TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
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TestAmerica Job ID: 600-153610-1
Client Project/Site: Geneva Industries/Fuhrmann Energy

For:
CH2M Hill Constructors, Inc.
14701 St. Mary's Lane
Suite 300
Houston, Texas 77079-2923

Attn: Mr. John Ynfante

Authorized for release by:
9/15/2017 5:06:44 PM

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7080239

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

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

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Job ID: 600-153610-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-153610-1

Comments
No additional comments.

Receipt
The samples were received on 9/10/2017 3:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7º C.

GC/MS VOA
Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 600-220982 recovered outside control limits for the following analyte: 1,4-Dioxane. This analytes was biased high in the LCS/LCSD and was 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(s) 8082: The internal standard eluted outside the retention time window on the RTX-CLPesticides 1 column for the following samples: GIF-SS-003 (600-153610-1), GIF-SS-004 (600-153610-4), (LCS 600-221054/2-A), (MB 600-221054/1-A), (600-153610-A-4-D MS) and (600-153610-A-4-E MSD). This retention time shift was taken into account when reviewing the sample(s) for target compounds.

Method(s) 8082: Surrogate recovery for the following samples was outside control limits: GIF-SS-003 (600-153610-1), GIF-SS-004 (600-153610-4), (600-153610-A-4-D MS) and (600-153610-A-4-E MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8082: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with preparation batch 600-221054 and analytical batch 600-221128 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of PCB-1016 in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method(s) 8082: The internal standard eluted outside the retention time window on the RTX-CLPesticides 1 column for the following samples: GIF-GW-001 (600-153610-2) and (LCSD 600-221012/3-A). This retention time shift was taken into account when reviewing the sample(s) for target compounds.

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(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 600-221012.

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

Method Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL HOU
2540B	Percent Moisture	SM20	TAL HOU

Protocol References:

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

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

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-153610-1	GIF-SS-003	Solid	09/10/17 10:05	09/10/17 15:10
600-153610-2	GIF-GW-001	Water	09/10/17 09:20	09/10/17 15:10
600-153610-3	GIF-GW-002	Water	09/10/17 09:45	09/10/17 15:10
600-153610-4	GIF-SS-004	Solid	09/10/17 10:30	09/10/17 15:10

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

Client Sample ID: GIF-SS-003

Date Collected: 09/10/17 10:05
Date Received: 09/10/17 15:10

Lab Sample ID: 600-153610-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.54	U	3.7	0.54	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,1,2,2-Tetrachloroethane	0.64	U	3.7	0.64	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.1	U	3.7	1.1	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,1,2-Trichloroethane	0.54	U	29	0.54	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,1-Dichloroethane	0.64	U	3.7	0.64	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,1-Dichloroethene	0.89	U	3.7	0.89	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,2,3-Trichlorobenzene	0.45	U	3.7	0.45	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,2,4-Trichlorobenzene	1.4	U	3.7	1.4	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,2-Dibromo-3-Chloropropane	1.8	U	3.7	1.8	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,2-Dibromoethane	0.75	U	3.7	0.75	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,2-Dichlorobenzene	0.59	U	3.7	0.59	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,2-Dichloroethane	0.66	U	3.7	0.66	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,2-Dichloroethene, Total	1.4	U	7.3	1.4	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,2-Dichloropropane	0.52	U	3.7	0.52	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,3-Dichlorobenzene	0.52	U	3.7	0.52	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,4-Dichlorobenzene	0.48	U	3.7	0.48	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
1,4-Dioxane	45	U *	370	45	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
2-Butanone (MEK)	1.4	U	7.3	1.4	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
2-Hexanone	0.74	U	7.3	0.74	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
4-Methyl-2-pentanone (MIBK)	1.1	U	7.3	1.1	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Acetone	1.2	U	7.3	1.2	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Benzene	0.46	U	3.7	0.46	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Bromodichloromethane	0.48	U	3.7	0.48	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Bromoform	1.0	U	3.7	1.0	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Bromomethane	0.61	U	7.3	0.61	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Carbon disulfide	0.40	U	7.3	0.40	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Carbon tetrachloride	0.83	U	3.7	0.83	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Chlorobenzene	0.70	U	3.7	0.70	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Chlorobromomethane	1.3	U	3.7	1.3	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Chloroethane	1.0	U	7.3	1.0	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Chloroform	0.48	U	7.3	0.48	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Chloromethane	1.2	U	7.3	1.2	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
cis-1,2-Dichloroethene	0.61	U	3.7	0.61	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
cis-1,3-Dichloropropene	0.40	U	3.7	0.40	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Cyclohexane	1.4	U	3.7	1.4	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Dibromochloromethane	0.69	U	3.7	0.69	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Dichlorodifluoromethane	1.1	U	3.7	1.1	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Ethylbenzene	0.75	U	3.7	0.75	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Isopropylbenzene	0.67	U	3.7	0.67	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Methyl acetate	2.1	U	3.7	2.1	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Methyl tert-butyl ether	1.3	U	3.7	1.3	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Methylcyclohexane	1.1	U	3.7	1.1	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Methylene Chloride	1.6	U	7.3	1.6	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
m-Xylene & p-Xylene	1.1	U	3.7	1.1	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
o-Xylene	0.83	U	3.7	0.83	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Styrene	0.52	U	3.7	0.52	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Tetrachloroethene	0.52	U	3.7	0.52	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Toluene	1.0	U	3.7	1.0	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
trans-1,2-Dichloroethene	0.84	U	3.7	0.84	ug/Kg		09/10/17 16:30	09/11/17 11:07	1

Client Sample ID: GIF-SS-003

Lab Sample ID: 600-153610-1
Date Collected: 09/10/17 10:05
Matrix: Solid
Date Received: 09/10/17 15:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	0.43	U	3.7	0.43	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Trichloroethene	1.0	U	3.7	1.0	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Trichlorofluoromethane	0.48	U	7.3	0.48	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Vinyl acetate	0.68	U	7.3	0.68	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Vinyl chloride	0.66	U	7.3	0.66	ug/Kg		09/10/17 16:30	09/11/17 11:07	1
Xylenes, Total	0.83	U	3.7	0.83	ug/Kg		09/10/17 16:30	09/11/17 11:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*61 - 130*	*09/10/17 16:30*	*09/11/17 11:07*	*1*
4-Bromofluorobenzene	*120*		*57 - 140*	*09/10/17 16:30*	*09/11/17 11:07*	*1*
Dibromofluoromethane	*75*		*68 - 140*	*09/10/17 16:30*	*09/11/17 11:07*	*1*
Toluene-d8 (Surr)	*84*		*50 - 130*	*09/10/17 16:30*	*09/11/17 11:07*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	1.6	U *	17	1.6	ug/Kg		09/11/17 15:18	09/12/17 13:45	1
PCB-1221	8.6	U *	17	8.6	ug/Kg		09/11/17 15:18	09/12/17 13:45	1
PCB-1232	6.7	U *	17	6.7	ug/Kg		09/11/17 15:18	09/12/17 13:45	1
PCB-1242	**87**	*	17	1.2	ug/Kg		09/11/17 15:18	09/12/17 13:45	1
PCB-1248	2.5	U *	17	2.5	ug/Kg		09/11/17 15:18	09/12/17 13:45	1
PCB-1254	2.2	U *	17	2.2	ug/Kg		09/11/17 15:18	09/12/17 13:45	1
PCB-1260	13	U *	17	13	ug/Kg		09/11/17 15:18	09/12/17 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*111*	*	*10 - 150*	*09/11/17 15:18*	*09/12/17 13:45*	*1*
DCB Decachlorobiphenyl	*162*	*X *	*10 - 150*	*09/11/17 15:18*	*09/12/17 13:45*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**25.4**		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	**74.6**		1.0	1.0	%			09/11/17 16:23	1

Client Sample ID: GIF-GW-001

Lab Sample ID: 600-153610-2
Date Collected: 09/10/17 09:20
Matrix: Water
Date Received: 09/10/17 15:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.54	U *	1.0	0.54	ug/L		09/11/17 09:59	09/12/17 15:55	1
PCB-1221	0.44	U *	1.0	0.44	ug/L		09/11/17 09:59	09/12/17 15:55	1
PCB-1232	0.12	U *	1.0	0.12	ug/L		09/11/17 09:59	09/12/17 15:55	1
PCB-1242	**8.7**	*	1.0	0.16	ug/L		09/11/17 09:59	09/12/17 15:55	1
PCB-1248	0.20	U *	1.0	0.20	ug/L		09/11/17 09:59	09/12/17 15:55	1
PCB-1254	0.14	U *	1.0	0.14	ug/L		09/11/17 09:59	09/12/17 15:55	1
PCB-1260	0.34	U *	1.0	0.34	ug/L		09/11/17 09:59	09/12/17 15:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*98*	*	*32 - 150*	*09/11/17 09:59*	*09/12/17 15:55*	*1*
DCB Decachlorobiphenyl	*77*	*	*26 - 130*	*09/11/17 09:59*	*09/12/17 15:55*	*1*

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

Client Sample ID: GIF-GW-002

Lab Sample ID: 600-153610-3
Matrix: Water
Date Collected: 09/10/17 09:45
Date Received: 09/10/17 15:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.54	U	1.0	0.54	ug/L		09/11/17 09:59	09/12/17 16:23	1
PCB-1221	0.44	U	1.0	0.44	ug/L		09/11/17 09:59	09/12/17 16:23	1
PCB-1232	0.12	U	1.0	0.12	ug/L		09/11/17 09:59	09/12/17 16:23	1
PCB-1242	0.16	U	1.0	0.16	ug/L		09/11/17 09:59	09/12/17 16:23	1
PCB-1248	0.20	U	1.0	0.20	ug/L		09/11/17 09:59	09/12/17 16:23	1
PCB-1254	0.14	U	1.0	0.14	ug/L		09/11/17 09:59	09/12/17 16:23	1
PCB-1260	0.34	U	1.0	0.34	ug/L		09/11/17 09:59	09/12/17 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*115*		*32 - 150*	*09/11/17 09:59*	*09/12/17 16:23*	*1*
DCB Decachlorobiphenyl	*80*		*26 - 130*	*09/11/17 09:59*	*09/12/17 16:23*	*1*

Client Sample ID: GIF-SS-004

Lab Sample ID: 600-153610-4
Matrix: Solid
Date Collected: 09/10/17 10:30
Date Received: 09/10/17 15:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.70	U	4.7	0.70	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,1,2,2-Tetrachloroethane	0.82	U	4.7	0.82	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	4.7	1.4	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,1,2-Trichloroethane	0.69	U	38	0.69	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,1-Dichloroethane	0.82	U	4.7	0.82	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,1-Dichloroethene	1.2	U	4.7	1.2	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,2,3-Trichlorobenzene	0.59	U	4.7	0.59	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,2,4-Trichlorobenzene	1.9	U	4.7	1.9	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,2-Dibromo-3-Chloropropane	2.3	U	4.7	2.3	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,2-Dibromoethane	0.96	U	4.7	0.96	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,2-Dichlorobenzene	0.76	U	4.7	0.76	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,2-Dichloroethane	0.85	U	4.7	0.85	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,2-Dichloroethene, Total	1.8	U	9.4	1.8	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,2-Dichloropropane	0.67	U	4.7	0.67	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,3-Dichlorobenzene	0.67	U	4.7	0.67	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,4-Dichlorobenzene	0.62	U	4.7	0.62	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
1,4-Dioxane	59	U *	470	59	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
2-Butanone (MEK)	1.8	U	9.4	1.8	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
2-Hexanone	0.95	U	9.4	0.95	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
4-Methyl-2-pentanone (MIBK)	1.4	U	9.4	1.4	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Acetone	1.6	U	9.4	1.6	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Benzene	0.60	U	4.7	0.60	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Bromodichloromethane	0.62	U	4.7	0.62	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Bromoform	1.3	U	4.7	1.3	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Bromomethane	0.78	U	9.4	0.78	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Carbon disulfide	0.52	U	9.4	0.52	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Carbon tetrachloride	1.1	U	4.7	1.1	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Chlorobenzene	0.91	U	4.7	0.91	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Chlorobromomethane	1.7	U	4.7	1.7	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Chloroethane	1.3	U	9.4	1.3	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Chloroform	0.62	U	9.4	0.62	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Chloromethane	1.6	U	9.4	1.6	ug/Kg		09/10/17 16:30	09/11/17 11:31	1

Client Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

Client Sample ID: GIF-SS-004

Date Collected: 09/10/17 10:30
Date Received: 09/10/17 15:10

Lab Sample ID: 600-153610-4

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.78	U	4.7	0.78	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
cis-1,3-Dichloropropene	0.51	U	4.7	0.51	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Cyclohexane	1.8	U	4.7	1.8	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Dibromochloromethane	0.89	U	4.7	0.89	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Dichlorodifluoromethane	1.5	U	4.7	1.5	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Ethylbenzene	0.96	U	4.7	0.96	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Isopropylbenzene	0.87	U	4.7	0.87	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Methyl acetate	2.7	U	4.7	2.7	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Methyl tert-butyl ether	1.7	U	4.7	1.7	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Methylcyclohexane	1.4	U	4.7	1.4	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Methylene Chloride	2.1	U	9.4	2.1	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
m-Xylene & p-Xylene	1.4	U	4.7	1.4	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
o-Xylene	1.1	U	4.7	1.1	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Styrene	0.67	U	4.7	0.67	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Tetrachloroethene	0.67	U	4.7	0.67	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Toluene	1.3	U	4.7	1.3	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
trans-1,2-Dichloroethene	1.1	U	4.7	1.1	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
trans-1,3-Dichloropropene	0.55	U	4.7	0.55	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Trichloroethene	1.3	U	4.7	1.3	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Trichlorofluoromethane	0.62	U	9.4	0.62	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Vinyl acetate	0.88	U	9.4	0.88	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Vinyl chloride	0.85	U	9.4	0.85	ug/Kg		09/10/17 16:30	09/11/17 11:31	1
Xylenes, Total	1.1	U	4.7	1.1	ug/Kg		09/10/17 16:30	09/11/17 11:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*61 - 130*	*09/10/17 16:30*	*09/11/17 11:31*	*1*
4-Bromofluorobenzene	*118*		*57 - 140*	*09/10/17 16:30*	*09/11/17 11:31*	*1*
Dibromofluoromethane	*75*		*68 - 140*	*09/10/17 16:30*	*09/11/17 11:31*	*1*
Toluene-d8 (Surr)	*82*		*50 - 130*	*09/10/17 16:30*	*09/11/17 11:31*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	1.6	U * F1	17	1.6	ug/Kg		09/11/17 15:18	09/12/17 14:07	1
PCB-1221	8.6	U *	17	8.6	ug/Kg		09/11/17 15:18	09/12/17 14:07	1
PCB-1232	6.7	U *	17	6.7	ug/Kg		09/11/17 15:18	09/12/17 14:07	1
PCB-1242	**130**	*	17	1.2	ug/Kg		09/11/17 15:18	09/12/17 14:07	1
PCB-1248	2.5	U *	17	2.5	ug/Kg		09/11/17 15:18	09/12/17 14:07	1
PCB-1254	2.2	U *	17	2.2	ug/Kg		09/11/17 15:18	09/12/17 14:07	1
PCB-1260	13	U *	17	13	ug/Kg		09/11/17 15:18	09/12/17 14:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*109*	*	*10 - 150*	*09/11/17 15:18*	*09/12/17 14:07*	*1*
DCB Decachlorobiphenyl	*204*	*X *	*10 - 150*	*09/11/17 15:18*	*09/12/17 14:07*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**31.9**		1.0	1.0	%			09/11/17 16:23	1
Percent Solids	**68.1**		1.0	1.0	%			09/11/17 16:23	1

Definitions/Glossary

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance limits.

GC Semi VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits
X	Surrogate is outside control limits
U	Indicates the analyte was analyzed for but not detected.
F1	MS and/or MSD Recovery is outside acceptance limits.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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)

Surrogate Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(61-130)	(57-140)	(68-140)	(50-130)
600-153610-1	GIF-SS-003	92	120	75	84
600-153610-4	GIF-SS-004	92	118	75	82
LCS 600-220982/3	Lab Control Sample	92	120	82	94
LCSD 600-220982/4	Lab Control Sample Dup	92	122	84	96
MB 600-220982/6	Method Blank	108	111	86	85

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCB1
Lab Sample ID	Client Sample ID	(10-150)	(10-150)
600-153610-1	GIF-SS-003	111 *	162 X *
600-153610-4	GIF-SS-004	109 *	204 X *
600-153610-4 MS	GIF-SS-004	105 *	214 X *
600-153610-4 MSD	GIF-SS-004	96 *	234 X *
LCS 600-221054/2-A	Lab Control Sample	99 *	146 *
MB 600-221054/1-A	Method Blank	95 *	124 *

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCB1
Lab Sample ID	Client Sample ID	(32-150)	(26-130)
600-153610-2	GIF-GW-001	98 *	77 *
600-153610-2 - RA	GIF-GW-001	112 *	74 *
600-153610-3	GIF-GW-002	115	80
600-153610-3 - RA	GIF-GW-002	93	77
LCS 600-221012/2-A	Lab Control Sample	122	86
LCS 600-221012/2-A - RA	Lab Control Sample	96	87
LCSD 600-221012/3-A	Lab Control Sample Dup	116 *	86 *
LCSD 600-221012/3-A - RA	Lab Control Sample Dup	92 *	83 *
MB 600-221012/1-A	Method Blank	115	103
MB 600-221012/1-A - RA	Method Blank	95	102

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

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

Lab Sample ID: MB 600-220982/6
Matrix: Solid
Analysis Batch: 220982

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.74	U	5.0	0.74	ug/Kg			09/11/17 09:53	1
1,1,2,2-Tetrachloroethane	0.87	U	5.0	0.87	ug/Kg			09/11/17 09:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.4	U	5.0	1.4	ug/Kg			09/11/17 09:53	1
1,1,2-Trichloroethane	0.73	U	40	0.73	ug/Kg			09/11/17 09:53	1
1,1-Dichloroethane	0.87	U	5.0	0.87	ug/Kg			09/11/17 09:53	1
1,1-Dichloroethene	1.2	U	5.0	1.2	ug/Kg			09/11/17 09:53	1
1,2,3-Trichlorobenzene	0.62	U	5.0	0.62	ug/Kg			09/11/17 09:53	1
1,2,4-Trichlorobenzene	2.0	U	5.0	2.0	ug/Kg			09/11/17 09:53	1
1,2-Dibromo-3-Chloropropane	2.4	U	5.0	2.4	ug/Kg			09/11/17 09:53	1
1,2-Dibromoethane	1.0	U	5.0	1.0	ug/Kg			09/11/17 09:53	1
1,2-Dichlorobenzene	0.80	U	5.0	0.80	ug/Kg			09/11/17 09:53	1
1,2-Dichloroethane	0.90	U	5.0	0.90	ug/Kg			09/11/17 09:53	1
1,2-Dichloroethene, Total	1.9	U	10	1.9	ug/Kg			09/11/17 09:53	1
1,2-Dichloropropane	0.71	U	5.0	0.71	ug/Kg			09/11/17 09:53	1
1,3-Dichlorobenzene	0.71	U	5.0	0.71	ug/Kg			09/11/17 09:53	1
1,4-Dichlorobenzene	0.66	U	5.0	0.66	ug/Kg			09/11/17 09:53	1
1,4-Dioxane	62	U	500	62	ug/Kg			09/11/17 09:53	1
2-Butanone (MEK)	1.9	U	10	1.9	ug/Kg			09/11/17 09:53	1
2-Hexanone	1.0	U	10	1.0	ug/Kg			09/11/17 09:53	1
4-Methyl-2-pentanone (MIBK)	1.5	U	10	1.5	ug/Kg			09/11/17 09:53	1
Acetone	1.7	U	10	1.7	ug/Kg			09/11/17 09:53	1
Benzene	0.63	U	5.0	0.63	ug/Kg			09/11/17 09:53	1
Bromodichloromethane	0.66	U	5.0	0.66	ug/Kg			09/11/17 09:53	1
Bromoform	1.4	U	5.0	1.4	ug/Kg			09/11/17 09:53	1
Bromomethane	0.83	U	10	0.83	ug/Kg			09/11/17 09:53	1
Carbon disulfide	0.55	U	10	0.55	ug/Kg			09/11/17 09:53	1
Carbon tetrachloride	1.1	U	5.0	1.1	ug/Kg			09/11/17 09:53	1
Chlorobenzene	0.96	U	5.0	0.96	ug/Kg			09/11/17 09:53	1
Chlorobromomethane	1.8	U	5.0	1.8	ug/Kg			09/11/17 09:53	1
Chloroethane	1.4	U	10	1.4	ug/Kg			09/11/17 09:53	1
Chloroform	0.66	U	10	0.66	ug/Kg			09/11/17 09:53	1
Chloromethane	1.7	U	10	1.7	ug/Kg			09/11/17 09:53	1
cis-1,2-Dichloroethene	0.83	U	5.0	0.83	ug/Kg			09/11/17 09:53	1
cis-1,3-Dichloropropene	0.54	U	5.0	0.54	ug/Kg			09/11/17 09:53	1
Cyclohexane	1.9	U	5.0	1.9	ug/Kg			09/11/17 09:53	1
Dibromochloromethane	0.94	U	5.0	0.94	ug/Kg			09/11/17 09:53	1
Dichlorodifluoromethane	1.5	U	5.0	1.5	ug/Kg			09/11/17 09:53	1
Ethylbenzene	1.0	U	5.0	1.0	ug/Kg			09/11/17 09:53	1
Isopropylbenzene	0.92	U	5.0	0.92	ug/Kg			09/11/17 09:53	1
Methyl acetate	2.9	U	5.0	2.9	ug/Kg			09/11/17 09:53	1
Methyl tert-butyl ether	1.8	U	5.0	1.8	ug/Kg			09/11/17 09:53	1
Methylcyclohexane	1.5	U	5.0	1.5	ug/Kg			09/11/17 09:53	1
Methylene Chloride	2.2	U	10	2.2	ug/Kg			09/11/17 09:53	1
m-Xylene & p-Xylene	1.5	U	5.0	1.5	ug/Kg			09/11/17 09:53	1
o-Xylene	1.1	U	5.0	1.1	ug/Kg			09/11/17 09:53	1
Styrene	0.71	U	5.0	0.71	ug/Kg			09/11/17 09:53	1
Tetrachloroethene	0.71	U	5.0	0.71	ug/Kg			09/11/17 09:53	1
Toluene	1.4	U	5.0	1.4	ug/Kg			09/11/17 09:53	1

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

Lab Sample ID: MB 600-220982/6
Matrix: Solid
Analysis Batch: 220982

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	1.1	U	5.0	1.1	ug/Kg			09/11/17 09:53	1
trans-1,3-Dichloropropene	0.58	U	5.0	0.58	ug/Kg			09/11/17 09:53	1
Trichloroethene	1.4	U	5.0	1.4	ug/Kg			09/11/17 09:53	1
Trichlorofluoromethane	0.66	U	10	0.66	ug/Kg			09/11/17 09:53	1
Vinyl acetate	0.93	U	10	0.93	ug/Kg			09/11/17 09:53	1
Vinyl chloride	0.90	U	10	0.90	ug/Kg			09/11/17 09:53	1
Xylenes, Total	1.1	U	5.0	1.1	ug/Kg			09/11/17 09:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*61 - 130*		*09/11/17 09:53*	*1*
4-Bromofluorobenzene	*111*		*57 - 140*		*09/11/17 09:53*	*1*
Dibromofluoromethane	*86*		*68 - 140*		*09/11/17 09:53*	*1*
Toluene-d8 (Surr)	*85*		*50 - 130*		*09/11/17 09:53*	*1*

Lab Sample ID: LCS 600-220982/3
Matrix: Solid
Analysis Batch: 220982

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	50.0	37.2		ug/Kg		74	59 - 130
1,1,2,2-Tetrachloroethane	50.0	59.2		ug/Kg		118	61 - 138
1,1,2-Trichloro-1,2,2-trifluoroetha ne	50.0	36.2		ug/Kg		72	48 - 150
1,1,2-Trichloroethane	50.0	50.7		ug/Kg		101	67 - 134
1,1-Dichloroethane	50.0	38.2		ug/Kg		76	63 - 140
1,1-Dichloroethene	50.0	36.5		ug/Kg		73	62 - 142
1,2,3-Trichlorobenzene	50.0	42.2		ug/Kg		84	52 - 135
1,2,4-Trichlorobenzene	50.0	39.6		ug/Kg		79	53 - 136
1,2-Dibromo-3-Chloropropane	50.0	54.9		ug/Kg		110	29 - 150
1,2-Dibromoethane	50.0	55.1		ug/Kg		110	65 - 136
1,2-Dichlorobenzene	50.0	43.1		ug/Kg		86	61 - 131
1,2-Dichloroethane	50.0	50.1		ug/Kg		100	58 - 137
1,2-Dichloroethene, Total	100	77.2		ug/Kg		77	70 - 130
1,2-Dichloropropane	50.0	46.1		ug/Kg		92	70 - 130
1,3-Dichlorobenzene	50.0	41.8		ug/Kg		84	63 - 132
1,4-Dichlorobenzene	50.0	42.9		ug/Kg		86	65 - 131
1,4-Dioxane	1000	1650	*	ug/Kg		165	31 - 150
2-Butanone (MEK)	100	146		ug/Kg		146	33 - 150
2-Hexanone	100	131		ug/Kg		131	35 - 150
4-Methyl-2-pentanone (MIBK)	100	130		ug/Kg		130	21 - 150
Acetone	100	147		ug/Kg		147	13 - 150
Benzene	50.0	40.3		ug/Kg		81	70 - 131
Bromodichloromethane	50.0	45.5		ug/Kg		91	67 - 138
Bromoform	50.0	51.6		ug/Kg		103	43 - 150
Bromomethane	50.0	43.9		ug/Kg		88	37 - 147
Carbon disulfide	50.0	38.0		ug/Kg		76	51 - 141
Carbon tetrachloride	50.0	35.2		ug/Kg		70	58 - 130
Chlorobenzene	50.0	42.3		ug/Kg		85	63 - 131

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

Lab Sample ID: LCS 600-220982/3
Matrix: Solid
Analysis Batch: 220982

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobromomethane	50.0	43.5		ug/Kg		87	70 - 132
Chloroethane	50.0	34.2		ug/Kg		68	40 - 150
Chloroform	50.0	39.7		ug/Kg		79	69 - 130
Chloromethane	50.0	44.7		ug/Kg		89	44 - 141
cis-1,2-Dichloroethene	50.0	38.8		ug/Kg		78	70 - 130
cis-1,3-Dichloropropene	50.0	46.6		ug/Kg		93	65 - 130
Cyclohexane	50.0	37.4		ug/Kg		75	54 - 130
Dibromochloromethane	50.0	47.7		ug/Kg		95	65 - 134
Dichlorodifluoromethane	50.0	41.4		ug/Kg		83	24 - 147
Ethylbenzene	50.0	39.2		ug/Kg		78	66 - 130
Isopropylbenzene	50.0	36.8		ug/Kg		74	64 - 131
Methyl acetate	250	334		ug/Kg		134	10 - 150
Methyl tert-butyl ether	50.0	46.2		ug/Kg		92	63 - 132
Methylcyclohexane	50.0	37.4		ug/Kg		75	51 - 137
Methylene Chloride	50.0	42.4		ug/Kg		85	61 - 150
m-Xylene & p-Xylene	50.0	39.2		ug/Kg		78	64 - 130
o-Xylene	50.0	39.2		ug/Kg		78	62 - 130
Styrene	50.0	43.7		ug/Kg		87	65 - 133
Tetrachloroethene	50.0	35.5		ug/Kg		71	43 - 143
Toluene	50.0	39.8		ug/Kg		80	67 - 130
trans-1,2-Dichloroethene	50.0	38.4		ug/Kg		77	69 - 130
trans-1,3-Dichloropropene	50.0	54.0		ug/Kg		108	70 - 130
Trichloroethene	50.0	37.6		ug/Kg		75	63 - 135
Trichlorofluoromethane	50.0	39.2		ug/Kg		78	53 - 134
Vinyl acetate	100	114		ug/Kg		114	40 - 150
Vinyl chloride	50.0	44.2		ug/Kg		88	40 - 148
Xylenes, Total	100	78.4		ug/Kg		78	63 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*61 - 130*
4-Bromofluorobenzene	*120*		*57 - 140*
Dibromofluoromethane	*82*		*68 - 140*
Toluene-d8 (Surr)	*94*		*50 - 130*

Lab Sample ID: LCSD 600-220982/4
Matrix: Solid
Analysis Batch: 220982

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
1,1,1-Trichloroethane	50.0	43.2		ug/Kg		86	59 - 130	15	30
1,1,2,2-Tetrachloroethane	50.0	62.0		ug/Kg		124	61 - 138	5	30
1,1,2-Trichloro-1,2,2-trifluoroetha ne	50.0	42.6		ug/Kg		85	48 - 150	16	30
1,1,2-Trichloroethane	50.0	55.9		ug/Kg		112	67 - 134	10	30
1,1-Dichloroethane	50.0	43.0		ug/Kg		86	63 - 140	12	30
1,1-Dichloroethene	50.0	41.9		ug/Kg		84	62 - 142	14	30
1,2,3-Trichlorobenzene	50.0	47.3		ug/Kg		95	52 - 135	11	30
1,2,4-Trichlorobenzene	50.0	46.4		ug/Kg		93	53 - 136	16	30

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

Lab Sample ID: LCSD 600-220982/4
Matrix: Solid
Analysis Batch: 220982

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
1,2-Dibromo-3-Chloropropane	50.0	58.2		ug/Kg		116	29 - 150	6	30
1,2-Dibromoethane	50.0	59.7		ug/Kg		119	65 - 136	8	30
1,2-Dichlorobenzene	50.0	48.6		ug/Kg		97	61 - 131	12	30
1,2-Dichloroethane	50.0	53.3		ug/Kg		107	58 - 137	6	30
1,2-Dichloroethene, Total	100	87.2		ug/Kg		87	70 - 130	12	30
1,2-Dichloropropane	50.0	50.3		ug/Kg		101	70 - 130	9	30
1,3-Dichlorobenzene	50.0	47.6		ug/Kg		95	63 - 132	13	30
1,4-Dichlorobenzene	50.0	48.9		ug/Kg		98	65 - 131	13	30
1,4-Dioxane	1000	1640	*	ug/Kg		164	31 - 150	1	30
2-Butanone (MEK)	100	145		ug/Kg		145	33 - 150	1	30
2-Hexanone	100	138		ug/Kg		138	35 - 150	5	30
4-Methyl-2-pentanone (MIBK)	100	131		ug/Kg		131	21 - 150	1	30
Acetone	100	131		ug/Kg		131	13 - 150	11	30
Benzene	50.0	45.6		ug/Kg		91	70 - 131	12	30
Bromodichloromethane	50.0	49.8		ug/Kg		100	67 - 138	9	30
Bromoform	50.0	55.5		ug/Kg		111	43 - 150	7	30
Bromomethane	50.0	52.0		ug/Kg		104	37 - 147	17	30
Carbon disulfide	50.0	44.9		ug/Kg		90	51 - 141	17	30
Carbon tetrachloride	50.0	39.4		ug/Kg		79	58 - 130	11	30
Chlorobenzene	50.0	48.3		ug/Kg		97	63 - 131	13	30
Chlorobromomethane	50.0	47.2		ug/Kg		94	70 - 132	8	30
Chloroethane	50.0	43.2		ug/Kg		86	40 - 150	23	30
Chloroform	50.0	44.4		ug/Kg		89	69 - 130	11	30
Chloromethane	50.0	48.5		ug/Kg		97	44 - 141	8	30
cis-1,2-Dichloroethene	50.0	43.6		ug/Kg		87	70 - 130	12	30
cis-1,3-Dichloropropene	50.0	52.1		ug/Kg		104	65 - 130	11	30
Cyclohexane	50.0	43.2		ug/Kg		86	54 - 130	14	30
Dibromochloromethane	50.0	52.5		ug/Kg		105	65 - 134	10	30
Dichlorodifluoromethane	50.0	42.3		ug/Kg		85	24 - 147	2	30
Ethylbenzene	50.0	45.6		ug/Kg		91	66 - 130	15	30
Isopropylbenzene	50.0	41.9		ug/Kg		84	64 - 131	13	30
Methyl acetate	250	334		ug/Kg		134	10 - 150	0	30
Methyl tert-butyl ether	50.0	50.4		ug/Kg		101	63 - 132	9	30
Methylcyclohexane	50.0	42.5		ug/Kg		85	51 - 137	13	30
Methylene Chloride	50.0	47.8		ug/Kg		96	61 - 150	12	30
m-Xylene & p-Xylene	50.0	46.0		ug/Kg		92	64 - 130	16	30
o-Xylene	50.0	45.7		ug/Kg		91	62 - 130	15	30
Styrene	50.0	49.9		ug/Kg		100	65 - 133	13	30
Tetrachloroethene	50.0	41.3		ug/Kg		83	43 - 143	15	30
Toluene	50.0	45.3		ug/Kg		91	67 - 130	13	30
trans-1,2-Dichloroethene	50.0	43.6		ug/Kg		87	69 - 130	13	30
trans-1,3-Dichloropropene	50.0	58.7		ug/Kg		117	70 - 130	8	30
Trichloroethene	50.0	41.9		ug/Kg		84	63 - 135	11	30
Trichlorofluoromethane	50.0	43.6		ug/Kg		87	53 - 134	11	30
Vinyl acetate	100	116		ug/Kg		116	40 - 150	2	30
Vinyl chloride	50.0	47.0		ug/Kg		94	40 - 148	6	30
Xylenes, Total	100	91.7		ug/Kg		92	63 - 130	16	30

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

Lab Sample ID: LCSD 600-220982/4
Matrix: Solid
Analysis Batch: 220982

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

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*61 - 130*
4-Bromofluorobenzene	*122*		*57 - 140*
Dibromofluoromethane	*84*		*68 - 140*
Toluene-d8 (Surr)	*96*		*50 - 130*

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

Lab Sample ID: MB 600-221012/1-A
Matrix: Water
Analysis Batch: 221124

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221012

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.54	U	1.0	0.54	ug/L		09/11/17 09:59	09/12/17 14:32	1
PCB-1221	0.44	U	1.0	0.44	ug/L		09/11/17 09:59	09/12/17 14:32	1
PCB-1232	0.12	U	1.0	0.12	ug/L		09/11/17 09:59	09/12/17 14:32	1
PCB-1242	0.16	U	1.0	0.16	ug/L		09/11/17 09:59	09/12/17 14:32	1
PCB-1248	0.20	U	1.0	0.20	ug/L		09/11/17 09:59	09/12/17 14:32	1
PCB-1254	0.14	U	1.0	0.14	ug/L		09/11/17 09:59	09/12/17 14:32	1
PCB-1260	0.34	U	1.0	0.34	ug/L		09/11/17 09:59	09/12/17 14:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*115*		*32 - 150*	*09/11/17 09:59*	*09/12/17 14:32*	*1*
DCB Decachlorobiphenyl	*103*		*26 - 130*	*09/11/17 09:59*	*09/12/17 14:32*	*1*

Lab Sample ID: LCS 600-221012/2-A
Matrix: Water
Analysis Batch: 221124

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221012

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			10.0	12.5		ug/L		125	68 - 130		
PCB-1260			10.0	11.4		ug/L		114	51 - 135		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*122*		*32 - 150*
DCB Decachlorobiphenyl	*86*		*26 - 130*

Lab Sample ID: LCSD 600-221012/3-A
Matrix: Water
Analysis Batch: 221124

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 221012

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			10.0	12.9	*	ug/L		129	68 - 130	4	20
PCB-1260			10.0	11.7	*	ug/L		117	51 - 135	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*116*	*	*32 - 150*
DCB Decachlorobiphenyl	*86*	*	*26 - 130*

QC Sample Results

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

Lab Sample ID: MB 600-221054/1-A
Matrix: Solid
Analysis Batch: 221128

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 221054

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	1.6	U *	17	1.6	ug/Kg		09/11/17 15:18	09/12/17 13:00	1
PCB-1221	8.6	U *	17	8.6	ug/Kg		09/11/17 15:18	09/12/17 13:00	1
PCB-1232	6.7	U *	17	6.7	ug/Kg		09/11/17 15:18	09/12/17 13:00	1
PCB-1242	1.2	U *	17	1.2	ug/Kg		09/11/17 15:18	09/12/17 13:00	1
PCB-1248	2.5	U *	17	2.5	ug/Kg		09/11/17 15:18	09/12/17 13:00	1
PCB-1254	2.2	U *	17	2.2	ug/Kg		09/11/17 15:18	09/12/17 13:00	1
PCB-1260	13	U *	17	13	ug/Kg		09/11/17 15:18	09/12/17 13:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*95*	*	*10 - 150*	*09/11/17 15:18*	*09/12/17 13:00*	*1*
DCB Decachlorobiphenyl	*124*	*	*10 - 150*	*09/11/17 15:18*	*09/12/17 13:00*	*1*

Lab Sample ID: LCS 600-221054/2-A
Matrix: Solid
Analysis Batch: 221128

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 221054

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	167	190	*	ug/Kg		114	35 - 138
PCB-1260	167	195	*	ug/Kg		117	40 - 146

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*99*	*	*10 - 150*
DCB Decachlorobiphenyl	*146*	*	*10 - 150*

Lab Sample ID: 600-153610-4 MS
Matrix: Solid
Analysis Batch: 221128

Client Sample ID: GIF-SS-004
Prep Type: Total/NA
Prep Batch: 221054

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1.6	U * F1	166	298	E F1 *	ug/Kg		179	35 - 138
PCB-1260	13	U *	166	181	*	ug/Kg		109	40 - 146

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*105*	*	*10 - 150*
DCB Decachlorobiphenyl	*214*	*X *	*10 - 150*

Lab Sample ID: 600-153610-4 MSD
Matrix: Solid
Analysis Batch: 221128

Client Sample ID: GIF-SS-004
Prep Type: Total/NA
Prep Batch: 221054

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	1.6	U * F1	166	348	E F1 *	ug/Kg		209	35 - 138	16	30
PCB-1260	13	U *	166	160	*	ug/Kg		96	40 - 146	12	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*96*	*	*10 - 150*
DCB Decachlorobiphenyl	*234*	*X *	*10 - 150*

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

Lab Sample ID: MB 600-221012/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 221213 — **Prep Batch: 221012**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016 - RA	0.54	U	1.0	0.54	ug/L		09/11/17 09:59	09/13/17 22:38	1
PCB-1221 - RA	0.44	U	1.0	0.44	ug/L		09/11/17 09:59	09/13/17 22:38	1
PCB-1232 - RA	0.12	U	1.0	0.12	ug/L		09/11/17 09:59	09/13/17 22:38	1
PCB-1242 - RA	0.16	U	1.0	0.16	ug/L		09/11/17 09:59	09/13/17 22:38	1
PCB-1248 - RA	0.20	U	1.0	0.20	ug/L		09/11/17 09:59	09/13/17 22:38	1
PCB-1254 - RA	0.14	U	1.0	0.14	ug/L		09/11/17 09:59	09/13/17 22:38	1
PCB-1260 - RA	0.34	U	1.0	0.34	ug/L		09/11/17 09:59	09/13/17 22:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene - RA	*95*		*32 - 150*	*09/11/17 09:59*	*09/13/17 22:38*	*1*
DCB Decachlorobiphenyl - RA	*102*		*26 - 130*	*09/11/17 09:59*	*09/13/17 22:38*	*1*

Lab Sample ID: LCS 600-221012/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 221213 — **Prep Batch: 221012**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016 - RA	10.0	10.0		ug/L		100	68 - 130
PCB-1260 - RA	10.0	9.18		ug/L		92	51 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene - RA	*96*		*32 - 150*
DCB Decachlorobiphenyl - RA	*87*		*26 - 130*

Lab Sample ID: LCSD 600-221012/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 221213 — **Prep Batch: 221012**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016 - RA	10.0	10.2	*	ug/L		102	68 - 130	2	20
PCB-1260 - RA	10.0	9.43	*	ug/L		94	51 - 135	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene - RA	*92*	*	*32 - 150*
DCB Decachlorobiphenyl - RA	*83*	*	*26 - 130*

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

GC/MS VOA

Analysis Batch: 220982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153610-1	GIF-SS-003	Total/NA	Solid	8260B	221006
600-153610-4	GIF-SS-004	Total/NA	Solid	8260B	221006
MB 600-220982/6	Method Blank	Total/NA	Solid	8260B	
LCS 600-220982/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-220982/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 221006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153610-1	GIF-SS-003	Total/NA	Solid	5035	
600-153610-4	GIF-SS-004	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 221012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153610-2 - RA	GIF-GW-001	Total/NA	Water	3510C	
600-153610-2	GIF-GW-001	Total/NA	Water	3510C	
600-153610-3	GIF-GW-002	Total/NA	Water	3510C	
600-153610-3 - RA	GIF-GW-002	Total/NA	Water	3510C	
MB 600-221012/1-A - RA	Method Blank	Total/NA	Water	3510C	
MB 600-221012/1-A	Method Blank	Total/NA	Water	3510C	
LCS 600-221012/2-A - RA	Lab Control Sample	Total/NA	Water	3510C	
LCS 600-221012/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 600-221012/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 600-221012/3-A - RA	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 221054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153610-1	GIF-SS-003	Total/NA	Solid	3550B	
600-153610-4	GIF-SS-004	Total/NA	Solid	3550B	
MB 600-221054/1-A	Method Blank	Total/NA	Solid	3550B	
LCS 600-221054/2-A	Lab Control Sample	Total/NA	Solid	3550B	
600-153610-4 MS	GIF-SS-004	Total/NA	Solid	3550B	
600-153610-4 MSD	GIF-SS-004	Total/NA	Solid	3550B	

Analysis Batch: 221124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153610-2	GIF-GW-001	Total/NA	Water	8082	221012
600-153610-3	GIF-GW-002	Total/NA	Water	8082	221012
MB 600-221012/1-A	Method Blank	Total/NA	Water	8082	221012
LCS 600-221012/2-A	Lab Control Sample	Total/NA	Water	8082	221012
LCSD 600-221012/3-A	Lab Control Sample Dup	Total/NA	Water	8082	221012

Analysis Batch: 221128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153610-1	GIF-SS-003	Total/NA	Solid	8082	221054
600-153610-4	GIF-SS-004	Total/NA	Solid	8082	221054
MB 600-221054/1-A	Method Blank	Total/NA	Solid	8082	221054
LCS 600-221054/2-A	Lab Control Sample	Total/NA	Solid	8082	221054
600-153610-4 MS	GIF-SS-004	Total/NA	Solid	8082	221054

QC Association Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

GC Semi VOA (Continued)

Analysis Batch: 221128 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153610-4 MSD	GIF-SS-004	Total/NA	Solid	8082	221054

Analysis Batch: 221213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153610-2 - RA	GIF-GW-001	Total/NA	Water	8082	221012
600-153610-3 - RA	GIF-GW-002	Total/NA	Water	8082	221012
MB 600-221012/1-A - RA	Method Blank	Total/NA	Water	8082	221012
LCS 600-221012/2-A - RA	Lab Control Sample	Total/NA	Water	8082	221012
LCSD 600-221012/3-A - RA	Lab Control Sample Dup	Total/NA	Water	8082	221012

General Chemistry

Analysis Batch: 221062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-153610-1	GIF-SS-003	Total/NA	Solid	2540B	
600-153610-4	GIF-SS-004	Total/NA	Solid	2540B	

Lab Chronicle

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

Client Sample ID: GIF-SS-003 — Lab Sample ID: 600-153610-1

Date Collected: 09/10/17 10:05
Date Received: 09/10/17 15:10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.821 g	5 mL	221006	09/10/17 16:30	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220982	09/11/17 11:07	WS1	TAL HOU
Total/NA	Prep	3550B			30.04 g	10.0 mL	221054	09/11/17 15:18	SMB	TAL HOU
Total/NA	Analysis	8082		1			221128	09/12/17 13:45	JAL	TAL HOU
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Client Sample ID: GIF-GW-001 — Lab Sample ID: 600-153610-2

Date Collected: 09/10/17 09:20
Date Received: 09/10/17 15:10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	5.0 mL	221012	09/11/17 09:59	LER	TAL HOU
Total/NA	Analysis	8082		1			221124	09/12/17 15:55	JAL	TAL HOU
Total/NA	Prep	3510C	RA		250 mL	5.0 mL	221012	09/11/17 09:59	LER	TAL HOU
Total/NA	Analysis	8082	RA	1			221213	09/14/17 00:01	JAL	TAL HOU

Client Sample ID: GIF-GW-002 — Lab Sample ID: 600-153610-3

Date Collected: 09/10/17 09:45
Date Received: 09/10/17 15:10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			250 mL	5.0 mL	221012	09/11/17 09:59	LER	TAL HOU
Total/NA	Analysis	8082		1			221124	09/12/17 16:23	JAL	TAL HOU
Total/NA	Prep	3510C	RA		250 mL	5.0 mL	221012	09/11/17 09:59	LER	TAL HOU
Total/NA	Analysis	8082	RA	1			221213	09/14/17 00:29	JAL	TAL HOU

Client Sample ID: GIF-SS-004 — Lab Sample ID: 600-153610-4

Date Collected: 09/10/17 10:30
Date Received: 09/10/17 15:10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.292 g	5 mL	221006	09/10/17 16:30	WS1	TAL HOU
Total/NA	Analysis	8260B		1	5 g	5 g	220982	09/11/17 11:31	WS1	TAL HOU
Total/NA	Prep	3550B			30.07 g	10.0 mL	221054	09/11/17 15:18	SMB	TAL HOU
Total/NA	Analysis	8082		1			221128	09/12/17 14:07	JAL	TAL HOU
Total/NA	Analysis	2540B		1			221062	09/11/17 16:23	B1K	TAL HOU

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: CH2M Hill Constructors, Inc.
Project/Site: Geneva Industries/Fuhrmann Energy

TestAmerica Job ID: 600-153610-1

Laboratory: TestAmerica Houston

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Texas	NELAP	6	T104704223-17-21	10-31-17

The following analytes are included in this report, but are not accredited/certified under this accreditation/certification:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Solid	Methyl acetate

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
2540B		Solid	Percent Moisture
2540B		Solid	Percent Solids
8260B	5035	Solid	1,2-Dichloroethene, Total
8260B	5035	Solid	Cyclohexane

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Darren Davis	Lab PM: Upton, Cathy L	Carrier Tracking No(s):	COC No: 600-54931-16099.23
Client Contact: Mr. John Ynfante	Phone: 214-458-9667	E-Mail: cathy.upton@testamericainc.com		Page: Page 23 of 32
Company: CH2M Hill Constructors, Inc.				Job #:
Address: 14701 St. Mary's Lane Suite 300	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77079-2923				
Phone: 281-721-8546(Tel)	PO #: Purchase Order not required			
Email: john.ynfante@ch2m.com	WO #:			
Project Name: Hurricane Harvey Environmental Response	Project #: 60008995			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020, 7471A	8260B - TCL Volatiles TX - default	8270C_LL - TCL 4.2 Default List	8082 - PCBs	300_ORGFM_28D, 9045C	6020, 7470A	8260B_LL - TCL Volatiles TX - default	9040B - pH	300_ORGFM_28D, SM2310B					Total Number of containers	Spec
		9/10/17	Preservation Code:		X	X	N	N	N	N	N	D	A	N	N					X	
GIF-SS-ØØ3	9/10/17	~~1201~~ 1005	G	~~Water~~ Soil	N	N				X			X							5	
GIF-GW-ØØ1	9/10/17	920	G	Water	N	N				X										6	
GIF-GW-ØØ2	9/10/17	945	G	Water	N	N				X										2	
~~GIF-GW~~ 9/10/17 GIF-SS-ØØ4	9/10/17	1030	G	Soil ~~Water~~	N	N				X			X							5	
HFS-SS-ØØ1	9/10/17	1230	G	Water	N	N			X											1	
HFS-SS-ØØ2	9/10/17	1250	G	Water	N	N			X											1	
HFS-SS-ØØ3	9/10/17	1300	G	Water	N	N			X											1	
HFS-SS-ØØ4	9/10/17	1320	G	Water	N	N			X											1	
Trip Blank	9/10/17	800	G	Water	N	N		X												1	
TEMP BLANK				Water																	
				Water																	

600-153610 Chain of Custody

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Darren Davis	Date/Time: 9/10/17 1510	Company: CH2M	Received by:	Date/Time: 9/10/17 1510	Company: TAH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

Loc: 600
153610

Sample Receipt Checklist

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Date/Time Received: _____

JOB NUMBER: 153610

CLIENT: CARMHILL

'17 SEP 10 15:10

UNPACKED BY: CMK

CARRIER/DRIVER: Client

CMK 9/10/17

Custody Seal Present: ☒ YES ☐ NO

Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
BW	Y / N	Y / N	2.1	549	-0.3	1.7
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CMK 9/8/17

CF = correction factor

Samples received on ice? ☒ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☐ YES ☐ NO

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☐ YES ☒ NO ☐ NA Headspace TB-2W

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	☒	

COMMENTS: COC - for following samples listed WATER however the were soils.
Rec'd the 2W for TB Headspace.

CMK 9/8/17

HFS-SS-001 *
SS 002
SS 003
SS 004
COC list as Matrix Water However Solids were Received and logged As Solids.

HS-SA-WI-013 Rev. 3; 07/01/2014

Login Sample Receipt Checklist

Client: CH2M Hill Constructors, Inc.

Job Number: 600-153610-1

Login Number: 153610
List Number: 1
Creator: Kovitch, Christina M

List Source: TestAmerica Houston

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	1.7°C IR549
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.	False	SEE NCM
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	Check done at department level as required.