September 2, 2022

Mr. Brian Roche
Village of Villa Park
20 South Ardmore Avenue
Villa Park, IL 60181
Email: broche@invillapark.com

ECS Project No. 53-3844

RE: Environmental Services Supporting Soil Sampling and Analysis – 320 East Wildwood Avenue, Villa Park, Illinois

Dear Mr. Roche:

At your request, ECS Midwest, LLC (ECS) was retained to perform an environmental soil analysis of the soil associated with the planned construction at the subject property. It is our understanding that the proposed construction activities will result in removal and disposal of excavation soils. To evaluate disposal options for the excavated soils, ECS performed a broad screening soil sampling and analysis as described below.

SOIL SAMPLING & ANALYSIS

In order to characterize the soils that are slated for off-site disposal, ECS collected one soil sample from one geotechnical soil boring (B-5) installed within the excavation area. Note that the soil sample collected for analysis was collected from the geotechnical soil boring and depth interval (approximately 1-4 feet) with the greatest potential for possible impacts (visual, olfactory, PID readings, etc.). Soil sampling and analysis was conducted in general accordance with 35 III. Adm. Code 1100, *Clean Construction Demolition Debris Fill Operations and Uncontaminated Soil Fill Operations*. The soil sample was analyzed for a broad range of contaminants including the following:

The soil sample was analyzed for a broad range of contaminants including the following:

Number of Samples	Analytical Parameters
Soil	
1	VOCs, SVOCs, Pesticides, PCBs, PP Metals/Cyanide, and pH

VOCS – Volatile Organic Compounds via Method 5035/8260B
SVOCs – Semi-Volatile Organic Compounds via Method 8270D
PCBs – Polychlorinated biphenyls via Method 8082A
Pesticides – Via Method 8081B
Priority Pollutant Metals/Cyanide
pH – Via Method 9045D

The sample analysis was performed by Test America of University Park, Illinois. Test America is an Illinois EPA accredited analytical laboratory. The results of the soil analysis are discussed in Section 2.1.

RESULTS OF SOIL SAMPLING

The soil sample was analyzed for a broad variety of target compounds in order to assist in the potential disposal of the excavated soils. The target compounds and findings are provided below:

Sample ID	Analysis	Test Results
B-5	VOCs	Below Maximum Allowable Concentrations
	SVOCs[1]	Below Maximum Allowable Concentrations
	Metals	Below Maximum Allowable Concentrations
	PCBs	Below Maximum Allowable Concentration
	Pesticides	Below Maximum Allowable Concentrations
	Cyanide	Below Maximum Allowable Concentration
	pH	Within an Acceptable Range

Bold and Highlighted indicates compounds were detected above applicable MACs

[1] - For disposal sites located within the City of Chicago, populated Metropolitan Statistical Area (MSA) or within a populated non-MSA

The laboratory results were compared to the numerical standards listed in 35 Ill. Adm. Code 1100, Subpart F, Maximum Allowable Concentrations of Chemical Constituents in Uncontaminated Soil Used as Fill Material at Regulated Fill Operations (MACs) for the contaminants of concern. **As indicated above, laboratory analysis did not detect chemicals of concern at concentrations in excess of their applicable MACs.** Based on experience in similar disposal at local landfills, the anticipated soils from the Subject Property appear to be suitable for disposal at a CCDD or soils-only facility located within the City of Chicago, populated Metropolitan Statistical Area (MSA) or within a populated non-MSA.

Please find attached the IEPA Form LPC-663 which certifies that this material is not impacted per the 35 III Adm. Code 1100. It is noted that local landfills can choose to apply more stringent disposal requirements and may request additional analytical data, laboratory results along with IEPA Form LPC-663 should be forwarded to the chosen landfill prior to transport. *Additionally, it should be noted that the landfill will make the final determination on whether or not they will choose to accept the waste, which could be regardless of laboratory results.* Copies of the laboratory reports and the laboratory accreditation information are attached.

If you have any questions regarding our findings or opinions, please contact either of the undersigned at (847) 279-0366. Thank you for retaining ECS Midwest, LLC for this evaluation.

Respectfully Submitted,

ECS MIDWEST, LLC

Katherine Langfoss
Assistant Staff Project Manager

Jason Warren, REM
Principal

Attachments – Laboratory Analytical Report, LPC-663 Form

Attachment I

Laboratory Analytical Report

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-221010-1
Client Project/Site: Villa Park CCDD (53:3844)

For:
ECS Midwest LLC
1575 Barclay Blvd.
Buffalo Grove, Illinois 60089

Attn: Katherine Langfoss

Authorized for release by:
8/24/2022 4:12:12 PM

Jim Knapp, Project Manager II
(630)758-0262
Jim.Knapp@et.eurofinsus.com

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

LINKS

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Case Narrative

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

Job ID: 500-221010-1

Laboratory: Eurofins Chicago

Narrative

Job Narrative
500-221010-1

Comments
No additional comments.

Receipt
The sample was received on 8/17/2022 1:40 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was -0.6º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270D: The laboratory control sample (LCS) for preparation batch 500-670809 and analytical batch 500-671141 recovered outside control limits for the following analytes: 2-Chlorophenol, Anthracene, Di-n-butyl phthalate, Hexachloroethane and N-Nitrosodiphenylamine. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

GC Semi VOA
Method 8081B: The continuing calibration verification (CCV) associated with batch 500-671149 recovered above the upper control limit for Methoxychlor and Tetrachloro-m-xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCVIS 500-671149/3).

Method 8081B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 500-670973 and analytical batch 500-671149 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

Detection Summary

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

Client Sample ID: B-5

Lab Sample ID: 500-221010-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.014	J	0.038	0.0068	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.0065	J	0.038	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.031	J *+	0.038	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.096		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.12		0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.16		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.041		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.071		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.13		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.012	J	0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.21		0.038	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.018	J	0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.045		0.038	0.0098	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.012	J	0.077	0.0070	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.013	J	0.038	0.0058	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.14		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.23		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
4,4'-DDD	0.046	F1	0.0020	0.0010	mg/Kg	1	☼	8081B	Total/NA
4,4'-DDT	0.0071	F1 F2	0.0020	0.00092	mg/Kg	1	☼	8081B	Total/NA
4,4'-DDE - DL	0.11		0.020	0.010	mg/Kg	10	☼	8081B	Total/NA
Arsenic	11	F1	1.1	0.37	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.89		0.44	0.10	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.083	J	0.22	0.039	mg/Kg	1	☼	6010B	Total/NA
Chromium	17		1.1	0.54	mg/Kg	1	☼	6010B	Total/NA
Copper	24		1.1	0.30	mg/Kg	1	☼	6010B	Total/NA
Lead	28	B F1	0.54	0.25	mg/Kg	1	☼	6010B	Total/NA
Nickel	25		1.1	0.32	mg/Kg	1	☼	6010B	Total/NA
Silver	0.28	J	0.54	0.14	mg/Kg	1	☼	6010B	Total/NA
Zinc	65		2.2	0.96	mg/Kg	1	☼	6010B	Total/NA
Mercury	0.030		0.019	0.0062	mg/Kg	1	☼	7471B	Total/NA
pH	7.5		0.2	0.2	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET CHI
8081B	Organochlorine Pesticides (GC)	SW846	EET CHI
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CHI
6010B	Metals (ICP)	SW846	EET CHI
7471B	Mercury (CVAA)	SW846	EET CHI
9012B	Cyanide, Total andor Amenable	SW846	EET CHI
9045D	pH	SW846	EET CHI
Moisture	Percent Moisture	EPA	EET CHI
3050B	Preparation, Metals	SW846	EET CHI
3541	Automated Soxhlet Extraction	SW846	EET CHI
5035	Closed System Purge and Trap	SW846	EET CHI
7471B	Preparation, Mercury	SW846	EET CHI
9010C	Cyanide, Distillation	SW846	EET CHI

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Sample Summary

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-221010-1	B-5	Solid	08/16/22 15:50	08/17/22 13:40

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

Client Sample ID: B-5
Date Collected: 08/16/22 15:50
Date Received: 08/17/22 13:40

Lab Sample ID: 500-221010-1
Matrix: Solid
Percent Solids: 85.8

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		0.020	0.0089	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Benzene	ND		0.0020	0.00052	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Bromodichloromethane	ND		0.0020	0.00042	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Bromoform	ND		0.0020	0.00060	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Bromomethane	ND		0.0051	0.0019	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Carbon disulfide	ND		0.0051	0.0011	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Carbon tetrachloride	ND		0.0020	0.00059	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Chlorobenzene	ND		0.0020	0.00075	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Chloroethane	ND		0.0051	0.0015	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Chloroform	ND		0.0020	0.00071	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Chloromethane	ND		0.0051	0.0021	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
cis-1,2-Dichloroethene	ND		0.0020	0.00057	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
cis-1,3-Dichloropropene	ND		0.0020	0.00062	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Dibromochloromethane	ND		0.0020	0.00067	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
1,1-Dichloroethane	ND		0.0020	0.00070	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
1,2-Dichloroethane	ND		0.0051	0.0016	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
1,1-Dichloroethene	ND		0.0020	0.00070	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
1,2-Dichloropropane	ND		0.0020	0.00053	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
1,3-Dichloropropene, Total	ND		0.0020	0.00072	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Ethylbenzene	ND		0.0020	0.00098	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
2-Hexanone	ND		0.0051	0.0016	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Methylene Chloride	ND		0.0051	0.0020	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Methyl Ethyl Ketone	ND		0.0051	0.0023	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
methyl isobutyl ketone	ND		0.0051	0.0015	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Methyl tert-butyl ether	ND		0.0020	0.00060	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Styrene	ND		0.0020	0.00062	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
1,1,2,2-Tetrachloroethane	ND		0.0020	0.00065	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Tetrachloroethene	ND		0.0020	0.00069	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Toluene	ND		0.0020	0.00052	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
trans-1,2-Dichloroethene	ND		0.0020	0.00090	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
trans-1,3-Dichloropropene	ND		0.0020	0.00072	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
1,1,1-Trichloroethane	ND		0.0020	0.00068	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
1,1,2-Trichloroethane	ND		0.0020	0.00088	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Trichloroethene	ND		0.0020	0.00069	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Vinyl chloride	ND		0.0020	0.00090	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1
Xylenes, Total	ND		0.0041	0.00065	mg/Kg	☼	08/17/22 17:35	08/21/22 11:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*75 - 131*	*08/17/22 17:35*	*08/21/22 11:25*	*1*
Dibromofluoromethane	*108*		*75 - 126*	*08/17/22 17:35*	*08/21/22 11:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 134*	*08/17/22 17:35*	*08/21/22 11:25*	*1*
Toluene-d8 (Surr)	*95*		*75 - 124*	*08/17/22 17:35*	*08/21/22 11:25*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**0.014**	**J**	0.038	0.0068	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Acenaphthylene	**0.0065**	**J**	0.038	0.0050	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Anthracene	**0.031**	**J *+**	0.038	0.0063	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Benzo[a]anthracene	**0.096**		0.038	0.0051	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Benzo[a]pyrene	**0.12**		0.038	0.0073	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

Client Sample ID: B-5
Date Collected: 08/16/22 15:50
Date Received: 08/17/22 13:40

Lab Sample ID: 500-221010-1
Matrix: Solid
Percent Solids: 85.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	**0.16**		0.038	0.0082	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Benzo[g,h,i]perylene	**0.041**		0.038	0.012	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Benzo[k]fluoranthene	**0.071**		0.038	0.011	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Bis(2-chloroethoxy)methane	ND		0.19	0.039	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Bis(2-chloroethyl)ether	ND		0.19	0.057	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Bis(2-ethylhexyl) phthalate	ND		0.19	0.069	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
4-Bromophenyl phenyl ether	ND		0.19	0.050	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Butyl benzyl phthalate	ND		0.19	0.072	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Carbazole	ND		0.19	0.095	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
4-Chloroaniline	ND		0.77	0.18	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
4-Chloro-3-methylphenol	ND		0.38	0.13	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2-Chloronaphthalene	ND		0.19	0.042	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2-Chlorophenol	ND	*+	0.19	0.065	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
4-Chlorophenyl phenyl ether	ND		0.19	0.044	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Chrysene	**0.13**		0.038	0.010	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Dibenz(a,h)anthracene	**0.012**	**J**	0.038	0.0073	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Dibenzofuran	ND		0.19	0.044	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
1,2-Dichlorobenzene	ND		0.19	0.045	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
1,3-Dichlorobenzene	ND		0.19	0.043	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
1,4-Dichlorobenzene	ND		0.19	0.049	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
3,3'-Dichlorobenzidine	ND		0.19	0.053	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2,4-Dichlorophenol	ND		0.38	0.090	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Diethyl phthalate	ND		0.19	0.064	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2,4-Dimethylphenol	ND		0.38	0.14	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Dimethyl phthalate	ND		0.19	0.050	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Di-n-butyl phthalate	ND	*+	0.19	0.058	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
4,6-Dinitro-2-methylphenol	ND		0.77	0.30	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2,4-Dinitrophenol	ND		0.77	0.67	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2,4-Dinitrotoluene	ND		0.19	0.060	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2,6-Dinitrotoluene	ND		0.19	0.075	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Di-n-octyl phthalate	ND		0.19	0.062	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Fluoranthene	**0.21**		0.038	0.0070	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Fluorene	**0.018**	**J**	0.038	0.0053	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Hexachlorobenzene	ND		0.077	0.0088	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Hexachlorobutadiene	ND		0.19	0.060	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Hexachlorocyclopentadiene	ND		0.77	0.22	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Hexachloroethane	ND	*+	0.19	0.058	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Indeno[1,2,3-cd]pyrene	**0.045**		0.038	0.0098	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Isophorone	ND		0.19	0.043	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2-Methylnaphthalene	**0.012**	**J**	0.077	0.0070	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2-Methylphenol	ND		0.19	0.061	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
3 & 4 Methylphenol	ND		0.19	0.063	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Naphthalene	**0.013**	**J**	0.038	0.0058	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2-Nitroaniline	ND		0.19	0.051	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
3-Nitroaniline	ND		0.38	0.12	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
4-Nitroaniline	ND		0.38	0.16	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Nitrobenzene	ND		0.038	0.0095	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2-Nitrophenol	ND		0.38	0.090	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
4-Nitrophenol	ND		0.77	0.36	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1

Client Sample ID: B-5
Date Collected: 08/16/22 15:50
Date Received: 08/17/22 13:40

Lab Sample ID: 500-221010-1
Matrix: Solid
Percent Solids: 85.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		0.077	0.046	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
N-Nitrosodiphenylamine	ND	*+	0.19	0.045	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2,2'-oxybis[1-chloropropane]	ND		0.19	0.044	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Pentachlorophenol	ND		0.77	0.61	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Phenanthrene	**0.14**		0.038	0.0053	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Phenol	ND		0.19	0.084	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
Pyrene	**0.23**		0.038	0.0075	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
1,2,4-Trichlorobenzene	ND		0.19	0.041	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2,4,5-Trichlorophenol	ND		0.38	0.087	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1
2,4,6-Trichlorophenol	ND		0.38	0.13	mg/Kg	☼	08/19/22 08:17	08/23/22 00:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*79*		*43 - 145*	*08/19/22 08:17*	*08/23/22 00:39*	*1*
2-Fluorophenol (Surr)	*104*		*31 - 166*	*08/19/22 08:17*	*08/23/22 00:39*	*1*
Nitrobenzene-d5	*62*		*37 - 147*	*08/19/22 08:17*	*08/23/22 00:39*	*1*
Phenol-d5 (Surr)	*114*		*30 - 153*	*08/19/22 08:17*	*08/23/22 00:39*	*1*
Terphenyl-d14	*107*		*42 - 157*	*08/19/22 08:17*	*08/23/22 00:39*	*1*
2,4,6-Tribromophenol (Surr)	*108*		*31 - 143*	*08/19/22 08:17*	*08/23/22 00:39*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0020	0.0013	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
alpha-BHC	ND		0.0020	0.0011	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
beta-BHC	ND		0.0020	0.0016	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
cis-Chlordane	ND		0.0020	0.0010	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
4,4'-DDD	**0.046**	**F1**	0.0020	0.0010	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
4,4'-DDT	**0.0071**	**F1 F2**	0.0020	0.00092	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
delta-BHC	ND		0.0020	0.00093	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
Dieldrin	ND	F1	0.0020	0.0010	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
Endosulfan I	ND	F1	0.0020	0.0011	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
Endosulfan II	ND	F1	0.0020	0.0011	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
Endosulfan sulfate	ND		0.0020	0.0011	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
Endrin	ND	F1	0.0020	0.00099	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
Endrin aldehyde	ND	F1 F2	0.0020	0.0011	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
Endrin ketone	ND	F1 F2	0.0020	0.00095	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
gamma-BHC (Lindane)	ND		0.0020	0.00097	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
Heptachlor	ND	F1 F2	0.0020	0.0011	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
Heptachlor epoxide	ND		0.0020	0.0010	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
Methoxychlor	ND	F1	0.0096	0.0013	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
Toxaphene	ND		0.019	0.0078	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1
trans-Chlordane	ND	F1	0.0020	0.0011	mg/Kg	☼	08/21/22 07:49	08/23/22 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*124*		*33 - 148*	*08/21/22 07:49*	*08/23/22 01:58*	*1*
Tetrachloro-m-xylene	*108*		*30 - 121*	*08/21/22 07:49*	*08/23/22 01:58*	*1*

Method: 8081B - Organochlorine Pesticides (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	**0.11**		0.020	0.010	mg/Kg	☼	08/21/22 07:49	08/23/22 20:26	10

Client Sample Results

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

Client Sample ID: B-5
Date Collected: 08/16/22 15:50
Date Received: 08/17/22 13:40

Lab Sample ID: 500-221010-1
Matrix: Solid
Percent Solids: 85.8

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*132*		*33 - 148*	*08/21/22 07:49*	*08/23/22 20:26*	*10*
Tetrachloro-m-xylene	*97*		*30 - 121*	*08/21/22 07:49*	*08/23/22 20:26*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.019	0.0075	mg/Kg	☼	08/21/22 07:49	08/22/22 19:23	1
PCB-1221	ND		0.019	0.0075	mg/Kg	☼	08/21/22 07:49	08/22/22 19:23	1
PCB-1232	ND		0.019	0.0052	mg/Kg	☼	08/21/22 07:49	08/22/22 19:23	1
PCB-1242	ND		0.019	0.0075	mg/Kg	☼	08/21/22 07:49	08/22/22 19:23	1
PCB-1248	ND		0.019	0.0091	mg/Kg	☼	08/21/22 07:49	08/22/22 19:23	1
PCB-1254	ND		0.019	0.0065	mg/Kg	☼	08/21/22 07:49	08/22/22 19:23	1
PCB-1260	ND		0.019	0.0072	mg/Kg	☼	08/21/22 07:49	08/22/22 19:23	1
Polychlorinated biphenyls, Total	ND		0.019	0.0052	mg/Kg	☼	08/21/22 07:49	08/22/22 19:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*58*		*49 - 129*	*08/21/22 07:49*	*08/22/22 19:23*	*1*
DCB Decachlorobiphenyl	*73*		*37 - 121*	*08/21/22 07:49*	*08/22/22 19:23*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	F1	2.2	0.42	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1
Arsenic	**11**	**F1**	1.1	0.37	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1
Beryllium	**0.89**		0.44	0.10	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1
Cadmium	**0.083**	**J**	0.22	0.039	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1
Chromium	**17**		1.1	0.54	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1
Copper	**24**		1.1	0.30	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1
Lead	**28**	**B F1**	0.54	0.25	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1
Nickel	**25**		1.1	0.32	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1
Selenium	ND		1.1	0.64	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1
Silver	**0.28**	**J**	0.54	0.14	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1
Thallium	ND		1.1	0.54	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1
Zinc	**65**		2.2	0.96	mg/Kg	☼	08/18/22 14:58	08/19/22 19:19	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.030**		0.019	0.0062	mg/Kg	☼	08/19/22 14:00	08/22/22 08:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.25	0.13	mg/Kg	☼	08/19/22 10:34	08/20/22 12:42	1
pH	**7.5**		0.2	0.2	SU			08/19/22 17:53	1

Definitions/Glossary

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

GC/MS VOA

Prep Batch: 670868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	5035	

Analysis Batch: 670958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	8260B	670868
MB 500-670958/7	Method Blank	Total/NA	Solid	8260B	
LCS 500-670958/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 500-670958/5	Lab Control Sample Dup	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 670809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	3541	
MB 500-670809/1-A	Method Blank	Total/NA	Solid	3541	
LCS 500-670809/2-A	Lab Control Sample	Total/NA	Solid	3541	

Analysis Batch: 671141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	8270D	670809
MB 500-670809/1-A	Method Blank	Total/NA	Solid	8270D	670809
LCS 500-670809/2-A	Lab Control Sample	Total/NA	Solid	8270D	670809

GC Semi VOA

Prep Batch: 670973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1 - DL	B-5	Total/NA	Solid	3541	
500-221010-1	B-5	Total/NA	Solid	3541	
MB 500-670973/1-A	Method Blank	Total/NA	Solid	3541	
LCS 500-670973/2-A	Lab Control Sample	Total/NA	Solid	3541	
LCS 500-670973/3-A	Lab Control Sample	Total/NA	Solid	3541	
500-221010-1 MS	B-5	Total/NA	Solid	3541	
500-221010-1 MS	B-5	Total/NA	Solid	3541	
500-221010-1 MSD	B-5	Total/NA	Solid	3541	
500-221010-1 MSD	B-5	Total/NA	Solid	3541	

Analysis Batch: 671094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	8082A	670973
MB 500-670973/1-A	Method Blank	Total/NA	Solid	8082A	670973
LCS 500-670973/3-A	Lab Control Sample	Total/NA	Solid	8082A	670973
500-221010-1 MS	B-5	Total/NA	Solid	8082A	670973
500-221010-1 MSD	B-5	Total/NA	Solid	8082A	670973

Analysis Batch: 671149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	8081B	670973
MB 500-670973/1-A	Method Blank	Total/NA	Solid	8081B	670973
LCS 500-670973/2-A	Lab Control Sample	Total/NA	Solid	8081B	670973
500-221010-1 MS	B-5	Total/NA	Solid	8081B	670973
500-221010-1 MSD	B-5	Total/NA	Solid	8081B	670973

GC Semi VOA

Analysis Batch: 671281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1 - DL	B-5	Total/NA	Solid	8081B	670973

Metals

Prep Batch: 670737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	3050B	
MB 500-670737/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 500-670737/2-A	Lab Control Sample	Total/NA	Solid	3050B	
500-221010-1 MS	B-5	Total/NA	Solid	3050B	
500-221010-1 MSD	B-5	Total/NA	Solid	3050B	
500-221010-1 DU	B-5	Total/NA	Solid	3050B	

Prep Batch: 670869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	7471B	
MB 500-670869/12-A	Method Blank	Total/NA	Solid	7471B	
LCS 500-670869/13-A	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 671030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	6010B	670737
MB 500-670737/1-A	Method Blank	Total/NA	Solid	6010B	670737
LCS 500-670737/2-A	Lab Control Sample	Total/NA	Solid	6010B	670737
500-221010-1 MS	B-5	Total/NA	Solid	6010B	670737
500-221010-1 MSD	B-5	Total/NA	Solid	6010B	670737
500-221010-1 DU	B-5	Total/NA	Solid	6010B	670737

Analysis Batch: 671096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	7471B	670869
MB 500-670869/12-A	Method Blank	Total/NA	Solid	7471B	670869
LCS 500-670869/13-A	Lab Control Sample	Total/NA	Solid	7471B	670869

General Chemistry

Prep Batch: 670636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	9010C	
MB 500-670636/1-A	Method Blank	Total/NA	Solid	9010C	
HLCS 500-670636/2-A	Lab Control Sample	Total/NA	Solid	9010C	
LCS 500-670636/3-A	Lab Control Sample	Total/NA	Solid	9010C	
LLCS 500-670636/4-A	Lab Control Sample	Total/NA	Solid	9010C	

Analysis Batch: 670664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	Moisture	

Analysis Batch: 670945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	9012B	670636
MB 500-670636/1-A	Method Blank	Total/NA	Solid	9012B	670636

General Chemistry (Continued)

Analysis Batch: 670945 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
HLCS 500-670636/2-A	Lab Control Sample	Total/NA	Solid	9012B	670636
LCS 500-670636/3-A	Lab Control Sample	Total/NA	Solid	9012B	670636
LLCS 500-670636/4-A	Lab Control Sample	Total/NA	Solid	9012B	670636

Analysis Batch: 670989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-221010-1	B-5	Total/NA	Solid	9045D	
LCS 500-670989/2	Lab Control Sample	Total/NA	Solid	9045D	
LCSD 500-670989/3	Lab Control Sample Dup	Total/NA	Solid	9045D	
500-221010-1 DU	B-5	Total/NA	Solid	9045D	

Surrogate Summary

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(75-131)	(75-126)	(70-134)	(75-124)
500-221010-1	B-5	106	108	113	95
LCS 500-670958/4	Lab Control Sample	96	99	97	99
LCSD 500-670958/5	Lab Control Sample Dup	96	99	96	98
MB 500-670958/7	Method Blank	102	101	99	95

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	NBZ	PHL	TPHL	TBP
Lab Sample ID	Client Sample ID	(43-145)	(31-166)	(37-147)	(30-153)	(42-157)	(31-143)
500-221010-1	B-5	79	104	62	114	107	108
LCS 500-670809/2-A	Lab Control Sample	125	130	101	122	111	116
MB 500-670809/1-A	Method Blank	103	138	77	104	117	131

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCBP2	TCX2
Lab Sample ID	Client Sample ID	(33-148)	(30-121)
500-221010-1	B-5	124	108
500-221010-1 MS	B-5	128	99
500-221010-1 MSD	B-5	116	93
LCS 500-670973/2-A	Lab Control Sample	89	72
MB 500-670973/1-A	Method Blank	92	88

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		DCBP1	TCX1
Lab Sample ID	Client Sample ID	(33-148)	(30-121)
500-221010-1 - DL	B-5	132	97

Surrogate Summary

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX2 (49-129)	DCBP2 (37-121)
500-221010-1	B-5	58	73
500-221010-1 MS	B-5	69	80
500-221010-1 MSD	B-5	76	91
LCS 500-670973/3-A	Lab Control Sample	73	89
MB 500-670973/1-A	Method Blank	69	79

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Client: ECS Midwest LLC
Project/Site: Villa Park CCDD (53:3844)

Job ID: 500-221010-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-670958/7
Matrix: Solid
Analysis Batch: 670958

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		0.020	0.0087	mg/Kg			08/21/22 09:42	1
Benzene	ND		0.0020	0.00051	mg/Kg			08/21/22 09:42	1
Bromodichloromethane	ND		0.0020	0.00041	mg/Kg			08/21/22 09:42	1
Bromoform	ND		0.0020	0.00058	mg/Kg			08/21/22 09:42	1
Bromomethane	ND		0.0050	0.0019	mg/Kg			08/21/22 09:42	1
Carbon disulfide	ND		0.0050	0.0010	mg/Kg			08/21/22 09:42	1
Carbon tetrachloride	ND		0.0020	0.00058	mg/Kg			08/21/22 09:42	1
Chlorobenzene	ND		0.0020	0.00074	mg/Kg			08/21/22 09:42	1
Chloroethane	ND		0.0050	0.0015	mg/Kg			08/21/22 09:42	1
Chloroform	ND		0.0020	0.00069	mg/Kg			08/21/22 09:42	1
Chloromethane	ND		0.0050	0.0020	mg/Kg			08/21/22 09:42	1
cis-1,2-Dichloroethene	ND		0.0020	0.00056	mg/Kg			08/21/22 09:42	1
cis-1,3-Dichloropropene	ND		0.0020	0.00060	mg/Kg			08/21/22 09:42	1
Dibromochloromethane	ND		0.0020	0.00065	mg/Kg			08/21/22 09:42	1
1,1-Dichloroethane	ND		0.0020	0.00069	mg/Kg			08/21/22 09:42	1
1,2-Dichloroethane	ND		0.0050	0.0016	mg/Kg			08/21/22 09:42	1
1,1-Dichloroethene	ND		0.0020	0.00069	mg/Kg			08/21/22 09:42	1
1,2-Dichloropropane	ND		0.0020	0.00052	mg/Kg			08/21/22 09:42	1
1,3-Dichloropropene, Total	ND		0.0020	0.00070	mg/Kg			08/21/22 09:42	1
Ethylbenzene	ND		0.0020	0.00096	mg/Kg			08/21/22 09:42	1
2-Hexanone	ND		0.0050	0.0016	mg/Kg			08/21/22 09:42	1
Methylene Chloride	ND		0.0050	0.0020	mg/Kg			08/21/22 09:42	1
Methyl Ethyl Ketone	ND		0.0050	0.0022	mg/Kg			08/21/22 09:42	1
methyl isobutyl ketone	ND		0.0050	0.0015	mg/Kg			08/21/22 09:42	1
Methyl tert-butyl ether	ND		0.0020	0.00059	mg/Kg			08/21/22 09:42	1
Styrene	ND		0.0020	0.00060	mg/Kg			08/21/22 09:42	1
1,1,2,2-Tetrachloroethane	ND		0.0020	0.00064	mg/Kg			08/21/22 09:42	1
Tetrachloroethene	ND		0.0020	0.00068	mg/Kg			08/21/22 09:42	1
Toluene	ND		0.0020	0.00051	mg/Kg			08/21/22 09:42	1
trans-1,2-Dichloroethene	ND		0.0020	0.00089	mg/Kg			08/21/22 09:42	1
trans-1,3-Dichloropropene	ND		0.0020	0.00070	mg/Kg			08/21/22 09:42	1
1,1,1-Trichloroethane	ND		0.0020	0.00067	mg/Kg			08/21/22 09:42	1
1,1,2-Trichloroethane	ND		0.0020	0.00086	mg/Kg			08/21/22 09:42	1
Trichloroethene	ND		0.0020	0.00068	mg/Kg			08/21/22 09:42	1
Vinyl chloride	ND		0.0020	0.00089	mg/Kg			08/21/22 09:42	1
Xylenes, Total	ND		0.0040	0.00064	mg/Kg			08/21/22 09:42	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*75 - 131*		*08/21/22 09:42*	*1*
Dibromofluoromethane	*101*		*75 - 126*		*08/21/22 09:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 134*		*08/21/22 09:42*	*1*
Toluene-d8 (Surr)	*95*		*75 - 124*		*08/21/22 09:42*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-670958/4
Matrix: Solid
Analysis Batch: 670958

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	0.0500	0.0430		mg/Kg		86	40 - 150
Benzene	0.0500	0.0500		mg/Kg		100	70 - 125
Bromodichloromethane	0.0500	0.0528		mg/Kg		106	67 - 129
Bromoform	0.0500	0.0596		mg/Kg		119	68 - 136
Bromomethane	0.0500	0.0481		mg/Kg		96	70 - 130
Carbon disulfide	0.0500	0.0443		mg/Kg		89	70 - 129
Carbon tetrachloride	0.0500	0.0517		mg/Kg		103	75 - 125
Chlorobenzene	0.0500	0.0530		mg/Kg		106	50 - 150
Chloroethane	0.0500	0.0473		mg/Kg		95	75 - 125
Chloroform	0.0500	0.0543		mg/Kg		109	57 - 135
Chloromethane	0.0500	0.0400		mg/Kg		80	70 - 125
cis-1,2-Dichloroethene	0.0500	0.0510		mg/Kg		102	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0487		mg/Kg		97	70 - 125
Dibromochloromethane	0.0500	0.0546		mg/Kg		109	69 - 125
1,1-Dichloroethane	0.0500	0.0501		mg/Kg		100	70 - 125
1,2-Dichloroethane	0.0500	0.0538		mg/Kg		108	70 - 130
1,1-Dichloroethene	0.0500	0.0469		mg/Kg		94	70 - 120
1,2-Dichloropropane	0.0500	0.0470		mg/Kg		94	70 - 125
Ethylbenzene	0.0500	0.0534		mg/Kg		107	61 - 136
2-Hexanone	0.0500	0.0348		mg/Kg		70	48 - 146
Methylene Chloride	0.0500	0.0496		mg/Kg		99	70 - 126
Methyl Ethyl Ketone	0.0500	0.0410		mg/Kg		82	47 - 138
methyl isobutyl ketone	0.0500	0.0366		mg/Kg		73	50 - 148
Methyl tert-butyl ether	0.0500	0.0493		mg/Kg		99	50 - 140
Styrene	0.0500	0.0543		mg/Kg		109	70 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0506		mg/Kg		101	70 - 122
Tetrachloroethene	0.0500	0.0553		mg/Kg		111	70 - 124
Toluene	0.0500	0.0506		mg/Kg		101	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0511		mg/Kg		102	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0468		mg/Kg		94	70 - 125
1,1,1-Trichloroethane	0.0500	0.0518		mg/Kg		104	70 - 128
1,1,2-Trichloroethane	0.0500	0.0524		mg/Kg		105	70 - 125
Trichloroethene	0.0500	0.0541		mg/Kg		108	70 - 125
Vinyl chloride	0.0500	0.0505		mg/Kg		101	70 - 125
Xylenes, Total	0.100	0.106		mg/Kg		106	53 - 147

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*75 - 131*
Dibromofluoromethane	*99*		*75 - 126*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 134*
Toluene-d8 (Surr)	*99*		*75 - 124*

Lab Sample ID: LCSD 500-670958/5
Matrix: Solid
Analysis Batch: 670958

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	0.0500	0.0433		mg/Kg		87	40 - 150	1	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 500-670958/5
Matrix: Solid
Analysis Batch: 670958

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.0500	0.0459		mg/Kg		92	70 - 125	8	30
Bromodichloromethane			0.0500	0.0486		mg/Kg		97	67 - 129	8	30
Bromoform			0.0500	0.0532		mg/Kg		106	68 - 136	11	30
Bromomethane			0.0500	0.0489		mg/Kg		98	70 - 130	2	30
Carbon disulfide			0.0500	0.0410		mg/Kg		82	70 - 129	8	30
Carbon tetrachloride			0.0500	0.0479		mg/Kg		96	75 - 125	8	30
Chlorobenzene			0.0500	0.0487		mg/Kg		97	50 - 150	8	30
Chloroethane			0.0500	0.0462		mg/Kg		92	75 - 125	2	30
Chloroform			0.0500	0.0505		mg/Kg		101	57 - 135	7	30
Chloromethane			0.0500	0.0410		mg/Kg		82	70 - 125	3	30
cis-1,2-Dichloroethene			0.0500	0.0474		mg/Kg		95	70 - 125	7	30
cis-1,3-Dichloropropene			0.0500	0.0438		mg/Kg		88	70 - 125	11	30
Dibromochloromethane			0.0500	0.0488		mg/Kg		98	69 - 125	11	30
1,1-Dichloroethane			0.0500	0.0467		mg/Kg		93	70 - 125	7	30
1,2-Dichloroethane			0.0500	0.0487		mg/Kg		97	70 - 130	10	30
1,1-Dichloroethene			0.0500	0.0445		mg/Kg		89	70 - 120	5	30
1,2-Dichloropropane			0.0500	0.0433		mg/Kg		87	70 - 125	8	30
Ethylbenzene			0.0500	0.0483		mg/Kg		97	61 - 136	10	30
2-Hexanone			0.0500	0.0376		mg/Kg		75	48 - 146	8	30
Methylene Chloride			0.0500	0.0461		mg/Kg		92	70 - 126	7	30
Methyl Ethyl Ketone			0.0500	0.0423		mg/Kg		85	47 - 138	3	30
methyl isobutyl ketone			0.0500	0.0361		mg/Kg		72	50 - 148	2	30
Methyl tert-butyl ether			0.0500	0.0449		mg/Kg		90	50 - 140	9	30
Styrene			0.0500	0.0491		mg/Kg		98	70 - 125	10	30
1,1,2,2-Tetrachloroethane			0.0500	0.0452		mg/Kg		90	70 - 122	11	30
Tetrachloroethene			0.0500	0.0505		mg/Kg		101	70 - 124	9	30
Toluene			0.0500	0.0458		mg/Kg		92	70 - 125	10	30
trans-1,2-Dichloroethene			0.0500	0.0477		mg/Kg		95	70 - 125	7	30
trans-1,3-Dichloropropene			0.0500	0.0423		mg/Kg		85	70 - 125	10	30
1,1,1-Trichloroethane			0.0500	0.0491		mg/Kg		98	70 - 128	5	30
1,1,2-Trichloroethane			0.0500	0.0466		mg/Kg		93	70 - 125	12	30
Trichloroethene			0.0500	0.0499		mg/Kg		100	70 - 125	8	30
Vinyl chloride			0.0500	0.0510		mg/Kg		102	70 - 125	1	30
Xylenes, Total			0.100	0.0961		mg/Kg		96	53 - 147	10	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*75 - 131*
Dibromofluoromethane	*99*		*75 - 126*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 134*
Toluene-d8 (Surr)	*98*		*75 - 124*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-670809/1-A
Matrix: Solid
Analysis Batch: 671141

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 670809

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.033	0.0060	mg/Kg		08/19/22 08:17	08/22/22 16:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-670809/1-A
Matrix: Solid
Analysis Batch: 671141

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 670809

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.033	0.0044	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Anthracene	ND		0.033	0.0056	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Benzo[a]anthracene	ND		0.033	0.0045	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Benzo[a]pyrene	ND		0.033	0.0064	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Benzo[b]fluoranthene	ND		0.033	0.0072	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Benzo[g,h,i]perylene	ND		0.033	0.011	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Benzo[k]fluoranthene	ND		0.033	0.0098	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Bis(2-chloroethoxy)methane	ND		0.17	0.034	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Bis(2-chloroethyl)ether	ND		0.17	0.050	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Bis(2-ethylhexyl) phthalate	ND		0.17	0.061	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
4-Bromophenyl phenyl ether	ND		0.17	0.044	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Butyl benzyl phthalate	ND		0.17	0.063	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Carbazole	ND		0.17	0.083	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
4-Chloroaniline	ND		0.67	0.16	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
4-Chloro-3-methylphenol	ND		0.33	0.11	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2-Chloronaphthalene	ND		0.17	0.037	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2-Chlorophenol	ND		0.17	0.057	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
4-Chlorophenyl phenyl ether	ND		0.17	0.039	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Chrysene	ND		0.033	0.0091	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Dibenz(a,h)anthracene	ND		0.033	0.0064	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Dibenzofuran	ND		0.17	0.039	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
1,2-Dichlorobenzene	ND		0.17	0.040	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
1,3-Dichlorobenzene	ND		0.17	0.037	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
1,4-Dichlorobenzene	ND		0.17	0.043	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
3,3'-Dichlorobenzidine	ND		0.17	0.047	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2,4-Dichlorophenol	ND		0.33	0.079	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Diethyl phthalate	ND		0.17	0.056	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2,4-Dimethylphenol	ND		0.33	0.13	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Dimethyl phthalate	ND		0.17	0.043	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Di-n-butyl phthalate	ND		0.17	0.051	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
4,6-Dinitro-2-methylphenol	ND		0.67	0.27	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2,4-Dinitrophenol	ND		0.67	0.59	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2,4-Dinitrotoluene	ND		0.17	0.053	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2,6-Dinitrotoluene	ND		0.17	0.065	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Di-n-octyl phthalate	ND		0.17	0.054	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Fluoranthene	ND		0.033	0.0062	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Fluorene	ND		0.033	0.0047	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Hexachlorobenzene	ND		0.067	0.0077	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Hexachlorobutadiene	ND		0.17	0.052	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Hexachlorocyclopentadiene	ND		0.67	0.19	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Hexachloroethane	ND		0.17	0.051	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Indeno[1,2,3-cd]pyrene	ND		0.033	0.0086	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Isophorone	ND		0.17	0.037	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2-Methylnaphthalene	ND		0.067	0.0061	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2-Methylphenol	ND		0.17	0.053	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
3 & 4 Methylphenol	ND		0.17	0.055	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Naphthalene	ND		0.033	0.0051	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2-Nitroaniline	ND		0.17	0.045	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
3-Nitroaniline	ND		0.33	0.10	mg/Kg		08/19/22 08:17	08/22/22 16:29	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-670809/1-A
Matrix: Solid
Analysis Batch: 671141

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 670809

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	ND		0.33	0.14	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Nitrobenzene	ND		0.033	0.0083	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2-Nitrophenol	ND		0.33	0.079	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
4-Nitrophenol	ND		0.67	0.32	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
N-Nitrosodi-n-propylamine	ND		0.067	0.041	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
N-Nitrosodiphenylamine	ND		0.17	0.039	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2,2'-oxybis[1-chloropropane]	ND		0.17	0.039	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Pentachlorophenol	ND		0.67	0.53	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Phenanthrene	ND		0.033	0.0046	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Phenol	ND		0.17	0.074	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
Pyrene	ND		0.033	0.0066	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
1,2,4-Trichlorobenzene	ND		0.17	0.036	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2,4,5-Trichlorophenol	ND		0.33	0.076	mg/Kg		08/19/22 08:17	08/22/22 16:29	1
2,4,6-Trichlorophenol	ND		0.33	0.11	mg/Kg		08/19/22 08:17	08/22/22 16:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*103*		*43 - 145*	*08/19/22 08:17*	*08/22/22 16:29*	*1*
2-Fluorophenol (Surr)	*138*		*31 - 166*	*08/19/22 08:17*	*08/22/22 16:29*	*1*
Nitrobenzene-d5	*77*		*37 - 147*	*08/19/22 08:17*	*08/22/22 16:29*	*1*
Phenol-d5 (Surr)	*104*		*30 - 153*	*08/19/22 08:17*	*08/22/22 16:29*	*1*
Terphenyl-d14	*117*		*42 - 157*	*08/19/22 08:17*	*08/22/22 16:29*	*1*
2,4,6-Tribromophenol (Surr)	*131*		*31 - 143*	*08/19/22 08:17*	*08/22/22 16:29*	*1*

Lab Sample ID: LCS 500-670809/2-A
Matrix: Solid
Analysis Batch: 671141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670809

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	1.33	1.47		mg/Kg		110	65 - 124
Acenaphthylene	1.33	1.38		mg/Kg		104	68 - 120
Anthracene	1.33	1.55	*+	mg/Kg		116	70 - 114
Benzo[a]anthracene	1.33	1.35		mg/Kg		101	67 - 122
Benzo[a]pyrene	1.33	1.48		mg/Kg		111	65 - 133
Benzo[b]fluoranthene	1.33	1.42		mg/Kg		107	69 - 129
Benzo[g,h,i]perylene	1.33	1.54		mg/Kg		115	72 - 131
Benzo[k]fluoranthene	1.33	1.44		mg/Kg		108	68 - 127
Bis(2-chloroethoxy)methane	1.33	1.26		mg/Kg		94	60 - 112
Bis(2-chloroethyl)ether	1.33	1.21		mg/Kg		91	55 - 111
Bis(2-ethylhexyl) phthalate	1.33	1.52		mg/Kg		114	72 - 131
4-Bromophenyl phenyl ether	1.33	1.49		mg/Kg		112	68 - 118
Butyl benzyl phthalate	1.33	1.53		mg/Kg		115	71 - 129
Carbazole	1.33	1.59		mg/Kg		119	65 - 142
4-Chloroaniline	1.33	0.803		mg/Kg		60	30 - 150
4-Chloro-3-methylphenol	1.33	1.51		mg/Kg		114	65 - 122
2-Chloronaphthalene	1.33	1.41		mg/Kg		106	69 - 114
2-Chlorophenol	1.33	1.56	*+	mg/Kg		117	64 - 110
4-Chlorophenyl phenyl ether	1.33	1.32		mg/Kg		99	62 - 119
Chrysene	1.33	1.44		mg/Kg		108	63 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-670809/2-A
Matrix: Solid
Analysis Batch: 671141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670809

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dibenz(a,h)anthracene	1.33	1.60		mg/Kg		120	64 - 131
Dibenzofuran	1.33	1.40		mg/Kg		105	66 - 115
1,2-Dichlorobenzene	1.33	1.45		mg/Kg		109	62 - 110
1,3-Dichlorobenzene	1.33	1.37		mg/Kg		103	65 - 124
1,4-Dichlorobenzene	1.33	1.37		mg/Kg		103	61 - 110
3,3'-Dichlorobenzidine	1.33	0.863		mg/Kg		65	35 - 128
2,4-Dichlorophenol	1.33	1.47		mg/Kg		110	58 - 120
Diethyl phthalate	1.33	1.54		mg/Kg		115	58 - 120
2,4-Dimethylphenol	1.33	1.38		mg/Kg		103	60 - 110
Dimethyl phthalate	1.33	1.50		mg/Kg		113	69 - 116
Di-n-butyl phthalate	1.33	1.65	*+	mg/Kg		124	65 - 120
4,6-Dinitro-2-methylphenol	2.67	1.62		mg/Kg		61	10 - 110
2,4-Dinitrophenol	2.67	0.765		mg/Kg		29	10 - 100
2,4-Dinitrotoluene	1.33	1.61		mg/Kg		121	69 - 124
2,6-Dinitrotoluene	1.33	1.56		mg/Kg		117	70 - 123
Di-n-octyl phthalate	1.33	1.65		mg/Kg		124	68 - 134
Fluoranthene	1.33	1.56		mg/Kg		117	62 - 120
Fluorene	1.33	1.39		mg/Kg		104	62 - 120
Hexachlorobenzene	1.33	1.64		mg/Kg		123	63 - 124
Hexachlorobutadiene	1.33	1.51		mg/Kg		113	56 - 120
Hexachlorocyclopentadiene	1.33	ND		mg/Kg		10	10 - 133
Hexachloroethane	1.33	1.54	*+	mg/Kg		116	60 - 114
Indeno[1,2,3-cd]pyrene	1.33	1.54		mg/Kg		115	68 - 130
Isophorone	1.33	1.34		mg/Kg		100	55 - 110
2-Methylnaphthalene	1.33	1.39		mg/Kg		104	69 - 112
2-Methylphenol	1.33	1.56		mg/Kg		117	60 - 120
3 & 4 Methylphenol	1.33	1.53		mg/Kg		115	57 - 120
Naphthalene	1.33	1.38		mg/Kg		103	63 - 110
2-Nitroaniline	1.33	1.38		mg/Kg		103	57 - 124
3-Nitroaniline	1.33	0.917		mg/Kg		69	40 - 122
4-Nitroaniline	1.33	1.23		mg/Kg		92	60 - 160
Nitrobenzene	1.33	1.30		mg/Kg		98	60 - 116
2-Nitrophenol	1.33	1.47		mg/Kg		110	60 - 120
4-Nitrophenol	2.67	2.37		mg/Kg		89	30 - 122
N-Nitrosodi-n-propylamine	1.33	1.46		mg/Kg		109	56 - 118
N-Nitrosodiphenylamine	1.33	1.51	*+	mg/Kg		113	65 - 112
2,2'-oxybis[1-chloropropane]	1.33	1.31		mg/Kg		99	40 - 124
Pentachlorophenol	2.67	1.44		mg/Kg		54	13 - 112
Phenanthrene	1.33	1.52		mg/Kg		114	62 - 120
Phenol	1.33	1.50		mg/Kg		113	56 - 122
Pyrene	1.33	1.46		mg/Kg		110	61 - 128
1,2,4-Trichlorobenzene	1.33	1.38		mg/Kg		103	66 - 117
2,4,5-Trichlorophenol	1.33	1.59		mg/Kg		119	50 - 120
2,4,6-Trichlorophenol	1.33	1.40		mg/Kg		105	57 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*125*		*43 - 145*
2-Fluorophenol (Surr)	*130*		*31 - 166*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-670809/2-A
Matrix: Solid
Analysis Batch: 671141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670809

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*101*		*37 - 147*
Phenol-d5 (Surr)	*122*		*30 - 153*
Terphenyl-d14	*111*		*42 - 157*
2,4,6-Tribromophenol (Surr)	*116*		*31 - 143*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 500-670973/1-A
Matrix: Solid
Analysis Batch: 671149

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 670973

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0017	0.0012	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
alpha-BHC	ND		0.0017	0.00095	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
beta-BHC	ND		0.0017	0.0014	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
cis-Chlordane	ND		0.0017	0.00090	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
4,4'-DDD	ND		0.0017	0.00091	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
4,4'-DDE	ND		0.0017	0.00087	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
4,4'-DDT	ND		0.0017	0.00080	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
delta-BHC	ND		0.0017	0.00081	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
Dieldrin	ND		0.0017	0.00088	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
Endosulfan I	ND		0.0017	0.00091	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
Endosulfan II	ND		0.0017	0.00093	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
Endosulfan sulfate	ND		0.0017	0.00093	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
Endrin	ND		0.0017	0.00086	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
Endrin aldehyde	ND		0.0017	0.00096	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
Endrin ketone	ND		0.0017	0.00082	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
gamma-BHC (Lindane)	ND		0.0017	0.00084	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
Heptachlor	ND		0.0017	0.00091	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
Heptachlor epoxide	ND		0.0017	0.00091	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
Methoxychlor	ND		0.0083	0.0011	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
Toxaphene	ND		0.017	0.0067	mg/Kg		08/21/22 07:49	08/22/22 18:18	1
trans-Chlordane	ND		0.0017	0.00097	mg/Kg		08/21/22 07:49	08/22/22 18:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*92*		*33 - 148*	*08/21/22 07:49*	*08/22/22 18:18*	*1*
Tetrachloro-m-xylene	*88*		*30 - 121*	*08/21/22 07:49*	*08/22/22 18:18*	*1*

Lab Sample ID: LCS 500-670973/2-A
Matrix: Solid
Analysis Batch: 671149

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670973

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	0.0133	0.0126		mg/Kg		94	52 - 122
alpha-BHC	0.0133	0.0118		mg/Kg		88	50 - 123
beta-BHC	0.0133	0.0126		mg/Kg		94	44 - 140
cis-Chlordane	0.0133	0.0130		mg/Kg		98	52 - 129
4,4'-DDD	0.0133	0.0136		mg/Kg		102	47 - 137

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 500-670973/2-A
Matrix: Solid
Analysis Batch: 671149

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670973

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDE	0.0133	0.0145		mg/Kg		108	50 - 130
4,4'-DDT	0.0133	0.0141		mg/Kg		106	46 - 143
delta-BHC	0.0133	0.0131		mg/Kg		98	57 - 125
Dieldrin	0.0133	0.0134		mg/Kg		101	51 - 133
Endosulfan I	0.0133	0.0129		mg/Kg		96	30 - 120
Endosulfan II	0.0133	0.0138		mg/Kg		103	30 - 120
Endosulfan sulfate	0.0133	0.0133		mg/Kg		100	42 - 150
Endrin	0.0133	0.0138		mg/Kg		104	43 - 144
Endrin aldehyde	0.0133	0.0137		mg/Kg		103	39 - 131
Endrin ketone	0.0133	0.0132		mg/Kg		99	51 - 135
gamma-BHC (Lindane)	0.0133	0.0125		mg/Kg		94	50 - 122
Heptachlor	0.0133	0.0117		mg/Kg		88	53 - 129
Heptachlor epoxide	0.0133	0.0132		mg/Kg		99	50 - 139
Methoxychlor	0.0133	0.0150		mg/Kg		113	45 - 144
trans-Chlordane	0.0133	0.0131		mg/Kg		98	52 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*89*		*33 - 148*
Tetrachloro-m-xylene	*72*		*30 - 121*

Lab Sample ID: 500-221010-1 MS
Matrix: Solid
Analysis Batch: 671149

Client Sample ID: B-5
Prep Type: Total/NA
Prep Batch: 670973

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	ND		0.0152	0.0178		mg/Kg	☼	117	52 - 122
alpha-BHC	ND		0.0152	0.0165		mg/Kg	☼	109	50 - 123
beta-BHC	ND		0.0152	0.0157		mg/Kg	☼	103	44 - 140
cis-Chlordane	ND		0.0152	0.0179		mg/Kg	☼	118	52 - 129
4,4'-DDD	0.046	F1	0.0152	0.0815	E F1	mg/Kg	☼	231	47 - 137
4,4'-DDE	0.17	E	0.0152	0.194	E 4	mg/Kg	☼	159	50 - 130
4,4'-DDT	0.0071	F1 F2	0.0152	0.00622	F1	mg/Kg	☼	-6	46 - 143
delta-BHC	ND		0.0152	0.0167		mg/Kg	☼	110	57 - 125
Dieldrin	ND	F1	0.0152	0.00730	F1	mg/Kg	☼	48	51 - 133
Endosulfan I	ND	F1	0.0152	0.0226	F1	mg/Kg	☼	149	30 - 120
Endosulfan II	ND	F1	0.0152	0.0198	F1	mg/Kg	☼	130	30 - 120
Endosulfan sulfate	ND		0.0152	0.0148		mg/Kg	☼	97	42 - 150
Endrin	ND	F1	0.0152	ND	F1	mg/Kg	☼	0	43 - 144
Endrin aldehyde	ND	F1 F2	0.0152	0.00267	F1	mg/Kg	☼	18	39 - 131
Endrin ketone	ND	F1 F2	0.0152	0.00877		mg/Kg	☼	58	51 - 135
gamma-BHC (Lindane)	ND		0.0152	0.0127		mg/Kg	☼	84	50 - 122
Heptachlor	ND	F1 F2	0.0152	0.00848		mg/Kg	☼	56	53 - 129
Heptachlor epoxide	ND		0.0152	0.0188		mg/Kg	☼	124	50 - 139
Methoxychlor	ND	F1	0.0152	ND	F1	mg/Kg	☼	0	45 - 144
trans-Chlordane	ND	F1	0.0152	0.0240	F1	mg/Kg	☼	159	52 - 132

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*128*		*33 - 148*

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 500-221010-1 MS
Matrix: Solid
Analysis Batch: 671149

Client Sample ID: B-5
Prep Type: Total/NA
Prep Batch: 670973

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	*99*		*30 - 121*

Lab Sample ID: 500-221010-1 MSD
Matrix: Solid
Analysis Batch: 671149

Client Sample ID: B-5
Prep Type: Total/NA
Prep Batch: 670973

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Aldrin	ND		0.0153	0.0173		mg/Kg	☼	113	52 - 122	3	30
alpha-BHC	ND		0.0153	0.0155		mg/Kg	☼	101	50 - 123	6	30
beta-BHC	ND		0.0153	0.0151		mg/Kg	☼	98	44 - 140	4	30
cis-Chlordane	ND		0.0153	0.0179		mg/Kg	☼	116	52 - 129	0	30
4,4'-DDD	0.046	F1	0.0153	0.0815	E F1	mg/Kg	☼	229	47 - 137	0	30
4,4'-DDE	0.17	E	0.0153	0.192	E 4	mg/Kg	☼	141	50 - 130	1	30
4,4'-DDT	0.0071	F1 F2	0.0153	0.00444	F1 F2	mg/Kg	☼	-17	46 - 143	33	30
delta-BHC	ND		0.0153	0.0168		mg/Kg	☼	109	57 - 125	0	30
Dieldrin	ND	F1	0.0153	0.00924		mg/Kg	☼	60	51 - 133	24	30
Endosulfan I	ND	F1	0.0153	0.0228	F1	mg/Kg	☼	148	30 - 120	1	30
Endosulfan II	ND	F1	0.0153	0.0159		mg/Kg	☼	104	30 - 120	21	30
Endosulfan sulfate	ND		0.0153	0.0142		mg/Kg	☼	93	42 - 150	4	30
Endrin	ND	F1	0.0153	ND	F1	mg/Kg	☼	0	43 - 144	NC	30
Endrin aldehyde	ND	F1	0.0153	0.00201	F1 F2	mg/Kg	☼	13	39 - 131	47	30
Endrin ketone	ND	F1 F2	0.0153	0.00457	F1 F2	mg/Kg	☼	30	51 - 135	63	30
gamma-BHC (Lindane)	ND		0.0153	0.0106		mg/Kg	☼	69	50 - 122	18	30
Heptachlor	ND	F1 F2	0.0153	0.00602	F1 F2	mg/Kg	☼	39	53 - 129	34	30
Heptachlor epoxide	ND		0.0153	0.0180		mg/Kg	☼	117	50 - 139	5	30
Methoxychlor	ND	*+ F1	0.0153	0.00200	J F1	mg/Kg	☼	13	45 - 144	NC	30
trans-Chlordane	ND	F1	0.0153	0.0232	F1	mg/Kg	☼	151	52 - 132	4	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl	*116*		*33 - 148*
Tetrachloro-m-xylene	*93*		*30 - 121*

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

Lab Sample ID: MB 500-670973/1-A
Matrix: Solid
Analysis Batch: 671094

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 670973

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.017	0.0066	mg/Kg		08/21/22 07:49	08/22/22 15:41	1
PCB-1221	ND		0.017	0.0066	mg/Kg		08/21/22 07:49	08/22/22 15:41	1
PCB-1232	ND		0.017	0.0045	mg/Kg		08/21/22 07:49	08/22/22 15:41	1
PCB-1242	ND		0.017	0.0065	mg/Kg		08/21/22 07:49	08/22/22 15:41	1
PCB-1248	ND		0.017	0.0079	mg/Kg		08/21/22 07:49	08/22/22 15:41	1
PCB-1254	ND		0.017	0.0057	mg/Kg		08/21/22 07:49	08/22/22 15:41	1
PCB-1260	ND		0.017	0.0063	mg/Kg		08/21/22 07:49	08/22/22 15:41	1
Polychlorinated biphenyls, Total	ND		0.017	0.0045	mg/Kg		08/21/22 07:49	08/22/22 15:41	1

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

Lab Sample ID: MB 500-670973/1-A
Matrix: Solid
Analysis Batch: 671094

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 670973

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		49 - 129	08/21/22 07:49	08/22/22 15:41	1
DCB Decachlorobiphenyl	79		37 - 121	08/21/22 07:49	08/22/22 15:41	1

Lab Sample ID: LCS 500-670973/3-A
Matrix: Solid
Analysis Batch: 671094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670973

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
PCB-1016			0.167	0.118		mg/Kg		71	57 - 120		
PCB-1260			0.167	0.127		mg/Kg		76	61 - 125		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	73		49 - 129
DCB Decachlorobiphenyl	89		37 - 121

Lab Sample ID: 500-221010-1 MS
Matrix: Solid
Analysis Batch: 671094

Client Sample ID: B-5
Prep Type: Total/NA
Prep Batch: 670973

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
PCB-1016	ND		0.193	0.124		mg/Kg	☼	64	57 - 120		
PCB-1260	ND		0.193	0.132		mg/Kg	☼	68	61 - 125		

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	69		49 - 129
DCB Decachlorobiphenyl	80		37 - 121

Lab Sample ID: 500-221010-1 MSD
Matrix: Solid
Analysis Batch: 671094

Client Sample ID: B-5
Prep Type: Total/NA
Prep Batch: 670973

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-1016	ND		0.191	0.141		mg/Kg	☼	74	57 - 120	12	30
PCB-1260	ND		0.191	0.148		mg/Kg	☼	77	61 - 125	11	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	76		49 - 129
DCB Decachlorobiphenyl	91		37 - 121

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 500-670737/1-A
Matrix: Solid
Analysis Batch: 671030

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 670737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.39	mg/Kg		08/18/22 14:58	08/19/22 18:36	1
Arsenic	ND		1.0	0.34	mg/Kg		08/18/22 14:58	08/19/22 18:36	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 500-670737/1-A
Matrix: Solid
Analysis Batch: 671030

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 670737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.40	0.093	mg/Kg		08/18/22 14:58	08/19/22 18:36	1
Cadmium	ND		0.20	0.036	mg/Kg		08/18/22 14:58	08/19/22 18:36	1
Chromium	ND		1.0	0.50	mg/Kg		08/18/22 14:58	08/19/22 18:36	1
Copper	ND		1.0	0.28	mg/Kg		08/18/22 14:58	08/19/22 18:36	1
Lead	0.334	J	0.50	0.23	mg/Kg		08/18/22 14:58	08/19/22 18:36	1
Nickel	ND		1.0	0.29	mg/Kg		08/18/22 14:58	08/19/22 18:36	1
Selenium	ND		1.0	0.59	mg/Kg		08/18/22 14:58	08/19/22 18:36	1
Silver	ND		0.50	0.13	mg/Kg		08/18/22 14:58	08/19/22 18:36	1
Thallium	ND		1.0	0.50	mg/Kg		08/18/22 14:58	08/19/22 18:36	1
Zinc	ND		2.0	0.88	mg/Kg		08/18/22 14:58	08/19/22 18:36	1

Lab Sample ID: LCS 500-670737/2-A
Matrix: Solid
Analysis Batch: 671030

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	45.4		mg/Kg		91	80 - 120
Arsenic	10.0	9.10		mg/Kg		91	80 - 120
Beryllium	5.00	4.61		mg/Kg		92	80 - 120
Cadmium	5.00	4.55		mg/Kg		91	80 - 120
Chromium	20.0	18.4		mg/Kg		92	80 - 120
Copper	25.0	24.0		mg/Kg		96	80 - 120
Lead	10.0	9.09		mg/Kg		91	80 - 120
Nickel	50.0	46.0		mg/Kg		92	80 - 120
Selenium	10.0	8.39		mg/Kg		84	80 - 120
Silver	5.00	4.19		mg/Kg		84	80 - 120
Thallium	10.0	9.06		mg/Kg		91	80 - 120
Zinc	50.0	44.7		mg/Kg		89	80 - 120

Lab Sample ID: 500-221010-1 MS
Matrix: Solid
Analysis Batch: 671030

Client Sample ID: B-5
Prep Type: Total/NA
Prep Batch: 670737

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND	F1	57.3	15.0	F1	mg/Kg	☼	26	75 - 125
Arsenic	11	F1	11.5	18.6	F1	mg/Kg	☼	70	75 - 125
Beryllium	0.89		5.73	5.94		mg/Kg	☼	88	75 - 125
Cadmium	0.083	J	5.73	4.75		mg/Kg	☼	81	75 - 125
Chromium	17		22.9	38.9		mg/Kg	☼	97	75 - 125
Copper	24		28.6	51.2		mg/Kg	☼	95	75 - 125
Lead	28	B F1	11.5	36.0	F1	mg/Kg	☼	74	75 - 125
Nickel	25		57.3	79.4		mg/Kg	☼	96	75 - 125
Selenium	ND		11.5	8.64		mg/Kg	☼	75	75 - 125
Silver	0.28	J	5.73	4.70		mg/Kg	☼	77	75 - 125
Thallium	ND		11.5	10.2		mg/Kg	☼	89	75 - 125
Zinc	65		57.3	119		mg/Kg	☼	95	75 - 125

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 500-221010-1 MSD
Matrix: Solid
Analysis Batch: 671030

Client Sample ID: B-5
Prep Type: Total/NA
Prep Batch: 670737

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND	F1	54.2	15.5	F1	mg/Kg	☼	29	75 - 125	3	20
Arsenic	11	F1	10.8	17.5	F1	mg/Kg	☼	64	75 - 125	6	20
Beryllium	0.89		5.42	5.62		mg/Kg	☼	87	75 - 125	6	20
Cadmium	0.083	J	5.42	4.50		mg/Kg	☼	81	75 - 125	5	20
Chromium	17		21.7	37.6		mg/Kg	☼	97	75 - 125	3	20
Copper	24		27.1	48.9		mg/Kg	☼	92	75 - 125	5	20
Lead	28	B F1	10.8	34.3	F1	mg/Kg	☼	63	75 - 125	5	20
Nickel	25		54.2	76.8		mg/Kg	☼	96	75 - 125	3	20
Selenium	ND		10.8	8.67		mg/Kg	☼	80	75 - 125	0	20
Silver	0.28	J	5.42	4.41		mg/Kg	☼	76	75 - 125	6	20
Thallium	ND		10.8	9.65		mg/Kg	☼	89	75 - 125	6	20
Zinc	65		54.2	118		mg/Kg	☼	99	75 - 125	1	20

Lab Sample ID: 500-221010-1 DU
Matrix: Solid
Analysis Batch: 671030

Client Sample ID: B-5
Prep Type: Total/NA
Prep Batch: 670737

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Antimony	ND	F1		0.572	J	mg/Kg	☼			NC	20
Arsenic	11	F1		8.38	F3	mg/Kg	☼			23	20
Beryllium	0.89			0.898		mg/Kg	☼			0.3	20
Cadmium	0.083	J		0.0670	J F5	mg/Kg	☼			22	20
Chromium	17			17.4		mg/Kg	☼			5	20
Copper	24			23.8		mg/Kg	☼			1	20
Lead	28	B F1		25.8		mg/Kg	☼			6	20
Nickel	25			24.7		mg/Kg	☼			0.07	20
Selenium	ND			ND		mg/Kg	☼			NC	20
Silver	0.28	J		0.221	J F5	mg/Kg	☼			22	20
Thallium	ND			0.907	J	mg/Kg	☼			NC	20
Zinc	65			63.1		mg/Kg	☼			2	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 500-670869/12-A
Matrix: Solid
Analysis Batch: 671096

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 670869

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0056	mg/Kg		08/19/22 14:00	08/22/22 10:32	1

Lab Sample ID: LCS 500-670869/13-A
Matrix: Solid
Analysis Batch: 671096

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670869

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			0.167	0.166		mg/Kg		99	80 - 120		

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 500-670636/1-A
Matrix: Solid
Analysis Batch: 670945

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 670636

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.24	0.12	mg/Kg		08/19/22 10:34	08/20/22 11:33	1

Lab Sample ID: HLCS 500-670636/2-A
Matrix: Solid
Analysis Batch: 670945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670636

Analyte			Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Cyanide, Total			9.60	9.92		mg/Kg		103	90 - 110		

Lab Sample ID: LCS 500-670636/3-A
Matrix: Solid
Analysis Batch: 670945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670636

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Cyanide, Total			2.40	2.54		mg/Kg		106	85 - 115		

Lab Sample ID: LLCS 500-670636/4-A
Matrix: Solid
Analysis Batch: 670945

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 670636

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits		
Cyanide, Total			1.20	1.24		mg/Kg		104	75 - 125		

Method: 9045D - pH

Lab Sample ID: 500-221010-1 DU
Matrix: Solid
Analysis Batch: 670989

Client Sample ID: B-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	7.5			7.6		SU				0.4	

Lab Chronicle

Client: ECS Midwest LLC
Job ID: 500-221010-1
Project/Site: Villa Park CCDD (53:3844)

Client Sample ID: B-5
Lab Sample ID: 500-221010-1
Date Collected: 08/16/22 15:50
Matrix: Solid
Date Received: 08/17/22 13:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9045D		1	670989	LWN	EET CHI	08/19/22 17:53
Total/NA	Analysis	Moisture		1	670664	LWN	EET CHI	08/18/22 10:43

Client Sample ID: B-5
Lab Sample ID: 500-221010-1
Date Collected: 08/16/22 15:50
Matrix: Solid
Date Received: 08/17/22 13:40
Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			670868	WRE	EET CHI	08/17/22 17:35
Total/NA	Analysis	8260B		1	670958	PMF	EET CHI	08/21/22 11:25
Total/NA	Prep	3541			670809	KN	EET CHI	08/19/22 08:17 - 08/19/22 15:00 [1]
Total/NA	Analysis	8270D		1	671141	SS	EET CHI	08/23/22 00:39
Total/NA	Prep	3541			670973	KN	EET CHI	08/21/22 07:49 - 08/21/22 15:00 [1]
Total/NA	Analysis	8081B		1	671149	SS	EET CHI	08/23/22 01:58
Total/NA	Prep	3541	DL		670973	KN	EET CHI	08/21/22 07:49 - 08/21/22 15:00 [1]
Total/NA	Analysis	8081B	DL	10	671281	SS	EET CHI	08/23/22 20:26
Total/NA	Prep	3541			670973	KN	EET CHI	08/21/22 07:49 - 08/21/22 15:00 [1]
Total/NA	Analysis	8082A		1	671094	NB	EET CHI	08/22/22 19:23
Total/NA	Prep	3050B			670737	LMB	EET CHI	08/18/22 14:58 - 08/18/22 15:28 [1]
Total/NA	Analysis	6010B		1	671030	JJB	EET CHI	08/19/22 19:19
Total/NA	Prep	7471B			670869	MJG	EET CHI	08/19/22 14:00
Total/NA	Analysis	7471B		1	671096	MJG	EET CHI	08/22/22 08:49
Total/NA	Prep	9010C			670636	LP	EET CHI	08/19/22 10:34 - 08/19/22 11:04 [1]
Total/NA	Analysis	9012B		1	670945	JMP	EET CHI	08/20/22 12:42

[1] Completion dates and times are reported or not reported per method requirements or individual lab discretion.

Laboratory References:

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

Accreditation/Certification Summary

Client: ECS Midwest LLC
Job ID: 500-221010-1
Project/Site: Villa Park CCDD (53:3844)

Laboratory: Eurofins Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	IL00035	04-30-23

Chicago
2417 Bond Street

University Park IL 60466
phone 708 534 5200 fax 708 534 5363

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Kathy Langfoss	Site Contact: Kathy Langfoss		COC No
ECS Midwest LLC	Tel/Fax:Same	Lab Contact: Jim Knapp		1 of 1 COCs
1575 Barclay Blvd	**Analysis Turnaround Time**			Job No
Buffalo Grove IL 60089	Calendar (C) or Work Days (W)			500-221010
Phone	☐ 2 weeks			SDG No
224-478-9420 FAX 847 279-0369	■ Standard (7 day)			
Project Name Villa Park CCDD	☐ 3 day			
Site 53	☐ 1 day			
P O # 53 3944				

500-221010 COC

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	VOCs	SVOCs	PP Metals and Cyanide	Pestisides	PCBS	pH	Sample Specific Notes
1 B-5	8/16/22	3:50	Grab	Soil	Kit		X	X	X	X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification

☐ *Non-Hazard* ☐ *Flammable* ☐ *Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ *Return To Client* ☒ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments.

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Cole Fullerton	ECS Midwest	8/16/22		EETA	8/17/22 1445
	EETA 8/17	1340	Haller Buckley	EETA	8/17/22 1340
	Company	Date/Time	Received by	Company	Date/Time

-0.1 → -0.6

Login Sample Receipt Checklist

Client: ECS Midwest LLC

Job Number: 500-221010-1

Login Number: 221010
List Number: 1
Creator: Buckley, Paula M

List Source: Eurofins Chicago

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	-0.6 samples were not frozen
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Attachment II

LPC-663 Form

Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: Villa Park CCDD Office Phone Number, if available: _____

Physical Site Location (address, including number and street):
320 East Wildwood Avenue

City: Villa Park State: IL Zip Code: 60181

County: DuPage Township: 39N - York Township

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.88769 (Decimal Degrees) Longitude: - 87.97162 (-Decimal Degrees)

Identify how the lat/long data were determined:

○ GPS ⊘ Map Interpolation ○ Photo Interpolation ○ Survey ○ Other

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): _____ Approximate End Date (mm/dd/yyyy): _____

Estimated Volume of debris (cu. Yd.): _____

II. Owner/Operator Information for Source Site

Site Owner

Name: _____

Street Address: _____

PO Box: _____

City: _____ State: _____

Zip Code: _____ Phone: _____

Contact: _____

Email, if available: _____

Site Operator

Name: _____

Street Address: _____

PO Box: _____

City: _____ State: _____

Zip Code: _____ Phone: _____

Contact: _____

Email, if available: _____

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: Villa Park CCDD Latitude: 41.88769 Longitude: - 87.97162

Uncontaminated Soil Certification

III. Basis for Certification and Attachments

For each item listed below, reference the attachments to this form that provide the required information.

a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

The soil samples were taken from soil borings advanced within the area to be excavated and removed for off-site disposal. See ECS' "Environmental Services Supporting Soil Sampling and Analysis –320 East Wildwood Avenue, Villa Park, Illinois" (ECS Project No. 53-3844), dated September 2, 2022.

b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0,including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

The analyzed VOCs, SVOCs, PP Metals, Cyanide, Pesticides, and PCBs were found to be below maximum allowable concentrations in the area to be excavated. Additionally, pH was found to be within the acceptable range. See Test America Laboratory Report 500-221010-1.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Bernardo Martinez Tarin (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: ECS Midwest, LLC

Street Address: 1575 Barclay Boulevard

City: Buffalo Grove State: IL Zip Code: 60089

Phone: (847) 279-0366

Bernardo Martinez Tarin

Printed Name:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

Sep 6, 2022

Date:

9/6/22

LICENSED PROFESSIONAL ENGINEER
BERNARDO
MARTINEZ
TARIN
062.073624
OF ILLINOIS

Exp. 11/30/2

P.E or L.P.G. Seal: