66 | U | 66 | 66 | 66 | ug/Kg | 10 | 07-Nov-2019 14:51 |
| Benzal Chloride | 66 | U | 66 | 66 | 66 | ug/Kg | 10 | 07-Nov-2019 14:51 |
| o-Anisidine | 66 | U | 66 | 66 | 66 | ug/Kg | 10 | 07-Nov-2019 14:51 |
| p-Cresidine | 66 | U | 66 | 66 | 66 | ug/Kg | 10 | 07-Nov-2019 14:51 |
| **Phthalic acid** | **1,800** | | **66** | **66** | **66** | **ug/Kg** | 10 | 07-Nov-2019 14:51 |
| Phthalic anhydride | 66 | U | 66 | 66 | 66 | ug/Kg | 10 | 07-Nov-2019 14:51 |
| Tris(2,3-dibromopropyl) phosphate | 66 | U | 66 | 66 | 66 | ug/Kg | 10 | 07-Nov-2019 14:51 |
| *Surr: 2,4,6-Tribromophenol* | *116* | | | **0** | *36-126* | *%REC* | *10* | *07-Nov-2019 14:51* |
| *Surr: 2-Fluorobiphenyl* | *100* | | | **0** | *43-125* | *%REC* | *10* | *07-Nov-2019 14:51* |
| *Surr: 2-Fluorophenol* | *72.1* | | | **0** | *37-125* | *%REC* | *10* | *07-Nov-2019 14:51* |
| *Surr: 4-Terphenyl-d14* | *98.8* | | | **0** | *32-125* | *%REC* | *10* | *07-Nov-2019 14:51* |
| *Surr: Nitrobenzene-d5* | *75.7* | | | **0** | *37-125* | *%REC* | *10* | *07-Nov-2019 14:51* |
| *Surr: Phenol-d6* | *79.2* | | | **0** | *40-125* | *%REC* | *10* | *07-Nov-2019 14:51* |
| **ACRYLAMIDE BY SW8316** | | **Method:SW8316** | | | | Prep:SW8316 / 31-Oct-2019 | | Analyst: Non respons [redacted] |
| Acrylamide | 0.00050 | U | 0.00030 | 0.00050 | 0.00099 | mg/Kg | 1 | 31-Oct-2019 14:19 |
| **SUBCONTRACT ANALYSIS - DIOXINS/FURANS 8290A** | | **Method:NA** | | | | | | Analyst: Non responsi [redacted] |
| Subcontract Analysis | See Attached | | 0 | 0 | | | 1 | 15-Nov-2019 16:24 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

## Weight / Prep Log

**Client:** Non responsive based on revised scope [redacted]
**Project:** 3065932
**WorkOrder:** HS19101778

**Batch ID:** 3411 **Start Date:** 30 Oct 2019 15:02 **End Date:** 30 Oct 2019 15:02
**Method:** VOLATILES BY SW8260C

| Sample ID | Container | Sample Wt/Vol | Final Volume | Weight Factor | Container Type |
|---|---|---|---|---|---|
| HS19101778-01 | 1 | 5.141 (g) | 5 (mL) | 0.97 | Bulk (5030B) |

**Batch ID:** 147047 **Start Date:** 31 Oct 2019 12:18 **End Date:** 31 Oct 2019 12:21
**Method:** ACRYLAMIDE - HPLC PREP **Prep Code:** 8316_S_PR

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS19101778-01 | | 10.08 (g) | 10 (mL) | 0.9921 |

**Batch ID:** 147228 **Start Date:** 06 Nov 2019 10:05 **End Date:** 06 Nov 2019 15:30
**Method:** SV SOXHLET EXTRACT-LOWLEVEL-SW3541 **Prep Code:** 3541_B_LOW

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS19101778-01 | | 30 (g) | 1 (mL) | 0.03333 |

**Client:** Non responsive based on revised scope [redacted]
**Project:** 3065932
**WorkOrder:** HS19101778

## DATES REPORT

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|---|---|---|---|---|---|---|
| **Batch ID:** 147047 ( 0 ) | **Test Name:** ACRYLAMIDE BY SW8316 | | | | **Matrix:** Solid | |
| HS19101778-01 | 3065932001 | 23 Oct 2019 16:30 | | 31 Oct 2019 12:18 | 31 Oct 2019 14:19 | 1 |
| **Batch ID:** 147228 ( 0 ) | **Test Name:** LOW-LEVEL SEMIVOLATILES BY 8270D | | | | **Matrix:** Solid | |
| HS19101778-01 | 3065932001 | 23 Oct 2019 16:30 | | 06 Nov 2019 10:05 | 07 Nov 2019 14:51 | 10 |
| **Batch ID:** R349528 ( 0 ) | **Test Name:** VOLATILES BY SW8260C | | | | **Matrix:** Solid | |
| HS19101778-01 | 3065932001 | 23 Oct 2019 16:30 | | | 31 Oct 2019 13:33 | 1 |
| **Batch ID:** R350617 ( 0 ) | **Test Name:** SUBCONTRACT ANALYSIS - DIOXINS/FURANS 8290A | | | | **Matrix:** Solid | |
| HS19101778-01 | 3065932001 | 23 Oct 2019 16:30 | | | 15 Nov 2019 16:24 | 1 |

**Client:** Non responsive based on revised scope [redacted]
**Project:** 3065932
**WorkOrder:** HS19101778

## QC BATCH REPORT

**Batch ID:** 147047 ( 0 ) **Instrument:** HPLC3 **Method:** ACRYLAMIDE BY SW8316

**MBLK** Sample ID: **MBLK-147047** Units: **ug/Kg** Analysis Date: **31-Oct-2019 15:03**
Client ID: Run ID: **HPLC3_349571** SeqNo: **5324113** PrepDate: **31-Oct-2019** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Acrylamide | 0.50 | 1.0 | | | | | | | | U |

**LCS** Sample ID: **LCS-147047** Units: **ug/Kg** Analysis Date: **31-Oct-2019 15:18**
Client ID: Run ID: **HPLC3_349571** SeqNo: **5324114** PrepDate: **31-Oct-2019** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Acrylamide | 26.56 | 1.0 | 25 | 0 | 106 | 60 - 120 | | | | |

**LCSD** Sample ID: **LCSD-147047** Units: **ug/Kg** Analysis Date: **31-Oct-2019 15:33**
Client ID: Run ID: **HPLC3_349571** SeqNo: **5324115** PrepDate: **31-Oct-2019** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Acrylamide | 26.89 | 1.0 | 25 | 0 | 108 | 60 - 120 | 26.56 | 1.23 | 20 | |

**MS** Sample ID: **HS19101778-01MS** Units: **ug/Kg** Analysis Date: **31-Oct-2019 14:34**
Client ID: **3065932001** Run ID: **HPLC3_349571** SeqNo: **5324111** PrepDate: **31-Oct-2019** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Acrylamide | 29.56 | 1.0 | 24.93 | 0 | 119 | 60 - 120 | | | | |

**MSD** Sample ID: **HS19101778-01MSD** Units: **ug/Kg** Analysis Date: **31-Oct-2019 14:48**
Client ID: **3065932001** Run ID: **HPLC3_349571** SeqNo: **5324112** PrepDate: **31-Oct-2019** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Acrylamide | 27.86 | 1.0 | 24.88 | 0 | 112 | 60 - 120 | 29.56 | 5.91 | 30 | |

**The following samples were analyzed in this batch:** HS19101778-01

**Client:** Non responsive based on revised scope [redacted]
**Project:** 3065932
**WorkOrder:** HS19101778

## QC BATCH REPORT

**Batch ID: 147228 ( 0 )** **Instrument: SV-6** **Method: LOW-LEVEL SEMIVOLATILES BY 8270D**

**MBLK** Sample ID: **MBLK-147228** Units: **ug/Kg** Analysis Date: **07-Nov-2019 09:50**
Client ID: Run ID: **SV-6_350011** SeqNo: **5334098** PrepDate: **06-Nov-2019** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,3-Phenylenediamine | 6.6 | 6.6 | | | | | | | | U |
| 2,4-Dimethylaniline | 6.6 | 6.6 | | | | | | | | U |
| 4,4'-Methylene-bis(2-chloroaniline) | 6.6 | 6.6 | | | | | | | | U |
| Benzal Chloride | 6.6 | 6.6 | | | | | | | | U |
| o-Anisidine | 6.6 | 6.6 | | | | | | | | U |
| p-Cresidine | 6.6 | 6.6 | | | | | | | | U |
| Phthalic acid | 6.6 | 6.6 | | | | | | | | U |
| Phthalic anhydride | 6.6 | 6.6 | | | | | | | | U |
| Tris(2,3-dibromopropyl) phosphate | 6.6 | 6.6 | | | | | | | | U |
| *Surr: 2,4,6-Tribromophenol* | *128.8* | *0* | *167* | *0* | *77.1* | *36 - 126* | | | | |
| *Surr: 2-Fluorobiphenyl* | *124.9* | *0* | *167* | *0* | *74.8* | *43 - 125* | | | | |
| *Surr: 2-Fluorophenol* | *116.7* | *0* | *167* | *0* | *69.9* | *37 - 125* | | | | |
| *Surr: 4-Terphenyl-d14* | *143.1* | *0* | *167* | *0* | *85.7* | *32 - 125* | | | | |
| *Surr: Nitrobenzene-d5* | *113.1* | *0* | *167* | *0* | *67.7* | *37 - 125* | | | | |
| *Surr: Phenol-d6* | *124.8* | *0* | *167* | *0* | *74.8* | *40 - 125* | | | | |

**LCS** Sample ID: **LCS-147228** Units: **ug/Kg** Analysis Date: **07-Nov-2019 10:09**
Client ID: Run ID: **SV-6_350011** SeqNo: **5334099** PrepDate: **06-Nov-2019** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,3-Phenylenediamine | 122.2 | 6.6 | 167 | 0 | 73.2 | 40 - 140 | | | | |
| 2,4-Dimethylaniline | 75.07 | 6.6 | 167 | 0 | 45.0 | 40 - 140 | | | | |
| 4,4'-Methylene-bis(2-chloroaniline) | 96.3 | 6.6 | 167 | 0 | 57.7 | 40 - 140 | | | | |
| Benzal Chloride | 148 | 6.6 | 167 | 0 | 88.6 | 40 - 140 | | | | |
| o-Anisidine | 138.6 | 6.6 | 167 | 0 | 83.0 | 30 - 140 | | | | |
| p-Cresidine | 89.96 | 6.6 | 167 | 0 | 53.9 | 30 - 140 | | | | |
| Phthalic acid | 39.76 | 6.6 | 333 | 0 | 11.9 | 10 - 140 | | | | |
| Tris(2,3-dibromopropyl) phosphate | 87.61 | 6.6 | 167 | 0 | 52.5 | 40 - 140 | | | | |
| *Surr: 2,4,6-Tribromophenol* | *157.5* | *0* | *167* | *0* | *94.3* | *36 - 126* | | | | |
| *Surr: 2-Fluorobiphenyl* | *133.7* | *0* | *167* | *0* | *80.1* | *43 - 125* | | | | |
| *Surr: 2-Fluorophenol* | *130.9* | *0* | *167* | *0* | *78.4* | *37 - 125* | | | | |
| *Surr: 4-Terphenyl-d14* | *158* | *0* | *167* | *0* | *94.6* | *32 - 125* | | | | |
| *Surr: Nitrobenzene-d5* | *122* | *0* | *167* | *0* | *73.1* | *37 - 125* | | | | |
| *Surr: Phenol-d6* | *136* | *0* | *167* | *0* | *81.5* | *40 - 125* | | | | |

**Client:** Non responsive based on revised scope [redacted]
**Project:** 3065932
**WorkOrder:** HS19101778

## QC BATCH REPORT

**Batch ID:** 147228 ( 0 ) **Instrument:** SV-6 **Method:** LOW-LEVEL SEMIVOLATILES BY 8270D

**MS** Sample ID: **HS19101626-01MS** Units: **ug/Kg** Analysis Date: **07-Nov-2019 12:19**
Client ID: Run ID: **SV-6_350011** SeqNo: **5334101** PrepDate: **06-Nov-2019** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,3-Phenylenediamine | 110.1 | 6.6 | 166.9 | 0 | 65.9 | 40 - 140 | | | | |
| 2,4-Dimethylaniline | 87.67 | 6.6 | 166.9 | 0 | 52.5 | 40 - 140 | | | | |
| 4,4'-Methylene-bis(2-chloroaniline) | 103.5 | 6.6 | 166.9 | 0 | 62.0 | 40 - 140 | | | | |
| Benzal Chloride | 147.9 | 6.6 | 166.9 | 0 | 88.6 | 40 - 140 | | | | |
| o-Anisidine | 131.3 | 6.6 | 166.9 | 0 | 78.7 | 30 - 140 | | | | |
| p-Cresidine | 76.34 | 6.6 | 166.9 | 0 | 45.7 | 30 - 140 | | | | |
| Phthalic acid | 405.5 | 6.6 | 332.9 | 0 | 122 | 10 - 148 | | | | E |
| Phthalic anhydride | 6.6 | 6.6 | 332.9 | 0 | 0 | 10 - 140 | | | | SU |
| Tris(2,3-dibromopropyl) phosphate | 87.58 | 6.6 | 166.9 | 0 | 52.5 | 40 - 140 | | | | |
| *Surr: 2,4,6-Tribromophenol* | *142.3* | *0* | *166.9* | *0* | *85.2* | *36 - 126* | | | | |
| *Surr: 2-Fluorobiphenyl* | *131.3* | *0* | *166.9* | *0* | *78.6* | *43 - 125* | | | | |
| *Surr: 2-Fluorophenol* | *128.6* | *0* | *166.9* | *0* | *77.0* | *37 - 125* | | | | |
| *Surr: 4-Terphenyl-d14* | *145* | *0* | *166.9* | *0* | *86.9* | *32 - 125* | | | | |
| *Surr: Nitrobenzene-d5* | *119.5* | *0* | *166.9* | *0* | *71.6* | *37 - 125* | | | | |
| *Surr: Phenol-d6* | *141.8* | *0* | *166.9* | *0* | *84.9* | *40 - 125* | | | | |

**Client:** Non responsive based on revised scope [redacted]
**Project:** 3065932
**WorkOrder:** HS19101778

## QC BATCH REPORT

**Batch ID: 147228 ( 0 )** **Instrument: SV-6** **Method: LOW-LEVEL SEMIVOLATILES BY 8270D**

**MSD** Sample ID: **HS19101626-01MSD** Units: **ug/Kg** Analysis Date: **07-Nov-2019 12:38**
Client ID: Run ID: **SV-6_350011** SeqNo: **5334102** PrepDate: **06-Nov-2019** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,3-Phenylenediamine | 111.3 | 6.6 | 165.9 | 0 | 67.1 | 40 - 140 | 110.1 | 1.1 | 30 | |
| 2,4-Dimethylaniline | 88.9 | 6.6 | 165.9 | 0 | 53.6 | 40 - 140 | 87.67 | 1.4 | 30 | |
| 4,4'-Methylene-bis(2-chloroaniline) | 95.66 | 6.6 | 165.9 | 0 | 57.7 | 40 - 140 | 103.5 | 7.9 | 30 | |
| Benzal Chloride | 135.4 | 6.6 | 165.9 | 0 | 81.6 | 40 - 140 | 147.9 | 8.87 | 30 | |
| o-Anisidine | 133.3 | 6.6 | 165.9 | 0 | 80.4 | 30 - 140 | 131.3 | 1.5 | 30 | |
| p-Cresidine | 83.66 | 6.6 | 165.9 | 0 | 50.4 | 30 - 140 | 76.34 | 9.15 | 30 | |
| Phthalic acid | 342.2 | 6.6 | 330.8 | 0 | 103 | 10 - 140 | 405.5 | 16.9 | 30 | E |
| Phthalic anhydride | 6.6 | 6.6 | 330.8 | 0 | 0 | 10 - 140 | 0 | 0 | 30 | SU |
| Tris(2,3-dibromopropyl) phosphate | 81.6 | 6.6 | 165.9 | 0 | 49.2 | 40 - 140 | 87.58 | 7.07 | 30 | |
| *Surr: 2,4,6-Tribromophenol* | *145.6* | *0* | *165.9* | *0* | *87.8* | *36 - 126* | *142.3* | *2.29* | *30* | |
| *Surr: 2-Fluorobiphenyl* | *125.4* | *0* | *165.9* | *0* | *75.6* | *43 - 125* | *131.3* | *4.6* | *30* | |
| *Surr: 2-Fluorophenol* | *127.1* | *0* | *165.9* | *0* | *76.6* | *37 - 125* | *128.6* | *1.19* | *30* | |
| *Surr: 4-Terphenyl-d14* | *139.6* | *0* | *165.9* | *0* | *84.1* | *32 - 125* | *145* | *3.82* | *30* | |
| *Surr: Nitrobenzene-d5* | *111.8* | *0* | *165.9* | *0* | *67.4* | *37 - 125* | *119.5* | *6.65* | *30* | |
| *Surr: Phenol-d6* | *126.7* | *0* | *165.9* | *0* | *76.4* | *40 - 125* | *141.8* | *11.2* | *30* | |

**The following samples were analyzed in this batch:** HS19101778-01

**Client:** Non responsive based on revised scope
**Project:** 3065932
**WorkOrder:** HS19101778

## QC BATCH REPORT

**Batch ID:** R349528 ( 0 ) **Instrument:** VOA5 **Method:** VOLATILES BY SW8260C

**MBLK** Sample ID: **VBLKS1-103119** Units: **ug/Kg** Analysis Date: **31-Oct-2019 10:39**
Client ID: Run ID: **VOA5_349528** SeqNo: **5323209** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chloro-1,3-butadiene | 1.2 | 5.0 | | | | | | | | U |
| *Surr: 1,2-Dichloroethane-d4* | *50.22* | *0* | *50* | *0* | *100* | *76 - 125* | | | | |
| *Surr: 4-Bromofluorobenzene* | *51.36* | *0* | *50* | *0* | *103* | *80 - 120* | | | | |
| *Surr: Dibromofluoromethane* | *48.89* | *0* | *50* | *0* | *97.8* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *49.08* | *0* | *50* | *0* | *98.2* | *81 - 118* | | | | |

**LCS** Sample ID: **VLCSS1-1023119** Units: **ug/Kg** Analysis Date: **31-Oct-2019 09:49**
Client ID: Run ID: **VOA5_349528** SeqNo: **5323208** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chloro-1,3-butadiene | 48.88 | 5.0 | 50 | 0 | 97.8 | 72 - 126 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *57.36* | *0* | *50* | *0* | *115* | *76 - 125* | | | | |
| *Surr: 4-Bromofluorobenzene* | *51.57* | *0* | *50* | *0* | *103* | *80 - 120* | | | | |
| *Surr: Dibromofluoromethane* | *53.33* | *0* | *50* | *0* | *107* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *49.02* | *0* | *50* | *0* | *98.0* | *81 - 118* | | | | |

**MS** Sample ID: **HS19101767-01MS** Units: **ug/Kg** Analysis Date: **31-Oct-2019 13:58**
Client ID: Run ID: **VOA5_349528** SeqNo: **5324299** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chloro-1,3-butadiene | 42.22 | 4.9 | 49 | 0 | 86.2 | 72 - 126 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *54.49* | *0* | *49* | *0* | *111* | *70 - 126* | | | | |
| *Surr: 4-Bromofluorobenzene* | *50.04* | *0* | *49* | *0* | *102* | *70 - 130* | | | | |
| *Surr: Dibromofluoromethane* | *51.36* | *0* | *49* | *0* | *105* | *70 - 130* | | | | |
| *Surr: Toluene-d8* | *48.64* | *0* | *49* | *0* | *99.3* | *70 - 130* | | | | |

**Client:** Non responsive based on revised scope [redacted]
**Project:** 3065932
**WorkOrder:** HS19101778

## QC BATCH REPORT

**Batch ID:** R349528 ( 0 ) **Instrument:** VOA5 **Method:** VOLATILES BY SW8260C

**MSD** Sample ID: **HS19101767-01MSD** Units: **ug/Kg** Analysis Date: **31-Oct-2019 14:23**
Client ID: Run ID: **VOA5_349528** SeqNo: **5324300** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chloro-1,3-butadiene | 41.33 | 4.9 | 49 | 0 | 84.3 | 72 - 126 | 42.22 | 2.13 | 30 | |
| *Surr: 1,2-Dichloroethane-d4* | *54.48* | *0* | *49* | *0* | *111* | *70 - 126* | *54.49* | *0.0204* | *30* | |
| *Surr: 4-Bromofluorobenzene* | *51.35* | *0* | *49* | *0* | *105* | *70 - 130* | *50.04* | *2.58* | *30* | |
| *Surr: Dibromofluoromethane* | *52* | *0* | *49* | *0* | *106* | *70 - 130* | *51.36* | *1.22* | *30* | |
| *Surr: Toluene-d8* | *48.91* | *0* | *49* | *0* | *99.8* | *70 - 130* | *48.64* | *0.547* | *30* | |

**The following samples were analyzed in this batch:** HS19101778-01

**Client:** Non responsive based on revised scope [redacted]
**Project:** 3065932
**WorkOrder:** HS19101778

## QUALIFIERS, ACRONYMS, UNITS

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| Acronym | Description |
|---|---|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitaion Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| Unit Reported | Description |
|---|---|
| mg/Kg-dry | Milligrams per Kilogram - Dry weight corrected |

## CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Non responsive based on revised scope [redacted] | Expire Date |
|---|---|
| | 27-Mar-2020 |
| | 30-Apr-2020 |
| | 20-Dec-2021 |
| | 30-Jun-2020 |
| | 09-May-2020 |
| | 31-Jul-2020 |
| | 30-Apr-2020 |
| | 30-Jun-2020 |
| | 30-Jun-2020 |
| | 31-Dec-2019 |
| | 30-Apr-2020 |
| | 31-Aug-2020 |
| | 30-Apr-2020 |

## Sample Receipt Checklist

Client Name: Non responsive based on revised scop

Work Order: HS1910 1778

Date/Time Received: **30-Oct-2019 09:30**

Received by: Non responsive

Checklist completed by: Non responsive based on revised scope — eSignature — 30-Oct-2019 Date

Reviewed by: Non responsive based on revised sco — eSignature — 31-Oct-2019 Date

Matrices: **Solid**

Carrier name: **FedEx**

| | Yes | No | |
|---|---|---|---|
| Shipping container/cooler in good condition? | ☑ | ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | ☐ | ☐ | Not Present ☑ |
| Custody seals intact on sample bottles? | ☐ | ☐ | Not Present ☑ |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | ☐ | ☑ | Not Present ☐ |
| Chain of custody present? | ☑ | ☐ | 1 Page(s) |
| Chain of custody signed when relinquished and received? | ☑ | ☐ | COC IDs: None |
| Samplers name present on COC? | ☐ | ☑ | |
| Chain of custody agrees with sample labels? | ☑ | ☐ | |
| Samples in proper container/bottle? | ☑ | ☐ | |
| Sample containers intact? | ☑ | ☐ | |
| Sufficient sample volume for indicated test? | ☑ | ☐ | |
| All samples received within holding time? | ☑ | ☐ | |
| Container/Temp Blank temperature in compliance? | ☑ | ☐ | |

Temperature(s)/Thermometer(s): 0.7c U/C — R25

Cooler(s)/Kit(s): Blue

Date/Time sample(s) sent to storage: 10/30/19 13:10

| | Yes | No | |
|---|---|---|---|
| Water - VOA vials have zero headspace? | ☐ | ☐ | No VOA vials submitted ☑ |
| Water - pH acceptable upon receipt? | ☐ | ☐ | N/A ☑ |
| pH adjusted? | ☐ | ☐ | N/A ☑ |

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Non responsive based on revised scope [redacted]

# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: [redacted] of

Client Nan [redacted]
Address: [redacted]
Contact: [redacted]
Phone#: [redacted]
Project Na [redacted]
Bill To: [redacted]

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to [redacted] approval and surcharges.
Date Required: 11/10/2019 Approved?
Email? [X] -Y [redacted]
Fax? [ ] -Y No.:

| | Container Type | G | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Container Size | 16oz | | | | | | | | | |
| | Preservative | None | | | | | | | | | |

ANALYSES/METHOD REQUESTED

Receipt Information (completed by Receiving Lab)
W.O. Temp: ____ Therm ID: ____
Courier/Tracking #:
Purchase Order #:
Project Comments:
[redacted] ☐ Pickup ☐ Labor
☐ Composite Sampling ☐ Rental Equipment
Other:

| | Sample Description/Location (as it will appear on the lab report) | Date Collected mm/dd/yy | Time hh:mm | *G or C | **Matrix | 8316- Acrylamide | 8270- (See attached list) /8260 | 8290- Dioxins and Furans (see attached list) | | | Subcontract to: [redacted] | | | | | Sample/COC Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Enter Number of Containers Per Sample or Field Results Below. | | | | | | | | | | |
| 1 | 3065932001 | 10/23/19 | 16:30 | G | S | 1 | X | X | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | |

HS19101778
[redacted]
3065932

SAMPLED BY (Please Print):

Sampler Comments:

| Relinquished By / Company Name | Date | Time | Received By / Company Name | Date | Time |
|---|---|---|---|---|---|
| 1 [redacted] | 10/24/19 | 1500 | 2 [redacted] | 10/30/19 | 09:30 |
| 3 | | | 4 | | |
| 5 | | | 6 | | |
| 7 | | | 8 | | |
| 9 | | | 10 | | |

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE/DOD [ ] DOD

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] VA other

Reportable to PADEP? Yes [ ] No [ ]
PWSID #

Sample Disposal: Lab [ ] Special [ ]

EDDS: Format Type-

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Non responsive based on revised scope

Rev 11/18



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Non responsive based on revised [redacted]

| COMPOUND | METHOD-LAB | COMPOUND | METHOD-LAB | COMPOUND | METHOD-LAB | COMPOUND | METHOD-LAB |
|---|---|---|---|---|---|---|---|
| Acenaphthylene | 8270 | o,p'-DDD | TA | Fluoranthene | 8270 | Phenacetin | 8270-APP9 |
| Acenaphthene | 8270 | p,p'-DDD | 8081 | Fluorene | 8270 | Phenanthrene | 8270 |
| Acetone | 8260 | o,p'-DDE | TA | Heptachlor | 8081 | Phenol | 8270 |
| Acetonitrile | 8260 | p,p'-DDE | 8081 | 1,2,3,4,6,7,8-HpCDD | HOUSTON | 1,3-Phenylenediamine V | 8270-HOUSTON |
| Acetophenone | 8270 | o,p'-DDT | TA | 1,2,3,4,6,7,8-HpCDF | HOUSTON | Phorate | 8270-APP9 |
| 2-Acetylaminofluorene | 8270-APP9 | p,p'-DDT | 8081 | 1,2,3,4,7,8,9-HpCDF | HOUSTON | Phthalic acid V | 8270-HOUSTON |
| Acrolein | 8260 | Dibenz(a,h)anthracene | 8270 | Heptachlor epoxide | 8081 | Phthalic anhydride V | 8270-HOUSTON |
| Acrylamide V | 8316-HOUSTON | Dibenzo(a,e)pyrene | TA | Hexachlorobenzene | 8270 | Pronamide | 8270-APP9 |
| Acrylonitrile | 8260 | 1,2-Dibromo-3-chloropropane | 8260 | Hexachlorobutadiene | 8270 | Pyrene | 8270 |
| Aldrin | 8081 | 1,2-Dibromoethane/Ethylene dibromide | 8260 | Hexachlorocyclopentadiene | 8270 | Pyridine | 8270 |
| 4-Aminobiphenyl | 8270-APP9 | Dibromomethane | 8260 | HxCDDs (All Hexachlorodibenzo-p-dioxins) | HOUSTON | Safrole | 8270 |
| Aniline | 8270 | m-Dichlorobenzene | 8260 | HxCDFs (All Hexachlorodibenzofurans) | HOUSTON | Silvex/2,4,5-TP | 8151 |
| o-Anisidine (2-methoxyaniline) V | 8270-HOUSTON | o-Dichlorobenzene | 8260 | Hexachloroethane | 8260 | 1,2,4,5-Tetrachlorobenzene | 8270 |
| Anthracene | 8270 | p-Dichlorobenzene | 8260 | Hexachloropropylene | 8270-APP9 | TCDDs (All Tetrachlorodibenzo-p-dioxins) | HOUSTON |
| Aramite | 8270-APP9 | Dichlorodifluoromethane | 8260 | Indeno(1,2,3-c,d) pyrene | 8270 | TCDFs (All Tetrachlorodibenzofurans) | HOUSTON |
| alpha-BHC | 8081 | 1,1-Dichloroethane | 8260 | Iodomethane | 8260 | 1,1,1,2-Tetrachloroethane | 8260 |
| beta-BHC | 8081 | 1,2-Dichloroethane | 8260 | Isobutyl alcohol | 8260 | 1,1,2,2-Tetrachloroethane | 8260 |
| delta-BHC | 8081 | 1,1-Dichloroethylene | 8260 | Isodrin | 8270-APP9 | Tetrachloroethylene | 8260 |
| gamma-BHC | 8081 | trans-1,2-Dichloroethylene | 8260 | Isosafrole | 8270-APP9 | 2,3,4,6-Tetrachlorophenol | 8270 |
| Benzene | 8260 | 2,4-Dichlorophenol | 8270 | Kepone | 8270-APP9 | Toluene | 8260 |
| Benz(a)anthracene | 8270 | 2,6-Dichlorophenol | 8270 | Methacrylonitrile | 8260 | Toxaphene | 8081 |
| Benzal chloride V | 8270-HOUSTON | 2,4-Dichlorophenoxyacetic acid/2,4-D | 8151 | Methanol | 8015 | Tribromomethane/Bromoform | 8260 |
| Benzo(b)fluoranthene | 8270 | 1,2-Dichloropropane | 8260 | Methapyrilene | 8270-APP9 | 1,2,4-Trichlorobenzene | 8260 |
| Benzo(k)fluoranthene | 8270 | cis-1,3-Dichloropropylene | 8260 | Methoxychlor | 8081 | 1,1,1-Trichloroethane | 8260 |
| Benzo(g,h,i)perylene | 8270 | trans-1,3-Dichloropropylene | 8260 | 3-Methylcholanthrene | 8270-APP9 | 1,1,2-Trichloroethane | 8260 |
| Benzo(a)pyrene | 8270 | Dieldrin | 8081 | 4,4-Methylene bis(2-chloroaniline) V | 8270-HOUSTON | Trichloroethylene | 8260 |
| Bromodichloromethane | 8260 | Diethyl phthalate | 8270 | Methylene chloride | 8260 | Trichlorofluoromethane | 8260 |
| Bromomethane/Methyl bromide | 8260 | p-Dimethylaminoazobenzene | 8270-APP9 | Methyl ethyl ketone | 8260 | 2,4,5-Trichlorophenol | 8260 |
| 4-Bromophenyl phenyl ether | 8270 | 2,4-Dimethylaniline (2,4-xylidine) V | 8270-HOUSTON | Methyl isobutyl ketone | 8260 | 2,4,6-Trichlorophenol | 8260 |
| n-Butyl alcohol | 8015 | 2,4-Dimethyl phenol | 8270 | Methyl methacrylate | 8260 | 2,4,5-Trichlorophenoxyacetic acid/2,4,5-T | 8151 |
| Butyl benzyl phthalate | 8270 | Dimethyl phthalate | 8270 | Methyl methanesulfonate | 8270-APP9 | 1,2,3-Trichloropropane | 8260 |
| 2-sec-Butyl-4,6-dinitrophenol/Dinoseb | 8151 | Di-n-butyl phthalate | 8270 | Methyl parathion | 8141-TA | 1,1,2-Trichloro-1,2,2-trifluoroethane | 8260 |
| Carbon disulfide (TCLP) | 8260-TCLP | 1,4-Dinitrobenzene | 8270 | Naphthalene | 8270 | tris-(2,3-Dibromopropyl) phosphate V | 8270-HOUSTON |
| Carbon tetrachloride | 8260 | 4,6-Dinitro-o-cresol | 8270 | 2-Naphthylamine | 8270 | Vinyl chloride | 8260 |
| Chlordane (alpha and gamma isomers) | 8081 | 2,4-Dinitrophenol | 8270 | o-Nitroaniline | 8270 | Xylene(s) | 8260 |
| p-Chloroaniline | 8270 | 2,4-Dinitrotoluene | 8270 | p-Nitroaniline | 8270 | METALS AND INORGANICS | |
| Chlorobenzene | 8260 | 2,6-Dinitrotoluene | 8270 | Nitrobenzene | 8270 | Antimony (TCLP) | 6010-1311 |
| Chlorobenzilate | 8270-APP9 | Di-n-octyl phthalate | 8270 | 5-Nitro-o-toluidine | 8270-APP9 | Arsenic (TCLP) | 6010-1311 |
| 2-Chloro-1,3-butadiene 8260 | HOUSTON | Di-n-propylnitrosamine N-Nitrosodi-n-propylamine | 8270 | o-Nitrophenol | 8270 | Barium (TCLP) | 6010-1311 |
| Chlorodibromomethane | 8260 | 1,4-Dioxane | 8270 | p-Nitrophenol | 8270 | Beryllium (TCLP) | 6010-1311 |
| Chloroethane | 8260 | Diphenylamine | 8270 | N-Nitrosodiethylamine | 8270 | Chromium (TCLP) | 6010-1311 |
| bis(2-Chloroethoxy)methane | 8270 | Diphenylnitrosamine N-Nitrosodiphenylamine | 8270 | N-Nitrosodimethylamine | 8270 | Chromium (Total) | 6010 |



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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| bis(2-Chloroethyl)ether | 8270 | 1,2-Diphenylhydrazine | 8270 | N-Nitroso-di-n-butylamine | 8270 | Cyanides (Total) | 9012 |
| Chloroform | 8260 | Disulfoton | 8141-TA | N-Nitrosomethylethylamine | 8270-APP9 | Cyanides (Amenable) | 9012 |
| bis(2-Chloroisopropyl)ether | 8260 | Endosulfan I | 8081 | N-Nitrosomorpholine | 8270-APP9 | Fluoride (Not a UHC) | 9056 |
| p-Chloro-m-cresol | 8270 | Endosulfan II | 8081 | N-Nitrosopiperidine | 8270-APP9 | Lead (TCLP) | 6010-1311 |
| 2-Chloroethyl vinyl ether | 8260 | Endosulfan sulfate | 8081 | N-Nitrosopyrrolidine | 8270-APP9 | Mercury—Nonwastewater Non Reactor (TCLP) | 7470-1311 |
| Chloromethane/Methyl chloride | 8260 | Endrin | 8081 | 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) | HOUSTON | Mercury—All Others (TCLP) | SAME |
| 2-Chloronaphthalene | 8270 | Endrin aldehyde | 8081 | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) | HOUSTON | Nickel (TCLP) | 6010-1311 |
| 2-Chlorophenol | 8270 | Ethyl acetate | 8260 | Parathion | 8141-TA | Selenium (TCLP) (Not a UHC) | 6010-1311 |
| 3-Chloropropylene | 8260 | Ethyl benzene | 8260 | Total PCBs (All isomers) | 8082 | Silver (TCLP) | 6010-1311 |
| Chrysene | 8270 | Ethyl cyanide/Propanenitrile | 8260 | Pentachlorobenzene | 8270 | Sulfide (Not a UHC) | 9034 |
| p-Cresidine ✓ | 8270-HOUSTON | Ethyl ether | 8260 | PeCDDs (All Pentachlorodibenzo-p-dioxins) | HOUSTON | Thallium (TCLP) | 6010-1311 |
| o-Cresol | 8270 | bis(2-Ethylhexyl)phthalate | 8270 | PeCDFs (All Pentachlorodibenzofurans) | HOUSTON | Vanadium (TCLP) (Not a UHC) | 6010-1311 |
| m-Cresol | 8270 | Ethyl methacrylate | 8270-APP9 | Pentachloroethane | 8270-APP9 | Zinc (TCLP) (Not a UHC) | 6010-1311 |
| p-Cresol | 8270 | Ethylene oxide | 7A | Pentachloronitrobenzene | 8270-APP9 | | |
| Cyclohexanone (TCLP) | 8260-ROCHESTER | Fumphur | 8141-TA | Pentachlorophenol | 8270-APP9 | | |

NOT NEEDED FOR THIS QUOTE

ALS ROCHESTER
ALS HOUSTON
TEST AMERICA PITTSBURGH



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Non responsive based on [redacted]

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**CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH**
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Non responsive based on revised scope

TRK# 0201 4798 9481 7545

NH SGRA

TX-US IAH 77099

WED - 30 OCT 3:00P
STANDARD OVERNIGHT

FedEx Express

[redacted]

565C30A3C05A2



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Non responsive based o
[redacted]

Non responsive based on revised scope [redacted]

November 15, 2019 Service Request No:E1900771

Non responsive based on revised scope [redacted]

**Laboratory Results for: HS19101778**

Dear [redacted]

Enclosed are the results of the sample(s) submitted to our laboratory October 29, 2019
For your reference, these analyses have been assigned our service request number **E1900771.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and [redacted] is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

Non responsive based on revised scope [redacted]

Non responsive based on revised scope [redacted]

Project Manager

ADDRESS
PHONE
Non responsive based on revised scope [redacted]

Non responsive based on revised scope

[redacted]

# Certificate of Analysis

Non responsive based on revised scope

[redacted]



Non responsive based on [redacted]

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised sc | **Service Request No.:** | E1900771 |
| **Project:** | HS19101778 | **Date Received:** | 10/30/19 |
| **Sample Matrix:** | Solid | | |

## CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of Non responsive based on revised scope This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

### Sample Receipt

One sample was received for analysis at Non responsive based on revised scope 10/30/19.

The sample was received at 0.9°C in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4° C upon receipt at the laboratory.

### Data Validation Notes and Discussion

**Precision and Accuracy:**

EQ1900365: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

**Method Blank**

The Method Blank EQ1900365-01 contained low levels of target dioxin and furan compounds above the EDL however below the Method Reporting Limit (MRL).

The associated compounds in the samples are not flagged with 'B' flags as the sample results are greater than ten times the level detected in the method blank

**P Flags**

Chlorodiphenyl ether interference was present at the retention time of the target analyte 1,2,3,6,7,8-HxCDF. The reported result should be considered an estimate.

**Detection Limits**

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

**The TEQ Summary results for each sample have been calculated by Non responsive based on revised s to include:**

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- 2378-TCDF from the DB-225 column, when confirmation required
- Non-detected compounds are not included in the 'Total'

Certification is held for the state of [redacted] for the method/matrix/analytes provided in this report.

*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and [redacted] is not responsible for utilization of less than the complete report.*

*Use of [redacted] Name. Client shall not use [redacted] name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to [redacted] any test result, tolerance or specification derived from [redacted] data ("Attribution") without [redacted] prior written consent, which may be withheld by [redacted] for any reason in its sole discretion. To request [redacted] consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If [redacted] has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use [redacted] name or trademark in any Materials or Attribution shall be deemed denied. [redacted] may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of [redacted] name or trademark may cause [redacted] to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.*

**Client:** Non responsive based on revised scope [redacted]

**Project:** HS19101778

**Service Request:** E1900771

## SAMPLE CROSS-REFERENCE

| SAMPLE # | CLIENT SAMPLE ID | DATE | TIME |
|---|---|---|---|
| E1900771-001 | 3065932001 | 10/23/2019 | 1520 |

# Service Request Summary

**Folder #:** **E1900771**
Client Name: Non responsive based on revised scope [redacted]
Project Name: HS19101778
Project Number:

**Report To:** Non responsive based on revised scope [redacted]

Phone Number:
Cell Number:
Fax Number:
E-mail:

Project Chemist: Non responsive based on revised [redacted]
Originating Lab:
Logged By:
Date Received: 10/29/19
Internal Due Date: 11/13/2019
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N, Y
Report to MDL?: Y
P.O. Number: HS19101778
EDD: No EDD Specified

1 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
**Location:** EHRMS-WIC 10D
**Pressure Gas:**

| | | | | HOUSTON | |
|---|---|---|---|---|---|
| Lab Samp No. | Client Samp No | Matrix | Collected | PCDD PCDF /8290 | Total Solids/ALS SOP |
| E1900771-001 | 3065932001 | Soil | 10/23/19 1520 | II | II |



Print

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Non responsive based on re [redacted]

# Service Request Summary

**Folder #:** **E1900771**
Client Name: Non responsive based on revised scope [redacted]
Project Name: HS19101778
Project Number:

**Report To:** Non responsive based on revised scope [redacted]

Phone Number:
Cell Number:
Fax Number:
E-mail:

Project Chemist: Non responsive based on revised s [redacted]
Originating Lab:
Logged By:
Date Received: 10/29/19
Internal Due Date: 11/13/2019
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N, Y
Report to MDL?: Y
P.O. Number: HS19101778
EDD: No EDD Specified

1 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
**Location:** EHRMS-WIC 10D
**Pressure Gas:**

# Data Qualifiers

## HRMS Qualifier Set

B Indicates the associated analyte was found in the method blank at >1/10th the reported value.
E Estimated value. The reported concentration is above the calibration range of the instrument.
H Sample extracted and/or analyzed out of suggested holding time.
J Estimated value. The reported concentration is below the MRL.
K The ion abundance ratio between the primary and secondary ions were outside of theoretical acceptance limits.The concentration of this analyte should be considered as an estimate.
P Chlorodiphenyl ether interference was present at the retention time of the target analyte. Reported result should be considered an estimate.
Q Monitored lock-mass indicates matrix-interference. Reported result is estimated.
S Signal saturated detector. Result reported from dilution.
U Compound was analyzed for, but was not detected (ND).
X See Case Narrative.
Y Isotopically Labeled Standard recovery outside of acceptance limits. In all cases, the signal-to-nois ratios are greater than 10:1, making the recoveries acceptable.
i The MDL/MRL have been elevated due to a matrix interference.


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Non responsive based on

## Acronyms

| | |
|---|---|
| Cal | Calibration |
| Conc | CONCentration |
| Dioxin(s) | Polychlorinated dibenzo-p-dioxin(s) |
| EDL | Estimated Detection Limit |
| EMPC | Estimated Maximum Possible Concentration |
| Flags | Data qualifiers |
| Furan(s) | Polychlorinated dibenzofuran(s) |
| g | Grams |
| ICAL | Initial CALibration |
| ID | IDentifier |
| Ions | Masses monitored for the analyte during data acquisition |
| L | Liter (s) |
| LCS | Laboratory Control Sample |
| DLCS | Duplicate Laboratory Control Sample |
| MB | Method Blank |
| MCL | Method Calibration Limit |
| MDL | Method Detection Limit |
| mL | Milliliters |
| MS | Matrix Spiked sample |
| DMS | Duplicate Matrix Spiked sample |
| NO | Number of peaks meeting all identification criteria |
| PCDD(s) | Polychlorinated dibenzo-p-dioxin(s) |
| PCDF(s) | Polychlorinated dibenzofuran(s) |
| ppb | Parts per billion |
| ppm | Parts per million |
| ppq | Parts per quadrillion |
| ppt | Parts per trillion |
| QA | Quality Assurance |
| QC | Quality Control |
| Ratio | Ratio of areas from monitored ions for an analyte |
| % Rec. | Percent recovery |
| RPD | Relative Percent Difference |
| RRF | Relative Response Factor |
| RT | Retention Time |
| SDG | Sample Delivery Group |
| S/N | Signal-to-noise ratio |
| TEF | Toxicity Equivalence Factor |
| TEQ | Toxicity Equivalence Quotient |

Non responsive based on revised scope

[redacted]

## State Certifications, Accreditations, and Licenses

| Agency | Number | Expire Date |
|---|---|---|
| Non responsive based on revised scope | | 11/30/2019 |
| | | 5/27/2020 |
| | | 3/27/2020 |
| | | 4/30/2020 |
| | | 11/30/2019 |
| | | 5/30/2020 |
| | | 4/30/2020 |
| | | 5/9/2020 |
| | | 7/31/2020 |
| | | 5/30/2020 |
| | | 12/31/2019 |
| | | 5/5/2020 |
| | | 5/30/2020 |
| | | 12/31/2019 |
| | | 4/30/2020 |
| | | 7/31/2020 |
| | | 4/24/2020 |
| | | 5/30/2020 |
| | | 3/31/2020 |
| | | 3/31/2020 |
| | | 5/30/2020 |
| | | 5/30/2020 |
| | | 4/30/2020 |
| | | 12/14/2019 |
| | | 7/31/2020 |
| | | 5/30/2020 |


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[redacted]

Non responsive based on revised scope

# Data Processing/Form Production and Peer Review Signatures

SR# Unique ID E190077 | DB-5MSUI | SPB-Octyl

**First Level - Data Processing** - to be filled by person generating the forms

Non responsive based on revised scope

| Date: 11/12/19 | Analyst: | Samples: 001 |
|---|---|---|
| | | |
| | | |

**Second Level - Data Review** – to be filled by person doing peer review

| Date: 11/12/19 | Analyst: | Samples: 001 |
|---|---|---|
| | | |
| | | |

Non responsive based on revised scope

# Data Processing/Form Production and Peer Review Signatures

SR# Unique ID E190077 | DB-5MSUI | SPB-Octyl

**First Level - Data Processing** - to be filled by person generating the forms

Non responsive based on revis

| Date: 11/14/19 | Analyst: | Samples: 001DL |
|---|---|---|

**Second Level - Data Review** – to be filled by person doing peer review

| Date: 11/15/19 | Analyst: Non responsive bas | Samples: 001DL |
|---|---|---|

Non responsive based on revised scope

[redacted]

# Chain of Custody

Non responsive based on revised scope

[redacted]

Non responsive based on revised scope

[redacted]

# Subcontract Chain of Custody

**SAMPLING STATE:**

**COC ID: 12527**

**SUBCONTRACT TO:**

Non responsive based on revised scope

[redacted]

**Phone:** Non responsive based on revised scope [redacted]

**CUSTOMER INFORMATION:**

**Company:** Non responsive based on revised scope
**Contact:**
**Address:**
**Phone:**
**Email:**
**Alternate Contact:**
**Email:**

[redacted]

**INVOICE INFORMATION:**

**Company:** Non responsive based on revised scope
**Contact:**
**Address:**
**Phone:**
**Reference:**
**TSR:**

[redacted]

| | LAB SAMPLE ID | CLIENT SAMPLE ID | MATRIX | COLLECT DATE |
|---|---|---|---|---|
| | ANALYSIS REQUESTED | | | DUE DATE |
| 1. | HS19101778-01 | 3065932001 | Solid | 23 Oct 2019 16:30 |
| | SUB_DIOXINS/FURANS | | | 08 Nov 2019 |

**Comments:** Please analyze for the analysis listed above.
Send report to the emails shown above.

**QC Level:** STD (Laboratory Standard QC: method blank and LCS required)

Non responsive based on revised scope

[redacted]

Relinquished By: _____ Date/Time: 10/30/19 14:30

Received By: _____ Date/Time: 10/30/19 14:30

Cooler ID(s): _____ Temperature(s): _____

RIGHT SOLUTIONS | RIGHT PARTNER



RIGHT SOLUTIONS | RIGHT PARTNER



Non responsive based on [redacted]

Non responsive based on revised scope [redacted]

# Cooler Receipt Form

Project Chemist [redacted]

Client/Project: ALS-H

Thermometer ID: GM64

Date/Time Received: 10/30/19 Initials: CG

Date/Time Logged in: 10/30/19 Initials: CG

1. Method of delivery: ○ US Mail ✓ Fed Ex ○ UPS ○ DHL ○ Courier ○ Client
2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other
3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?
4. Packing Material: ○ Inserts ✓ Baggies ○ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other
5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

| Cooler Tracking Number | COC ID | Date Opened | Time Opened | Opened By | Temp. °C | Temp Blank? |
|---|---|---|---|---|---|---|
| – | | 10/30/19 | 1430 | Non responsive [redacted] | 0.5/0.9 | ✓ |
| | | | | | | ☐ |
| | | | | | | ☐ |
| | | | | | | ☐ |

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label: E1900771 Non responsive based on revised scope [redacted] 5



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RIGHT SOLUTIONS | RIGHT PARTNER

Non responsive based on [redacted]

# SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by [redacted]

**Cooler Custody Seals (desirable, mandatory if specified in SAP):**

- ✓ Intact on outside of cooler, signed and dated

**Chain-of-Custody (COC) documentation (mandatory):**

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

**Sample Integrity (mandatory):**

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

**Temperature Requirement (varies by sample matrix):**

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



RIGHT SOLUTIONS | RIGHT PARTNER

Non responsive based on revised scope

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# Preparation Information Benchsheets

Non responsive based on revised scope

[redacted]



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[redacted]

# Preparation Information Benchsheet

**Prep Run#:** 347951 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped
**Team:** Semivoa GCMS/DBOTROS **Prep Method:** Method **Prep Date/Time:** 11/4/19 12:00

| # | Lab Code | Client ID | B# | Method /Test | pH | Cl | Matrix | Amt. Ext. | Sample Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | E1900709-001 | SMS 1.5-LOD1 - 1613 | .01 | 8290A/PCDD PCDF | | | Soil | 10.123g | @ 75 ul MDL |
| 2 | E1900709-002 | SMS 3.0-LOD2 - 1613 | .01 | 8290A/PCDD PCDF | | | Soil | 10.521g | @ 150 ul MDL |
| 3 | E1900709-003 | SMS 5-LOQ - 1613 | .03 | 8290A/PCDD PCDF | | | Soil | 10.371g | @ 250 ul MDL |
| 4 | E1900771-001 | 3065932001 | .01 | 8290/PCDD PCDF | | | Soil | 10.031g | Brown soil |
| 5 | E1900779-001 | G21 | .01 | 8290/PCDD PCDF | | | Soil | 10.312g | Brown soil |
| 6 | E1900780-001 | G18 | .01 | 8290/PCDD PCDF | | | Soil | 10.286g | Brown soil |
| 7 | E1900781-001 | G19 | .01 | 8290/PCDD PCDF | | | Soil | 10.264g | Brown soil |
| 8 | E1900782-001 | G16 | .01 | 8290/PCDD PCDF | | | Soil | 10.620g | Brown soil |
| 9 | E1900783-001 | G12 | .01 | 8290/PCDD PCDF | | | Soil | 10.436g | Brown soil |
| 10 | E1900784-001 | G08 | .01 | 8290/PCDD PCDF | | | Soil | 10.660g | Brown soil |
| 11 | E1900785-001 | G22 | .01 | 8290/PCDD PCDF | | | Soil | 10.642g | Brown soil |
| 12 | E1900786-001 | G07 | .01 | 8290/PCDD PCDF | | | Soil | 10.168g | Brown soil |
| 13 | E1900792-001 | API-12 | .01 | 8290/PCDD PCDF | | | Sludge, Solid | 10.415g | black wet sludge |
| 14 | E1900792-002 | P8-14 | .01 | 8290/PCDD PCDF | | | Sludge, Solid | 10.441g | black wet sludge |
| 15 | E1900792-003 | P8-15 | .01 | 8290/PCDD PCDF | | | Sludge, Solid | 10.114g | black wet sludge |
| 16 | EQ1900365-01 | MB | | 8290A/PCDD PCDF | | | Solid | 10.614g | |
| 17 | EQ1900365-02 | LCS | | 8290A/PCDD PCDF | | | Solid | 10.231g | |
| 18 | EQ1900365-03 | DLCS | | 8290A/PCDD PCDF | | | Solid | 10.314g | |
| 19 | EQ1900365-04 | SMS 5-LOQ - 1613 DUP | .03 | 8290A/PCDD PCDF | | | Solid | 10.218g | |

## Spiking Solutions

Name: 1613B/23/TO-9A MDL Native Solution Inventory ID 201620 Logbook Ref: 201620 JG 8/1/19 Expires On: 01/21/2020

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| E1900709-001 | 75.00µL | E1900709-002 | 150.00µL | E1900709-003 | 250.00µL | EQ1900365-04 | 250.00µL |

Name: 8290/1613B Cleanup Working Standard Inventory ID 204071 Logbook Ref: 204071 tw 10/24/19 8ng/ml Expires On: 03/16/2020

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E1900709-001 | 100.00µL | E1900709-002 | 100.00µL | E1900709-003 | 100.00µL | E1900771-001 | 100.00µL | E1900779-001 | 100.00µL | E1900780-001 | 100.00µL |
| E1900781-001 | 100.00µL | E1900782-001 | 100.00µL | E1900783-001 | 100.00µL | E1900784-001 | 100.00µL | E1900785-001 | 100.00µL | E1900786-001 | 100.00µL |
| E1900792-001 | 100.00µL | E1900792-002 | 100.00µL | E1900792-003 | 100.00µL | EQ1900365-01 | 100.00µL | EQ1900365-01 | 100.00µL | EQ1900365-02 | 100.00µL |
| EQ1900365-02 | 100.00µL | EQ1900365-03 | 100.00µL | EQ1900365-03 | 100.00µL | EQ1900365-04 | 100.00µL | | | | |

Name: 1613B Labeled Working Standard Inventory ID 204240 Logbook Ref: DB103019 204240 2-4ng/ml Expires On: 03/24/2020

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E1900709-001 | 1,000.00µL | E1900709-002 | 1,000.00µL | E1900709-003 | 1,000.00µL | E1900771-001 | 1,000.00µL | E1900779-001 | 1,000.00µL | E1900780-001 | 1,000.00µL |
| E1900781-001 | 1,000.00µL | E1900782-001 | 1,000.00µL | E1900783-001 | 1,000.00µL | E1900784-001 | 1,000.00µL | E1900785-001 | 1,000.00µL | E1900786-001 | 1,000.00µL |
| E1900792-001 | 1,000.00µL | E1900792-002 | 1,000.00µL | E1900792-003 | 1,000.00µL | EQ1900365-01 | 1,000.00µL | EQ1900365-01 | 1,000.00µL | EQ1900365-02 | 1,000.00µL |


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# *Preparation Information Benchsheet*

**Prep Run#:** 347951 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped

**Team:** Semivoa GCMS/DBOTROS **Prep Method:** Method **Prep Date/Time:** 11/4/19 12:00

EQ1900365-02 1,000.00µL EQ1900365-03 1,000.00µL EQ1900365-03 1,000.00µL EQ1900365-04 1,000.00µL

| Name: | 1613B Matrix Working Standard | Inventory ID | 204428 | Logbook Ref: | 204428 db 11/04/19 2-20ng/ml | Expires On: | 04/05/2020 |
|---|---|---|---|---|---|---|---|

EQ1900365-02 100.00µL EQ1900365-02 100.00µL EQ1900365-03 100.00µL EQ1900365-03 100.00µL

## Preparation Materials

| | | | | | |
|---|---|---|---|---|---|
| Carbon, High Purity | tw 10/28/19 (204202) | Ethyl Acetate 99.9% Minimum EtOAc | JG 7/16/19 (201129) | Glass Wool | JG 8/1/19 (201624) |
| Hexanes 95% | tw 10/28/19 hexanes (204197) | Dichloromethane (Methylene Chloride) 99.9% MeCl2 | JG 7/19/19 (201263) | Sodium Chloride 5% | 308051706 (202016) |
| Sodium Hydroxide 1N NaOH | sodsium hydroxide 1n (202287) | Sodium Sulfate Anhydrous Reagent Grade Na2SO4 | JG 8/14/19 (202064) | Silica Gel | tw 10/15/19 (204490) |
| sulfuric acid | tw sulfric acid 10/1 (203771) | Toluene 99.9% Minimum | toluene tw 10/14/19 (203768) | Tridecane (n-Tridecane) | JG 6/25/19 (200486) |

## Preparation Steps

| Step: | Extraction | Step: | Acid Clean | Step: | Silica Gel Clean | Step: | Final Volume |
|---|---|---|---|---|---|---|---|
| Started: | 11/4/19 12:00 | Started: | 11/6/19 09:00 | Started: | 11/6/19 11:00 | Started: | 11/7/19 09:00 |
| Finished: | 11/5/19 09:30 | Finished: | 11/6/19 10:00 | Finished: | 11/6/19 14:00 | Finished: | 11/7/19 12:00 |
| By: | TWOODS | By: | TWOODS | By: | TWOODS | By: | TWOODS |
| Comments | | Comments | | Comments | | Comments | |

Comments:

Reviewed By: Non responsive based [redacted] Date: 11/13/19

Chain of Custody

Relinquished By: Date:

Received By: Date:

Extracts Examined

Yes No



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Non responsive based on revised scope

[redacted]

# Analytical Results

Non responsive based on revised scope

[redacted]

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | 10/23/19 15:20 |
| **Sample Matrix:** | Soil | **Date Received:** | 10/29/19 09:00 |
| **Sample Name:** | 3065932001 | **Units:** | ng/Kg |
| **Lab Code:** | E1900771-001 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/08/19 12:55 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.031g | **Instrument Name:** | E-HRMS-07 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P525013 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 04/25/19 | **Cal Ver. File Name:** | P525008 |

**Native Analyte Results**

| Analyte Name | Result | Q | EDL | MRL | Ion Ratio | RRT | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 3.89 | | 0.387 | 0.591 | 0.79 | 1.001 | 1 |
| 1,2,3,7,8-PeCDD | ND | U | 0.447 | 2.95 | | | 1 |
| 1,2,3,4,7,8-HxCDD | 45.7 | | 1.09 | 2.95 | 1.28 | 1.000 | 1 |
| 1,2,3,6,7,8-HxCDD | 132 | | 1.03 | 2.95 | 1.25 | 1.000 | 1 |
| 1,2,3,7,8,9-HxCDD | 60.9 | | 1.03 | 2.95 | 1.15 | 1.007 | 1 |
| 1,2,3,4,6,7,8-HpCDD | 10500 | | 9.30 | 59.1 | 1.03 | 1.000 | 20 |
| OCDD | 149000 | | 3.92 | 118 | 0.89 | 1.000 | 20 |
| | | | | | | | |
| 2,3,7,8-TCDF | 1380 | | 3.40 | 11.8 | 0.75 | 1.001 | 20 |
| 1,2,3,7,8-PeCDF | 147 | | 4.80 | 4.80 | 1.44 | 1.001 | 1 |
| 2,3,4,7,8-PeCDF | 511 | | 5.17 | 5.17 | 1.44 | 1.000 | 1 |
| 1,2,3,4,7,8-HxCDF | 1000 | | 1.77 | 2.95 | 1.16 | 1.000 | 1 |
| 1,2,3,6,7,8-HxCDF | 526**P** | | 1.99 | 2.95 | 1.18 | 1.000 | 1 |
| 1,2,3,7,8,9-HxCDF | 285 | | 2.57 | 2.95 | 1.18 | 1.001 | 1 |
| 2,3,4,6,7,8-HxCDF | 343 | | 2.28 | 2.95 | 1.15 | 1.000 | 1 |
| 1,2,3,4,6,7,8-HpCDF | 1830 | | 8.89 | 8.89 | 1.00 | 1.000 | 1 |
| 1,2,3,4,7,8,9-HpCDF | 354 | | 12.5 | 12.5 | 0.92 | 1.000 | 1 |
| OCDF | 14900 | | 4.03 | 118 | 0.88 | 1.005 | 20 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | 10/23/19 15:20 |
| **Sample Matrix:** | Soil | **Date Received:** | 10/29/19 09:00 |
| **Sample Name:** | 3065932001 | **Units:** | ng/Kg |
| **Lab Code:** | E1900771-001 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/08/19 12:55 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.031g | **Instrument Name:** | E-HRMS-07 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P525013 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 04/25/19 | **Cal Ver. File Name:** | P525008 |

**Native Analyte Results**

| Analyte Name | Result | Q | EDL | MRL | Ion Ratio | RRT | Dilution Factor |
|---|---|---|---|---|---|---|---|
| Total Tetra-Dioxins | 134 | | 0.387 | 0.591 | 0.75 | | 1 |
| Total Penta-Dioxins | 255 | | 0.447 | 2.95 | 1.57 | | 1 |
| Total Hexa-Dioxins | 1900 | | 1.05 | 2.95 | 1.20 | | 1 |
| Total Hepta-Dioxins | 21300 | | 24.7 | 24.7 | 1.03 | | 1 |
| Total Tetra-Furans | 3890 | | 0.312 | 0.591 | 0.66 | | 1 |
| Total Penta-Furans | 2590 | | 4.98 | 4.98 | 1.46 | | 1 |
| Total Hexa-Furans | 4770 | | 2.12 | 2.95 | 1.15 | | 1 |
| Total Hepta-Furans | 7620 | | 10.5 | 10.5 | 1.00 | | 1 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | 10/23/19 15:20 |
| **Sample Matrix:** | Soil | **Date Received:** | 10/29/19 09:00 |
| **Sample Name:** | 3065932001 | **Units:** | Percent |
| **Lab Code:** | E1900771-001 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/08/19 12:55 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.031g | **Instrument Name:** | E-HRMS-07 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P525013 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 04/25/19 | **Cal Ver. File Name:** | P525008 |

**Labeled Standard Results**

| Labeled Compounds | Spike Conc.(pg) | Conc. Found (pg) | % Rec | Q | Control Limits | Ion Ratio | RRT |
|---|---|---|---|---|---|---|---|
| 13C-2,3,7,8-TCDD | 2000 | 1102.101 | 55 | | 40-135 | 0.78 | 1.019 |
| 13C-1,2,3,7,8-PeCDD | 2000 | 1230.238 | 62 | | 40-135 | 1.57 | 1.170 |
| 13C-1,2,3,4,7,8-HxCDD | 2000 | 1165.678 | 58 | | 40-135 | 1.32 | 0.991 |
| 13C-1,2,3,6,7,8-HxCDD | 2000 | 1355.418 | 68 | | 40-135 | 1.27 | 0.993 |
| 13C-1,2,3,4,6,7,8-HpCDD | 2000 | 1056.401 | 53 | | 40-135 | 1.05 | 1.065 |
| 13C-OCDD | 4000 | 1708.611 | 43 | | 40-135 | 0.91 | 1.142 |
| 13C-2,3,7,8-TCDF | 2000 | 1030.813 | 52 | | 40-135 | 0.79 | 0.994 |
| 13C-1,2,3,7,8-PeCDF | 2000 | 1168.320 | 58 | | 40-135 | 1.57 | 1.130 |
| 13C-2,3,4,7,8-PeCDF | 2000 | 1103.761 | 55 | | 40-135 | 1.57 | 1.161 |
| 13C-1,2,3,4,7,8-HxCDF | 2000 | 1303.956 | 65 | | 40-135 | 0.52 | 0.972 |
| 13C-1,2,3,6,7,8-HxCDF | 2000 | 1192.219 | 60 | | 40-135 | 0.50 | 0.975 |
| 13C-1,2,3,7,8,9-HxCDF | 2000 | 1120.697 | 56 | | 40-135 | 0.51 | 1.008 |
| 13C-2,3,4,6,7,8-HxCDF | 2000 | 1099.051 | 55 | | 40-135 | 0.51 | 0.988 |
| 13C-1,2,3,4,6,7,8-HpCDF | 2000 | 999.654 | 50 | | 40-135 | 0.44 | 1.040 |
| 13C-1,2,3,4,7,8,9-HpCDF | 2000 | 1056.591 | 53 | | 40-135 | 0.44 | 1.079 |
| 37Cl-2,3,7,8-TCDD | 800 | 413.579 | 52 | | 40-135 | NA | 1.019 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | 10/23/19 15:20 |
| **Sample Matrix:** | Soil | **Date Received:** | 10/29/19 09:00 |
| **Sample Name:** | 3065932001 | **Units:** | ng/Kg |
| **Lab Code:** | E1900771-001 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

**Analysis Method:** 8290
**Prep Method:** Method

**Toxicity Equivalency Quotient**

| Analyte Name | Result | DL | MRL | Dilution Factor | TEF | TEF - Adjusted Concentration |
|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | **3.89** | 0.387 | 0.591 | 1 | 1 | 3.89 |
| 1,2,3,7,8-PeCDD | ND | 0.447 | 2.95 | 1 | 1 | |
| 1,2,3,4,7,8-HxCDD | **45.7** | 1.09 | 2.95 | 1 | 0.1 | 4.57 |
| 1,2,3,6,7,8-HxCDD | **132** | 1.03 | 2.95 | 1 | 0.1 | 13.2 |
| 1,2,3,7,8,9-HxCDD | **60.9** | 1.03 | 2.95 | 1 | 0.1 | 6.09 |
| 1,2,3,4,6,7,8-HpCDD | **10500** | 9.30 | 59.1 | 20 | 0.01 | 105 |
| OCDD | **149000** | 3.92 | 118 | 20 | 0.0003 | 44.7 |
| 2,3,7,8-TCDF | **1380** | 3.40 | 11.8 | 20 | 0.1 | 138 |
| 1,2,3,7,8-PeCDF | **147** | 4.80 | 4.80 | 1 | 0.03 | 4.41 |
| 2,3,4,7,8-PeCDF | **511** | 5.17 | 5.17 | 1 | 0.3 | 153 |
| 1,2,3,4,7,8-HxCDF | **1000** | 1.77 | 2.95 | 1 | 0.1 | 100 |
| 1,2,3,6,7,8-HxCDF | **526** | 1.99 | 2.95 | 1 | 0.1 | 52.6 |
| 1,2,3,7,8,9-HxCDF | **285** | 2.57 | 2.95 | 1 | 0.1 | 28.5 |
| 2,3,4,6,7,8-HxCDF | **343** | 2.28 | 2.95 | 1 | 0.1 | 34.3 |
| 1,2,3,4,6,7,8-HpCDF | **1830** | 8.89 | 8.89 | 1 | 0.01 | 18.3 |
| 1,2,3,4,7,8,9-HpCDF | **354** | 12.5 | 12.5 | 1 | 0.01 | 3.54 |
| OCDF | **14900** | 4.03 | 118 | 20 | 0.0003 | 4.47 |
| | | Total TEQ | | | | 715 |

2005 WHO TEFs, ND = 0

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | 10/23/19 15:20 |
| **Sample Matrix:** | Soil | **Date Received:** | 10/29/19 09:00 |
| **Sample Name:** | 3065932001 | **Units:** | Percent |
| **Lab Code:** | E1900771-001 | **Basis:** | NA |

## Total Solids

| | | | |
|---|---|---|---|
| **Analysis Method:** | ALS SOP | **Date Analyzed:** | 11/01/19 14:16 |
| | 7.129g | | NA |
| | | | E-Balance-01 |

## Native Analyte Results

| Analyte Name | Result | Q | EDL | MRL | Ion Ratio | RRT | Dilution Factor |
|---|---|---|---|---|---|---|---|
| Total Solids | 84.4 | | - | - | | | 1 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | NA |
| **Sample Matrix:** | Soil | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ng/Kg |
| **Lab Code:** | EQ1900365-01 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/14/19 11:13 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.614g | **Instrument Name:** | E-HRMS-08 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P620045 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 10/04/19 | **Cal Ver. File Name:** | P620042 |

**Native Analyte Results**

| Analyte Name | Result | Q | EDL | MRL | Ion Ratio | RRT | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | ND | U | 0.0634 | 0.471 | | | 1 |
| 1,2,3,7,8-PeCDD | ND | U | 0.0111 | 2.36 | | | 1 |
| 1,2,3,4,7,8-HxCDD | ND | U | 0.00924 | 2.36 | | | 1 |
| 1,2,3,6,7,8-HxCDD | 0.0254**JK** | | 0.00867 | 2.36 | 0.94 | 1.000 | 1 |
| 1,2,3,7,8,9-HxCDD | 0.0183**JK** | | 0.00830 | 2.36 | 0.85 | 1.007 | 1 |
| 1,2,3,4,6,7,8-HpCDD | 0.0477**J** | | 0.00933 | 2.36 | 0.98 | 1.000 | 1 |
| OCDD | 0.135**J** | | 0.0178 | 4.71 | 0.76 | 1.000 | 1 |
| | | | | | | | |
| 2,3,7,8-TCDF | ND | U | 0.0318 | 0.471 | | | 1 |
| 1,2,3,7,8-PeCDF | ND | U | 0.00509 | 2.36 | | | 1 |
| 2,3,4,7,8-PeCDF | ND | U | 0.00519 | 2.36 | | | 1 |
| 1,2,3,4,7,8-HxCDF | ND | U | 0.00669 | 2.36 | | | 1 |
| 1,2,3,6,7,8-HxCDF | ND | U | 0.00754 | 2.36 | | | 1 |
| 1,2,3,7,8,9-HxCDF | 0.0360**J** | | 0.00811 | 2.36 | 1.29 | 1.000 | 1 |
| 2,3,4,6,7,8-HxCDF | ND | U | 0.00782 | 2.36 | | | 1 |
| 1,2,3,4,6,7,8-HpCDF | 0.0193**J** | | 0.00547 | 2.36 | 0.93 | 1.000 | 1 |
| 1,2,3,4,7,8,9-HpCDF | 0.0146**JK** | | 0.00688 | 2.36 | 2.15 | 1.000 | 1 |
| OCDF | ND | U | 0.0160 | 4.71 | | | 1 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | NA |
| **Sample Matrix:** | Soil | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ng/Kg |
| **Lab Code:** | EQ1900365-01 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/14/19 11:13 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.614g | **Instrument Name:** | E-HRMS-08 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P620045 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 10/04/19 | **Cal Ver. File Name:** | P620042 |

**Native Analyte Results**

| Analyte Name | Result | Q | EDL | MRL | Ion Ratio | RRT | Dilution Factor |
|---|---|---|---|---|---|---|---|
| Total Tetra-Dioxins | ND | U | 0.0634 | 0.471 | | | 1 |
| Total Penta-Dioxins | ND | U | 0.0111 | 2.36 | | | 1 |
| Total Hexa-Dioxins | ND | U | 0.00867 | 2.36 | | | 1 |
| Total Hepta-Dioxins | 0.0477**J** | | 0.00933 | 2.36 | 0.98 | | 1 |
| Total Tetra-Furans | ND | U | 0.0318 | 0.471 | | | 1 |
| Total Penta-Furans | ND | U | 0.00519 | 2.36 | | | 1 |
| Total Hexa-Furans | 0.0360**J** | | 0.00754 | 2.36 | 1.29 | | 1 |
| Total Hepta-Furans | 0.0193**J** | | 0.00613 | 2.36 | 0.93 | | 1 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | NA |
| **Sample Matrix:** | Soil | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | Percent |
| **Lab Code:** | EQ1900365-01 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/14/19 11:13 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.614g | **Instrument Name:** | E-HRMS-08 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P620045 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 10/04/19 | **Cal Ver. File Name:** | P620042 |

**Labeled Standard Results**

| Labeled Compounds | Spike Conc.(pg) | Conc. Found (pg) | % Rec | Q | Control Limits | Ion Ratio | RRT |
|---|---|---|---|---|---|---|---|
| 13C-2,3,7,8-TCDD | 2000 | 1253.718 | 63 | | 40-135 | 0.78 | 1.018 |
| 13C-1,2,3,7,8-PeCDD | 2000 | 1579.766 | 79 | | 40-135 | 1.57 | 1.172 |
| 13C-1,2,3,4,7,8-HxCDD | 2000 | 1431.458 | 72 | | 40-135 | 1.33 | 0.992 |
| 13C-1,2,3,6,7,8-HxCDD | 2000 | 1624.250 | 81 | | 40-135 | 1.21 | 0.994 |
| 13C-1,2,3,4,6,7,8-HpCDD | 2000 | 1320.776 | 66 | | 40-135 | 1.06 | 1.066 |
| 13C-OCDD | 4000 | 2598.455 | 65 | | 40-135 | 0.89 | 1.141 |
| 13C-2,3,7,8-TCDF | 2000 | 1076.851 | 54 | | 40-135 | 0.78 | 0.993 |
| 13C-1,2,3,7,8-PeCDF | 2000 | 1360.269 | 68 | | 40-135 | 1.56 | 1.132 |
| 13C-2,3,4,7,8-PeCDF | 2000 | 1288.934 | 64 | | 40-135 | 1.55 | 1.163 |
| 13C-1,2,3,4,7,8-HxCDF | 2000 | 1457.753 | 73 | | 40-135 | 0.51 | 0.972 |
| 13C-1,2,3,6,7,8-HxCDF | 2000 | 1290.950 | 65 | | 40-135 | 0.52 | 0.975 |
| 13C-1,2,3,7,8,9-HxCDF | 2000 | 1336.913 | 67 | | 40-135 | 0.52 | 1.008 |
| 13C-2,3,4,6,7,8-HxCDF | 2000 | 1311.216 | 66 | | 40-135 | 0.51 | 0.988 |
| 13C-1,2,3,4,6,7,8-HpCDF | 2000 | 1200.415 | 60 | | 40-135 | 0.44 | 1.041 |
| 13C-1,2,3,4,7,8,9-HpCDF | 2000 | 1207.449 | 60 | | 40-135 | 0.44 | 1.079 |
| 37Cl-2,3,7,8-TCDD | 800 | 458.589 | 57 | | 40-135 | NA | 1.019 |

Non responsive based on revised scope

[redacted]

# Accuracy & Precision

Non responsive based on revised scope

[redacted]



Non responsive bas
[redacted]

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Analyzed:** | 11/08/19 |
| **Sample Matrix:** | Soil | **Date Extracted:** | 11/04/19 |

**Duplicate Lab Control Sample Summary**
**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Units:** | ng/Kg |
| **Prep Method:** | Method | **Basis:** | Dry |
| | | **Analysis Lot:** | 659684 |

| | Lab Control Sample EQ1900365-02 | | | Duplicate Lab Control Sample EQ1900365-03 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| 1,2,3,4,6,7,8-HpCDD | 109 | 97.7 | 112 | 92.0 | 97.0 | 95 | 70-130 | 17 | 25 |
| 1,2,3,4,7,8-HxCDD | 114 | 97.7 | 117 | 96.9 | 97.0 | 100 | 70-130 | 17 | 25 |
| 1,2,3,6,7,8-HxCDD | 102 | 97.7 | 104 | 84.9 | 97.0 | 88 | 70-130 | 18 | 25 |
| 1,2,3,7,8,9-HxCDD | 104 | 97.7 | 106 | 87.1 | 97.0 | 90 | 70-130 | 17 | 25 |
| 1,2,3,7,8-PeCDD | 100 | 97.7 | 103 | 88.0 | 97.0 | 91 | 70-130 | 13 | 25 |
| 2,3,7,8-TCDD | 19.5 | 19.5 | 100 | 17.3 | 19.4 | 89 | 70-130 | 12 | 25 |
| OCDD | 225 | 195 | 115 | 195 | 194 | 101 | 70-130 | 14 | 25 |
| 1,2,3,4,6,7,8-HpCDF | 105 | 97.7 | 107 | 86.8 | 97.0 | 90 | 70-130 | 19 | 25 |
| 1,2,3,4,7,8,9-HpCDF | 105 | 97.7 | 107 | 90.3 | 97.0 | 93 | 70-130 | 15 | 25 |
| 1,2,3,4,7,8-HxCDF | 93.1 | 97.7 | 95 | 80.5 | 97.0 | 83 | 70-130 | 15 | 25 |
| 1,2,3,6,7,8-HxCDF | 101 | 97.7 | 103 | 88.8 | 97.0 | 92 | 70-130 | 13 | 25 |
| 1,2,3,7,8,9-HxCDF | 96.6 | 97.7 | 99 | 84.3 | 97.0 | 87 | 70-130 | 14 | 25 |
| 1,2,3,7,8-PeCDF | 97.0 | 97.7 | 99 | 79.6 | 97.0 | 82 | 70-130 | 20 | 25 |
| 2,3,4,6,7,8-HxCDF | 106 | 97.7 | 108 | 92.0 | 97.0 | 95 | 70-130 | 14 | 25 |
| 2,3,4,7,8-PeCDF | 105 | 97.7 | 108 | 89.4 | 97.0 | 92 | 70-130 | 16 | 25 |
| 2,3,7,8-TCDF | 21.2 | 19.5 | 109 | 17.4 | 19.4 | 90 | 70-130 | 20 | 25 |
| OCDF | 221 | 195 | 113 | 188 | 194 | 97 | 70-130 | 16 | 25 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | NA |
| **Sample Matrix:** | Soil | **Date Received:** | NA |
| **Sample Name:** | Lab Control Sample | **Units:** | ng/Kg |
| **Lab Code:** | EQ1900365-02 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/08/19 16:09 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.231g | **Instrument Name:** | E-HRMS-07 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P525017 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 04/25/19 | **Cal Ver. File Name:** | P525008 |

**Native Analyte Results**

| Analyte Name | Result | Q | EDL | MRL | Ion Ratio | RRT | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 19.5 | | 1.11 | 1.11 | 0.71 | 1.001 | 1 |
| 1,2,3,7,8-PeCDD | 100 | | 0.546 | 2.44 | 1.58 | 1.000 | 1 |
| 1,2,3,4,7,8-HxCDD | 114 | | 0.520 | 2.44 | 1.32 | 1.000 | 1 |
| 1,2,3,6,7,8-HxCDD | 102 | | 0.466 | 2.44 | 1.21 | 1.000 | 1 |
| 1,2,3,7,8,9-HxCDD | 104 | | 0.479 | 2.44 | 1.31 | 1.007 | 1 |
| 1,2,3,4,6,7,8-HpCDD | 109 | | 0.819 | 2.44 | 1.04 | 1.000 | 1 |
| OCDD | 225 | | 0.890 | 4.89 | 0.86 | 1.000 | 1 |
| 2,3,7,8-TCDF | 21.2 | | 0.927 | 0.927 | 0.72 | 1.001 | 1 |
| 1,2,3,7,8-PeCDF | 97.0 | | 0.395 | 2.44 | 1.45 | 1.000 | 1 |
| 2,3,4,7,8-PeCDF | 105 | | 0.419 | 2.44 | 1.44 | 1.000 | 1 |
| 1,2,3,4,7,8-HxCDF | 93.1 | | 0.279 | 2.44 | 1.23 | 1.000 | 1 |
| 1,2,3,6,7,8-HxCDF | 101 | | 0.311 | 2.44 | 1.16 | 1.000 | 1 |
| 1,2,3,7,8,9-HxCDF | 96.6 | | 0.438 | 2.44 | 1.22 | 1.000 | 1 |
| 2,3,4,6,7,8-HxCDF | 106 | | 0.339 | 2.44 | 1.20 | 1.000 | 1 |
| 1,2,3,4,6,7,8-HpCDF | 105 | | 0.788 | 2.44 | 0.99 | 1.000 | 1 |
| 1,2,3,4,7,8,9-HpCDF | 105 | | 1.13 | 2.44 | 0.98 | 1.000 | 1 |
| OCDF | 221 | | 0.783 | 4.89 | 0.84 | 1.005 | 1 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | NA |
| **Sample Matrix:** | Soil | **Date Received:** | NA |
| **Sample Name:** | Lab Control Sample | **Units:** | ng/Kg |
| **Lab Code:** | EQ1900365-02 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/08/19 16:09 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.231g | **Instrument Name:** | E-HRMS-07 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P525017 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 04/25/19 | **Cal Ver. File Name:** | P525008 |

**Native Analyte Results**

| Analyte Name | Result | Q | EDL | MRL | Ion Ratio | RRT | Dilution Factor |
|---|---|---|---|---|---|---|---|
| Total Tetra-Dioxins | 19.5 | | 1.11 | 1.11 | 0.71 | | 1 |
| Total Penta-Dioxins | 100 | | 0.546 | 2.44 | 1.58 | | 1 |
| Total Hexa-Dioxins | 320 | | 0.487 | 2.44 | 1.32 | | 1 |
| Total Hepta-Dioxins | 111 | | 0.819 | 2.44 | 0.96 | | 1 |
| Total Tetra-Furans | 21.2 | | 0.927 | 0.927 | 0.72 | | 1 |
| Total Penta-Furans | 202 | | 0.406 | 2.44 | 1.45 | | 1 |
| Total Hexa-Furans | 396 | | 0.334 | 2.44 | 1.23 | | 1 |
| Total Hepta-Furans | 211 | | 0.936 | 2.44 | 0.99 | | 1 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | NA |
| **Sample Matrix:** | Soil | **Date Received:** | NA |
| **Sample Name:** | Lab Control Sample | **Units:** | Percent |
| **Lab Code:** | EQ1900365-02 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/08/19 16:09 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.231g | **Instrument Name:** | E-HRMS-07 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P525017 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 04/25/19 | **Cal Ver. File Name:** | P525008 |

**Labeled Standard Results**

| Labeled Compounds | Spike Conc.(pg) | Conc. Found (pg) | % Rec | Q | Control Limits | Ion Ratio | RRT |
|---|---|---|---|---|---|---|---|
| 13C-2,3,7,8-TCDD | 2000 | 901.494 | 45 | | 40-135 | 0.79 | 1.018 |
| 13C-1,2,3,7,8-PeCDD | 2000 | 1207.148 | 60 | | 40-135 | 1.60 | 1.169 |
| 13C-1,2,3,4,7,8-HxCDD | 2000 | 1256.019 | 63 | | 40-135 | 1.35 | 0.992 |
| 13C-1,2,3,6,7,8-HxCDD | 2000 | 1534.211 | 77 | | 40-135 | 1.25 | 0.994 |
| 13C-1,2,3,4,6,7,8-HpCDD | 2000 | 1312.894 | 66 | | 40-135 | 1.06 | 1.065 |
| 13C-OCDD | 4000 | 2256.915 | 56 | | 40-135 | 0.88 | 1.142 |
| 13C-2,3,7,8-TCDF | 2000 | 869.829 | 43 | | 40-135 | 0.79 | 0.993 |
| 13C-1,2,3,7,8-PeCDF | 2000 | 1150.306 | 58 | | 40-135 | 1.62 | 1.130 |
| 13C-2,3,4,7,8-PeCDF | 2000 | 1147.080 | 57 | | 40-135 | 1.56 | 1.160 |
| 13C-1,2,3,4,7,8-HxCDF | 2000 | 1400.688 | 70 | | 40-135 | 0.51 | 0.972 |
| 13C-1,2,3,6,7,8-HxCDF | 2000 | 1316.395 | 66 | | 40-135 | 0.52 | 0.976 |
| 13C-1,2,3,7,8,9-HxCDF | 2000 | 1185.522 | 59 | | 40-135 | 0.50 | 1.008 |
| 13C-2,3,4,6,7,8-HxCDF | 2000 | 1251.587 | 63 | | 40-135 | 0.51 | 0.988 |
| 13C-1,2,3,4,6,7,8-HpCDF | 2000 | 1270.605 | 64 | | 40-135 | 0.42 | 1.041 |
| 13C-1,2,3,4,7,8,9-HpCDF | 2000 | 1298.109 | 65 | | 40-135 | 0.45 | 1.079 |
| 37Cl-2,3,7,8-TCDD | 800 | 343.272 | 43 | | 40-135 | NA | 1.019 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | NA |
| **Sample Matrix:** | Soil | **Date Received:** | NA |
| **Sample Name:** | Duplicate Lab Control Sample | **Units:** | ng/Kg |
| **Lab Code:** | EQ1900365-03 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/08/19 16:58 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.314g | **Instrument Name:** | E-HRMS-07 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P525018 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 04/25/19 | **Cal Ver. File Name:** | P525008 |

**Native Analyte Results**

| Analyte Name | Result | Q | EDL | MRL | Ion Ratio | RRT | Dilution Factor |
|---|---|---|---|---|---|---|---|
| 2,3,7,8-TCDD | 17.3 | | 0.418 | 0.485 | 0.77 | 1.001 | 1 |
| 1,2,3,7,8-PeCDD | 88.0 | | 0.163 | 2.42 | 1.54 | 1.001 | 1 |
| 1,2,3,4,7,8-HxCDD | 96.9 | | 0.179 | 2.42 | 1.25 | 1.000 | 1 |
| 1,2,3,6,7,8-HxCDD | 84.9 | | 0.155 | 2.42 | 1.27 | 1.000 | 1 |
| 1,2,3,7,8,9-HxCDD | 87.1 | | 0.162 | 2.42 | 1.29 | 1.007 | 1 |
| 1,2,3,4,6,7,8-HpCDD | 92.0 | | 0.296 | 2.42 | 1.04 | 1.000 | 1 |
| OCDD | 195 | | 0.187 | 4.85 | 0.91 | 1.000 | 1 |
| 2,3,7,8-TCDF | 17.4 | | 0.225 | 0.485 | 0.71 | 1.001 | 1 |
| 1,2,3,7,8-PeCDF | 79.6 | | 0.159 | 2.42 | 1.48 | 1.000 | 1 |
| 2,3,4,7,8-PeCDF | 89.4 | | 0.174 | 2.42 | 1.45 | 1.000 | 1 |
| 1,2,3,4,7,8-HxCDF | 80.5 | | 0.119 | 2.42 | 1.22 | 1.000 | 1 |
| 1,2,3,6,7,8-HxCDF | 88.8 | | 0.127 | 2.42 | 1.10 | 1.000 | 1 |
| 1,2,3,7,8,9-HxCDF | 84.3 | | 0.167 | 2.42 | 1.15 | 1.000 | 1 |
| 2,3,4,6,7,8-HxCDF | 92.0 | | 0.142 | 2.42 | 1.13 | 1.000 | 1 |
| 1,2,3,4,6,7,8-HpCDF | 86.8 | | 0.241 | 2.42 | 1.00 | 1.000 | 1 |
| 1,2,3,4,7,8,9-HpCDF | 90.3 | | 0.341 | 2.42 | 0.98 | 1.000 | 1 |
| OCDF | 188 | | 0.275 | 4.85 | 0.87 | 1.005 | 1 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | NA |
| **Sample Matrix:** | Soil | **Date Received:** | NA |
| **Sample Name:** | Duplicate Lab Control Sample | **Units:** | ng/Kg |
| **Lab Code:** | EQ1900365-03 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/08/19 16:58 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.314g | **Instrument Name:** | E-HRMS-07 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P525018 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 04/25/19 | **Cal Ver. File Name:** | P525008 |

**Native Analyte Results**

| Analyte Name | Result | Q | EDL | MRL | Ion Ratio | RRT | Dilution Factor |
|---|---|---|---|---|---|---|---|
| Total Tetra-Dioxins | 17.3 | | 0.418 | 0.485 | 0.77 | | 1 |
| Total Penta-Dioxins | 88.0 | | 0.163 | 2.42 | 1.54 | | 1 |
| Total Hexa-Dioxins | 269 | | 0.165 | 2.42 | 1.25 | | 1 |
| Total Hepta-Dioxins | 94.1 | | 0.296 | 2.42 | 0.94 | | 1 |
| Total Tetra-Furans | 17.4 | | 0.225 | 0.485 | 0.71 | | 1 |
| Total Penta-Furans | 170 | | 0.166 | 2.42 | 1.48 | | 1 |
| Total Hexa-Furans | 346 | | 0.137 | 2.42 | 1.22 | | 1 |
| Total Hepta-Furans | 177 | | 0.285 | 2.42 | 1.00 | | 1 |

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Non responsive based on revised scope | **Service Request:** | E1900771 |
| **Project:** | HS19101778 | **Date Collected:** | NA |
| **Sample Matrix:** | Soil | **Date Received:** | NA |
| **Sample Name:** | Duplicate Lab Control Sample | **Units:** | Percent |
| **Lab Code:** | EQ1900365-03 | **Basis:** | Dry |

**Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS**

| | | | |
|---|---|---|---|
| **Analysis Method:** | 8290 | **Date Analyzed:** | 11/08/19 16:58 |
| **Prep Method:** | Method | **Date Extracted:** | 11/4/19 |
| **Sample Amount:** | 10.314g | **Instrument Name:** | E-HRMS-07 |
| | | **GC Column:** | DB-5MSUI |
| **Data File Name:** | P525018 | **Blank File Name:** | P620045 |
| **ICAL Date:** | 04/25/19 | **Cal Ver. File Name:** | P525008 |

**Labeled Standard Results**

| Labeled Compounds | Spike Conc.(pg) | Conc. Found (pg) | % Rec | Q | Control Limits | Ion Ratio | RRT |
|---|---|---|---|---|---|---|---|
| 13C-2,3,7,8-TCDD | 2000 | 1079.751 | 54 | | 40-135 | 0.77 | 1.019 |
| 13C-1,2,3,7,8-PeCDD | 2000 | 1095.169 | 55 | | 40-135 | 1.62 | 1.170 |
| 13C-1,2,3,4,7,8-HxCDD | 2000 | 1202.047 | 60 | | 40-135 | 1.30 | 0.992 |
| 13C-1,2,3,6,7,8-HxCDD | 2000 | 1474.004 | 74 | | 40-135 | 1.27 | 0.994 |
| 13C-1,2,3,4,6,7,8-HpCDD | 2000 | 1196.961 | 60 | | 40-135 | 1.04 | 1.065 |
| 13C-OCDD | 4000 | 2064.732 | 52 | | 40-135 | 0.88 | 1.141 |
| 13C-2,3,7,8-TCDF | 2000 | 981.656 | 49 | | 40-135 | 0.78 | 0.994 |
| 13C-1,2,3,7,8-PeCDF | 2000 | 1058.721 | 53 | | 40-135 | 1.58 | 1.131 |
| 13C-2,3,4,7,8-PeCDF | 2000 | 991.105 | 50 | | 40-135 | 1.58 | 1.161 |
| 13C-1,2,3,4,7,8-HxCDF | 2000 | 1310.344 | 66 | | 40-135 | 0.52 | 0.972 |
| 13C-1,2,3,6,7,8-HxCDF | 2000 | 1209.901 | 60 | | 40-135 | 0.51 | 0.975 |
| 13C-1,2,3,7,8,9-HxCDF | 2000 | 1150.520 | 58 | | 40-135 | 0.50 | 1.008 |
| 13C-2,3,4,6,7,8-HxCDF | 2000 | 1135.785 | 57 | | 40-135 | 0.51 | 0.988 |
| 13C-1,2,3,4,6,7,8-HpCDF | 2000 | 1156.980 | 58 | | 40-135 | 0.44 | 1.041 |
| 13C-1,2,3,4,7,8,9-HpCDF | 2000 | 1225.391 | 61 | | 40-135 | 0.44 | 1.079 |
| 37Cl-2,3,7,8-TCDD | 800 | 420.833 | 53 | | 40-135 | NA | 1.019 |

Non responsive based on revised scope [redacted]

Environment Testing

Non responsive based on revised scope [redacted]

# ANALYTICAL REPORT

Non responsive based on revised scope [redacted]

Laboratory Job ID: 180-97987-1
Client Project/Site: 3065932

For:
Non responsive based on revised scope [redacted]

*Authorized for release by:*
*11/11/2019 1:44:07 PM*

Non responsive based on revised scope [redacted] Assistant I

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
Non responsive based on revised scope [redacted]

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

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

Non responsive based on revised scope [redacted]



Non responsive based on [redacted]

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# Case Narrative

Client: Non responsive based on revised scope
Project/Site: 3065932

Job ID: 180-97987-1

## Job ID: 180-97987-1

**Laboratory:** Non responsive based on revised scope

Narrative

**Job Narrative**
**180-97987-1**

**Comments**
No additional comments.

**Receipt**
The sample was received on 10/30/2019 9:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0° C.

**GC Semi VOA**
Method 8141B: The following samples were diluted due to the nature of the sample matrix: 3065932001 (180-97987-1), (180-97987-A-1-A MS) and (180-97987-A-1-B MSD) at 5x. Elevated reporting limits (RLs) are provided. Sample extracts were dark yellow in color.

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

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**
Method 3541: The following samples were prepared outside of preparation holding time due to test being added after holding time expired. : 3065932001 (180-97987-1), (180-97987-A-1 MS) and (180-97987-A-1 MSD).

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

# Definitions/Glossary

Client: Non responsive based on revised scope [redacted]
Project/Site: 3065932

Job ID: 180-97987-1

## Qualifiers

### GC Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| H | Sample was prepped or analyzed beyond the specified holding time |

## Glossary

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

Non responsive based on revised scope [redacted]

# Accreditation/Certification Summary

Client: Non responsive based on revised scope
Project/Site: 3065932

Job ID: 180-97987-1

## Laboratory: Non responsive based on revised scope

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

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Non responsive based on re | NELAP | Non responsive b | 06-30-20 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 2540G | | Solid | Percent Moisture |
| 2540G | | Solid | Percent Solids |
| EPA 8141B | 3541 | Solid | Famphur |

| | | | |
|---|---|---|---|
| Non responsive based o | NELAP | Non responsive | 03-31-20 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 2540G | | Solid | Percent Moisture |
| 2540G | | Solid | Percent Solids |

| | | | |
|---|---|---|---|
| Non responsive based on revised scope | State Program | Non respons | 12-31-19 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 2540G | | Solid | Percent Moisture |
| 2540G | | Solid | Percent Solids |

| | | | |
|---|---|---|---|
| Non responsive based on revised | NELAP | Non responsive based | 04-30-20 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|

Non responsive based on revised scope

# Sample Summary

Client: Non responsive based on revised scope
Project/Site: 3065932

Job ID: 180-97987-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 180-97987-1 | 3065932001 | Solid | 10/23/19 16:30 | 10/30/19 09:00 | |

Non responsive based on revised scope

# Method Summary

Client: Non responsive based on revised scope
Project/Site: 3065932

Job ID: 180-97987-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| EPA 8141B | Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique | SW846 | TAL PIT |
| 2540G | SM 2540G | SM22 | TAL PIT |
| 3541 | Automated Soxhlet Extraction | SW846 | TAL PIT |

Protocol References:

SM22 = Standard Methods For The Examination Of Water And Wastewater, 22nd Edition

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

Laboratory References:

Non responsive based on revised scope

Non responsive based on revised scope



Non responsive based on

# Lab Chronicle

Client: Non responsive based on revised scope
Project/Site: 3065932

Job ID: 180-97987-1

## Client Sample ID: 3065932001
**Date Collected: 10/23/19 16:30**
**Date Received: 10/30/19 09:00**

**Lab Sample ID: 180-97987-1**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 2540G | | 1 | | | 297419 | 11/07/19 11:28 | Non responsive based on revised scope | |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: 3065932001
**Date Collected: 10/23/19 16:30**
**Date Received: 10/30/19 09:00**

**Lab Sample ID: 180-97987-1**
**Matrix: Solid**
**Percent Solids: 83.5**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3541 | | | 15.2 g | 2.5 mL | 297078 | 11/05/19 05:57 | Non responsive based on revised scope | |
| Total/NA | Analysis | EPA 8141B | | 5 | | | 297301 | 11/06/19 14:58 | | |
| | Instrument ID: CHGC5 | | | | | | | | | |

Laboratory References:
Non responsive based on revised scope

Analyst References:
Non responsive based on revised scope

Non responsive based on revised scope

# Client Sample Results

Client: Non responsive based on revised scope [redacted]
Project/Site: 3065932

Job ID: 180-97987-1

**Client Sample ID: 3065932001**
**Date Collected: 10/23/19 16:30**
**Date Received: 10/30/19 09:00**

**Lab Sample ID: 180-97987-1**
**Matrix: Solid**
**Percent Solids: 83.5**

## Method: EPA 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chlorpyrifos | ND | H | 200 | 96 | ug/Kg | ☼ | 11/05/19 05:57 | 11/06/19 14:58 | 5 |
| Diazinon | ND | H | 200 | 83 | ug/Kg | ☼ | 11/05/19 05:57 | 11/06/19 14:58 | 5 |
| Malathion | ND | H | 200 | 120 | ug/Kg | ☼ | 11/05/19 05:57 | 11/06/19 14:58 | 5 |
| Parathion | ND | H | 200 | 110 | ug/Kg | ☼ | 11/05/19 05:57 | 11/06/19 14:58 | 5 |
| Methyl parathion | ND | H | 200 | 110 | ug/Kg | ☼ | 11/05/19 05:57 | 11/06/19 14:58 | 5 |
| Phorate | ND | H | 200 | 66 | ug/Kg | ☼ | 11/05/19 05:57 | 11/06/19 14:58 | 5 |
| Ronnel | ND | H | 200 | 96 | ug/Kg | ☼ | 11/05/19 05:57 | 11/06/19 14:58 | 5 |
| Disulfoton | ND | H | 200 | 130 | ug/Kg | ☼ | 11/05/19 05:57 | 11/06/19 14:58 | 5 |
| Famphur | ND | H | 200 | 100 | ug/Kg | ☼ | 11/05/19 05:57 | 11/06/19 14:58 | 5 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tributyl phosphate* | *86* | | *20 - 140* | *11/05/19 05:57* | *11/06/19 14:58* | *5* |
| *Tributyl phosphate* | *79* | | *20 - 140* | *11/05/19 05:57* | *11/06/19 14:58* | *5* |
| *Triphenylphosphate* | *108* | | *37 - 139* | *11/05/19 05:57* | *11/06/19 14:58* | *5* |
| *Triphenylphosphate* | *105* | | *37 - 139* | *11/05/19 05:57* | *11/06/19 14:58* | *5* |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Percent Moisture** | **16.5** | | 0.1 | 0.1 | % | | | 11/07/19 11:28 | 1 |
| **Percent Solids** | **83.5** | | 0.1 | 0.1 | % | | | 11/07/19 11:28 | 1 |

Non responsive based on revised scope

# QC Sample Results

Client: [redacted]
Project/Site: 3065932

Job ID: 180-97987-1

## Method: EPA 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique

**Lab Sample ID: MB 180-297078/1-A**
**Matrix: Solid**
**Analysis Batch: 297301**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 297078**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chlorpyrifos | ND | | 33 | 16 | ug/Kg | | 11/05/19 05:57 | 11/06/19 13:55 | 1 |
| Diazinon | ND | | 33 | 14 | ug/Kg | | 11/05/19 05:57 | 11/06/19 13:55 | 1 |
| Malathion | ND | | 33 | 20 | ug/Kg | | 11/05/19 05:57 | 11/06/19 13:55 | 1 |
| Parathion | ND | | 33 | 18 | ug/Kg | | 11/05/19 05:57 | 11/06/19 13:55 | 1 |
| Methyl parathion | ND | | 33 | 19 | ug/Kg | | 11/05/19 05:57 | 11/06/19 13:55 | 1 |
| Phorate | ND | | 33 | 11 | ug/Kg | | 11/05/19 05:57 | 11/06/19 13:55 | 1 |
| Ronnel | ND | | 33 | 16 | ug/Kg | | 11/05/19 05:57 | 11/06/19 13:55 | 1 |
| Disulfoton | ND | | 33 | 22 | ug/Kg | | 11/05/19 05:57 | 11/06/19 13:55 | 1 |
| Famphur | ND | | 33 | 18 | ug/Kg | | 11/05/19 05:57 | 11/06/19 13:55 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tributyl phosphate* | *57* | | *20 - 140* | *11/05/19 05:57* | *11/06/19 13:55* | *1* |
| *Tributyl phosphate* | *50* | | *20 - 140* | *11/05/19 05:57* | *11/06/19 13:55* | *1* |
| *Triphenylphosphate* | *84* | | *37 - 139* | *11/05/19 05:57* | *11/06/19 13:55* | *1* |
| *Triphenylphosphate* | *87* | | *37 - 139* | *11/05/19 05:57* | *11/06/19 13:55* | *1* |

**Lab Sample ID: LCS 180-297078/2-A**
**Matrix: Solid**
**Analysis Batch: 297301**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 297078**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chlorpyrifos | 333 | 332 | | ug/Kg | | 100 | 59 - 142 |
| Diazinon | 333 | 325 | | ug/Kg | | 98 | 57 - 135 |
| Malathion | 333 | 331 | | ug/Kg | | 99 | 57 - 134 |
| Parathion | 333 | 320 | | ug/Kg | | 96 | 54 - 129 |
| Methyl parathion | 333 | 315 | | ug/Kg | | 94 | 52 - 136 |
| Phorate | 333 | 292 | | ug/Kg | | 88 | 50 - 125 |
| Ronnel | 333 | 344 | | ug/Kg | | 103 | 60 - 136 |
| Disulfoton | 333 | 307 | | ug/Kg | | 92 | 27 - 150 |
| Famphur | 333 | 323 | | ug/Kg | | 97 | 54 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Tributyl phosphate* | *89* | | *20 - 140* |
| *Tributyl phosphate* | *83* | | *20 - 140* |
| *Triphenylphosphate* | *102* | | *37 - 139* |
| *Triphenylphosphate* | *102* | | *37 - 139* |

**Lab Sample ID: 180-97987-1 MS**
**Matrix: Solid**
**Analysis Batch: 297301**

**Client Sample ID: 3065932001**
**Prep Type: Total/NA**
**Prep Batch: 297078**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chlorpyrifos | ND | H | 397 | 396 | | ug/Kg | ☼ | 100 | 59 - 142 |
| Diazinon | ND | H | 397 | 373 | | ug/Kg | ☼ | 94 | 57 - 135 |
| Malathion | ND | H | 397 | 361 | | ug/Kg | ☼ | 91 | 57 - 134 |
| Parathion | ND | H | 397 | 373 | | ug/Kg | ☼ | 94 | 54 - 129 |
| Methyl parathion | ND | H | 397 | 379 | | ug/Kg | ☼ | 95 | 52 - 136 |

[redacted]

# QC Sample Results

Client: Non responsive based on revised scope
Project/Site: 3065932

Job ID: 180-97987-1

## Method: EPA 8141B - Organophosphorous Compounds by Gas Chromatography, Capillary Column Technique (Continued)

**Lab Sample ID: 180-97987-1 MS**
**Matrix: Solid**
**Analysis Batch: 297301**

**Client Sample ID: 3065932001**
**Prep Type: Total/NA**
**Prep Batch: 297078**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Phorate | ND | H | 397 | 321 | | ug/Kg | ☼ | 81 | 50 - 125 |
| Ronnel | ND | H | 397 | 364 | | ug/Kg | ☼ | 92 | 60 - 136 |
| Disulfoton | ND | H | 397 | 341 | | ug/Kg | ☼ | 86 | 27 - 150 |
| Famphur | ND | H | 397 | 354 | | ug/Kg | ☼ | 89 | 54 - 125 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *Tributyl phosphate* | *93* | | *20 - 140* |
| *Tributyl phosphate* | *88* | | *20 - 140* |
| *Triphenylphosphate* | *118* | | *37 - 139* |
| *Triphenylphosphate* | *112* | | *37 - 139* |

**Lab Sample ID: 180-97987-1 MSD**
**Matrix: Solid**
**Analysis Batch: 297301**

**Client Sample ID: 3065932001**
**Prep Type: Total/NA**
**Prep Batch: 297078**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorpyrifos | ND | H | 397 | 387 | | ug/Kg | ☼ | 98 | 59 - 142 | 2 | 33 |
| Diazinon | ND | H | 397 | 375 | | ug/Kg | ☼ | 95 | 57 - 135 | 0 | 40 |
| Malathion | ND | H | 397 | 370 | | ug/Kg | ☼ | 93 | 57 - 134 | 3 | 35 |
| Parathion | ND | H | 397 | 374 | | ug/Kg | ☼ | 94 | 54 - 129 | 0 | 29 |
| Methyl parathion | ND | H | 397 | 380 | | ug/Kg | ☼ | 96 | 52 - 136 | 0 | 30 |
| Phorate | ND | H | 397 | 324 | | ug/Kg | ☼ | 82 | 50 - 125 | 1 | 29 |
| Ronnel | ND | H | 397 | 368 | | ug/Kg | ☼ | 93 | 60 - 136 | 1 | 27 |
| Disulfoton | ND | H | 397 | 352 | | ug/Kg | ☼ | 89 | 27 - 150 | 3 | 40 |
| Famphur | ND | H | 397 | 352 | | ug/Kg | ☼ | 89 | 54 - 125 | 1 | 33 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *Tributyl phosphate* | *84* | | *20 - 140* |
| *Tributyl phosphate* | *78* | | *20 - 140* |
| *Triphenylphosphate* | *106* | | *37 - 139* |
| *Triphenylphosphate* | *101* | | *37 - 139* |

Non responsive based on revised scope

# QC Association Summary

Client: Non responsive based on revised scope [redacted]
Project/Site: 3065932

Job ID: 180-97987-1

## GC Semi VOA

### Prep Batch: 297078

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-97987-1 | 3065932001 | Total/NA | Solid | 3541 | |
| MB 180-297078/1-A | Method Blank | Total/NA | Solid | 3541 | |
| LCS 180-297078/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |
| 180-97987-1 MS | 3065932001 | Total/NA | Solid | 3541 | |
| 180-97987-1 MSD | 3065932001 | Total/NA | Solid | 3541 | |

### Analysis Batch: 297301

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-97987-1 | 3065932001 | Total/NA | Solid | EPA 8141B | 297078 |
| MB 180-297078/1-A | Method Blank | Total/NA | Solid | EPA 8141B | 297078 |
| LCS 180-297078/2-A | Lab Control Sample | Total/NA | Solid | EPA 8141B | 297078 |
| 180-97987-1 MS | 3065932001 | Total/NA | Solid | EPA 8141B | 297078 |
| 180-97987-1 MSD | 3065932001 | Total/NA | Solid | EPA 8141B | 297078 |

## General Chemistry

### Analysis Batch: 297419

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-97987-1 | 3065932001 | Total/NA | Solid | 2540G | |

Non responsive based on revised scope [redacted]

[redacted]

# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: [redacted] of

Quote #:

Client Name: [redacted]

Address: [redacted]

Contact:

Phone#: [redacted]

Project Name/#: 3065932

Bill To: [redacted]

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to [redacted] approval and surcharges.

Date Required: 11/10/2019 Approved?

Email? [X] -Y [redacted]

Fax? [ ] -Y No.:

| | Container Type | G | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Container Size | 16oz | | | | | | | | | |
| | Preservative | None | | | | | | | | | |
| ANALYSES/METHOD REQUESTED | | 8141 (Disulfton, Methyl Parathion, Famphur, Parathion | | | | | Subcontract to: | [redacted] | | | |

| | Sample Description/Location (as it will appear on the lab report) | Date Collected mm/dd/yy | Time hh:mm | *G or C | **Matrix | 8141 (Disulfton, Methyl Parathion, Famphur, Parathion | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Enter Number of Containers Per Sample or Field Results Below. | | | | | | | | | |
| 1 | 3065932001 | 10/23/19 | 16:30 | G | S | 1 | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | |

Receipt Information (completed by Receiving Lab)

W.O. Temp: Therm ID:

Courier/Tracking #:

Purchase Order #:

Project Comments:

[redacted] Field Services: ☐ Pickup ☐ Labor
☐ Composite Sampling ☐ Rental Equipment
Other:

Sample/COC Comments

180-97987 Chain of Custody

SAMPLED BY (Please Print): [redacted]

Sampler Comments:

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1 [redacted] | 10/24/19 | 1500 | 2 [redacted] | 10/24/19 | 900 |
| 3 | | | 4 | | |
| 5 | | | 6 | | |
| | | | 8 | | |
| | | | 10 | | |

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE/DOD [ ] DOD

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] VA other

Reportable to PADEP? Yes [ ] No [ ]

PWSID #

Sample Disposal: Lab [ ] Special [ ]

EDDS: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

[redacted]

Rev 11/18

[redacted]

After printing this label:
**CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH**
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

# Login Sample Receipt Checklist

Non responsive based on revised scope

Job Number: 180-97987-1

**Login Number: 97987**
**List Number: 1**
**Creator:** Non responsive based on revised scope

**List Source:** Non responsive based on revised scope

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