CT LABORATORIES

delivering more than data from your environmental analyses

ANALYTICAL REPORT

This report at a minimum contains the following information:

- Analytical Report of Test Results
- Description of QC Qualifiers
- Chain of Custody (copy)
- Quality Control Summary
- Case Narrative (if applicable)
- Correspondence with Client (if applicable)

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.

ACCREDITED IN ACCORDANCE WITH nelac

CT Laboratories LLC • 1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

CT LABORATORIES
delivering more than data from your environmental analyses
1230 Lange Court • Baraboo, WI 53913 • 608-356-2760
www.ctlaboratories.com

ANALYTICAL REPORT

TETRA TECH
JASON CASHMERE
6777 ENGLE ROAD
SUITE L
MIDDLEBURG HEIGHTS, OH 44130

Project Name: SH BELL XRF SITE
Project Phase:
Contract #: 2992
Project #: 103X90260015S051609003
Folder #: 123177
Purchase Order #: 1111200

Arrival Temperature: 1.1
Report Date: 11/08/2016
Date Received: 10/26/2016
Reprint Date: 11/08/2016

CT LAB#: 794506 Sample Description: WRS15 Client Sample #: Sampled: 10/20/2016 0819

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	75.8	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	17.2	mg/kg	0.15	0.46	0.92	0.92	5.00	M	10/28/2016 06:00	10/30/16 19:13	NAH	EPA 6010C	^
Iron	14900	mg/kg	2.0	5.9	12	12	5.00	Y,M	10/28/2016 06:00	10/30/16 19:13	NAH	EPA 6010C	^
Manganese	663	mg/kg	0.16	0.49	0.98	0.98	5.00	Y,M	10/28/2016 06:00	10/30/16 19:13	NAH	EPA 6010C	^

CT LAB#: 794507 Sample Description: WRS24 Client Sample #: Sampled: 10/20/2016 0839

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	75.2	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	32.8	mg/kg	0.15	0.45	0.90	0.90	5.00		10/28/2016 06:00	10/30/16 20:17	NAH	EPA 6010C	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 794507 Sample Description: WRS24 Client Sample #: Sampled: 10/20/2016 0839

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Iron	13700	mg/kg	1.9	5.8	12	12	5.00		10/28/2016 06:00	10/30/16 20:17	NAH	EPA 6010C	^
Manganese	1060	mg/kg	0.16	0.48	0.96	0.96	5.00		10/28/2016 06:00	10/30/16 20:17	NAH	EPA 6010C	^

CT LAB#: 794508 Sample Description: WRS45 Client Sample #: Sampled: 10/20/2016 0855

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	88.7	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	1110	mg/kg	0.12	0.38	0.75	0.75	5.00		10/28/2016 06:00	10/30/16 20:24	NAH	EPA 6010C	^
Iron	74800	mg/kg	1.6	4.8	9.7	9.7	5.00		10/28/2016 06:00	10/30/16 20:24	NAH	EPA 6010C	^
Manganese	58000	mg/kg	0.54	1.6	3.2	3.2	20.00	X	10/28/2016 06:00	11/4/16 16:25	NAH	EPA 6010C	^

CT LAB#: 794509 Sample Description: WRS46D Client Sample #: Sampled: 10/19/2016 0958

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	76.7	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	46.5	mg/kg	0.15	0.45	0.89	0.89	5.00		10/28/2016 06:00	10/30/16 20:31	NAH	EPA 6010C	^
Iron	13700	mg/kg	1.9	5.8	12	12	5.00		10/28/2016 06:00	10/30/16 20:31	NAH	EPA 6010C	^
Manganese	2460	mg/kg	0.16	0.48	0.96	0.96	5.00		10/28/2016 06:00	10/30/16 20:31	NAH	EPA 6010C	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 794510 Sample Description: WRSAM1 Client Sample #: Sampled: 10/19/2016 1557

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	82.3	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	62.7	mg/kg	0.15	0.45	0.89	0.89	5.00		10/28/2016 06:00	10/30/16 20:38	NAH	EPA 6010C	^
Iron	50600	mg/kg	1.9	5.7	11	11	5.00		10/28/2016 06:00	10/30/16 20:38	NAH	EPA 6010C	^
Manganese	3150	mg/kg	0.16	0.48	0.95	0.95	5.00		10/28/2016 06:00	10/30/16 20:38	NAH	EPA 6010C	^

CT LAB#: 794511 Sample Description: WRSAM2 Client Sample #: Sampled: 10/19/2016 1603

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	79.3	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	46.2	mg/kg	0.15	0.46	0.91	0.91	5.00		10/28/2016 06:00	10/30/16 20:46	NAH	EPA 6010C	^
Iron	32200	mg/kg	2.0	5.9	12	12	5.00		10/28/2016 06:00	10/30/16 20:46	NAH	EPA 6010C	^
Manganese	2340	mg/kg	0.16	0.49	0.98	0.98	5.00		10/28/2016 06:00	10/30/16 20:46	NAH	EPA 6010C	^

CT LAB#: 794512 Sample Description: ERS02 Client Sample #: Sampled: 10/19/2016 1453

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	71.3	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 794512 Sample Description: ERS02 Client Sample #: Sampled: 10/19/2016 1453

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Metals Results													
Chromium	25.3	mg/kg	0.16	0.50	1.0	1.0	5.00		10/28/2016 06:00	10/30/16 20:53	NAH	EPA 6010C	^
Iron	36800	mg/kg	2.1	6.4	13	13	5.00		10/28/2016 06:00	10/30/16 20:53	NAH	EPA 6010C	^
Manganese	952	mg/kg	0.18	0.53	1.1	1.1	5.00		10/28/2016 06:00	10/30/16 20:53	NAH	EPA 6010C	^

CT LAB#: 794513 Sample Description: ERS12 Client Sample #: Sampled: 10/19/2016 1505

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	79.3	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	30.9	mg/kg	0.15	0.45	0.90	0.90	5.00		10/28/2016 06:00	10/30/16 21:00	NAH	EPA 6010C	^
Iron	38400	mg/kg	1.9	5.8	12	12	5.00		10/28/2016 06:00	10/30/16 21:00	NAH	EPA 6010C	^
Manganese	1190	mg/kg	0.16	0.48	0.97	0.97	5.00		10/28/2016 06:00	10/30/16 21:00	NAH	EPA 6010C	^

CT LAB#: 794514 Sample Description: ERS15 Client Sample #: Sampled: 10/19/2016 1400

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	76.3	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	58.9	mg/kg	0.15	0.47	0.93	0.93	5.00		10/28/2016 06:00	10/30/16 21:08	NAH	EPA 6010C	^
Iron	36300	mg/kg	2.0	6.0	12	12	5.00		10/28/2016 06:00	10/30/16 21:08	NAH	EPA 6010C	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 794514 Sample Description: ERS15 Client Sample #: Sampled: 10/19/2016 1400

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Manganese	2400	mg/kg	0.17	0.50	1.0	1.0	5.00		10/28/2016 06:00	10/30/16 21:08	NAH	EPA 6010C	^

CT LAB#: 794515 Sample Description: NRS01 Client Sample #: Sampled: 10/19/2016 1314

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	89.3	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	65.9	mg/kg	0.13	0.40	0.80	0.80	5.00		10/28/2016 06:00	10/30/16 21:35	NAH	EPA 6010C	^
Iron	17500	mg/kg	1.7	5.1	10	10	5.00		10/28/2016 06:00	10/30/16 21:35	NAH	EPA 6010C	^
Manganese	2400	mg/kg	0.14	0.43	0.85	0.85	5.00		10/28/2016 06:00	10/30/16 21:35	NAH	EPA 6010C	^

CT LAB#: 794516 Sample Description: PS02 Client Sample #: Sampled: 10/19/2016 1430

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	84.7	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	356	mg/kg	0.13	0.38	0.77	0.77	5.00		10/28/2016 06:00	10/30/16 21:42	NAH	EPA 6010C	^
Iron	27700	mg/kg	1.6	4.9	9.9	9.9	5.00		10/28/2016 06:00	10/30/16 21:42	NAH	EPA 6010C	^
Manganese	34600	mg/kg	0.55	1.6	3.3	3.3	20.00		10/28/2016 06:00	11/4/16 16:32	NAH	EPA 6010C	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 794517 Sample Description: PS12 Client Sample #: Sampled: 10/19/2016 1012

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	89.2	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	270	mg/kg	0.13	0.41	0.82	0.82	5.00		10/28/2016 06:00	10/30/16 21:49	NAH	EPA 6010C	^
Iron	29600	mg/kg	1.8	5.3	11	11	5.00		10/28/2016 06:00	10/30/16 21:49	NAH	EPA 6010C	^
Manganese	14400	mg/kg	0.15	0.44	0.88	0.88	5.00		10/28/2016 06:00	10/30/16 21:49	NAH	EPA 6010C	^

CT LAB#: 794518 Sample Description: PS23 Client Sample #: Sampled: 10/20/2016 0855

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	79.3	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	860	mg/kg	0.58	1.8	3.5	3.5	20.00		10/28/2016 06:00	11/4/16 16:39	NAH	EPA 6010C	^
Iron	39200	mg/kg	1.9	5.6	11	11	5.00		10/28/2016 06:00	10/30/16 21:56	NAH	EPA 6010C	^
Manganese	25500	mg/kg	0.63	1.9	3.8	3.8	20.00		10/28/2016 06:00	11/4/16 16:39	NAH	EPA 6010C	^

CT LAB#: 794519 Sample Description: PS26 Client Sample #: Sampled: 10/19/2016 1444

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	86.2	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 794519 Sample Description: PS26 Client Sample #: Sampled: 10/19/2016 1444

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Metals Results													
Chromium	259	mg/kg	0.13	0.40	0.80	0.80	5.00		10/28/2016 06:00	10/30/16 22:03	NAH	EPA 6010C	^
Iron	42800	mg/kg	1.7	5.1	10	10	5.00		10/28/2016 06:00	10/30/16 22:03	NAH	EPA 6010C	^
Manganese	23000	mg/kg	0.57	1.7	3.4	3.4	20.00		10/28/2016 06:00	11/4/16 16:47	NAH	EPA 6010C	^

CT LAB#: 794520 Sample Description: PS32D Client Sample #: Sampled: 10/19/2016 1629

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	41.4	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	1120	mg/kg	0.29	0.88	1.8	1.8	5.00		10/28/2016 06:00	10/30/16 22:11	NAH	EPA 6010C	^
Iron	54100	mg/kg	3.8	11	23	23	5.00		10/28/2016 06:00	10/30/16 22:11	NAH	EPA 6010C	^
Manganese	20900	mg/kg	0.31	0.94	1.9	1.9	5.00		10/28/2016 06:00	10/30/16 22:11	NAH	EPA 6010C	^

CT LAB#: 794521 Sample Description: PS33 Client Sample #: Sampled: 10/20/2016 1021

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	71.1	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	55.9	mg/kg	0.15	0.47	0.94	0.94	5.00		10/28/2016 06:00	10/30/16 22:18	NAH	EPA 6010C	^
Iron	6280	mg/kg	2.0	6.1	12	12	5.00		10/28/2016 06:00	10/30/16 22:18	NAH	EPA 6010C	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 794521 Sample Description: PS33 Client Sample #: Sampled: 10/20/2016 1021

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Manganese	3870	mg/kg	0.17	0.50	1.0	1.0	5.00		10/28/2016 06:00	10/30/16 22:18	NAH	EPA 6010C	^

CT LAB#: 794522 Sample Description: WRS01 Client Sample #: Sampled: 10/20/2016 1013

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	74.5	%	0.1	0.1	0.1	0.1	1.00			10/31/16 14:09	AMA	EPA 8000C	
Metals Results													
Chromium	30.1	mg/kg	0.15	0.46	0.91	0.91	5.00		10/28/2016 06:00	10/30/16 22:25	NAH	EPA 6010C	^
Iron	13200	mg/kg	2.0	5.9	12	12	5.00		10/28/2016 06:00	10/30/16 22:25	NAH	EPA 6010C	^
Manganese	1530	mg/kg	0.16	0.49	0.98	0.98	5.00		10/28/2016 06:00	10/30/16 22:25	NAH	EPA 6010C	^

CT LAB#: 794523 Sample Description: WRS05 Client Sample #: Sampled: 10/20/2016 1021

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	76.0	%	0.1	0.1	0.1	0.1	1.00			10/31/16 14:09	AMA	EPA 8000C	
Metals Results													
Chromium	28.2	mg/kg	0.14	0.44	0.88	0.88	5.00		10/28/2016 06:00	10/30/16 22:32	NAH	EPA 6010C	^
Iron	37900	mg/kg	1.9	5.6	11	11	5.00		10/28/2016 06:00	10/30/16 22:32	NAH	EPA 6010C	^
Manganese	1520	mg/kg	0.16	0.47	0.94	0.94	5.00		10/28/2016 06:00	10/30/16 22:32	NAH	EPA 6010C	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 794524 Sample Description: WRS11 Client Sample #: Sampled: 10/20/2016 1043

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	75.8	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	46.5	mg/kg	0.14	0.43	0.85	0.85	5.00		10/28/2016 06:00	10/30/16 22:39	NAH	EPA 6010C	^
Iron	27200	mg/kg	1.8	5.5	11	11	5.00		10/28/2016 06:00	10/30/16 22:39	NAH	EPA 6010C	^
Manganese	2400	mg/kg	0.15	0.46	0.91	0.91	5.00		10/28/2016 06:00	10/30/16 22:39	NAH	EPA 6010C	^

CT LAB#: 794525 Sample Description: WRS13 Client Sample #: Sampled: 10/20/2016 0939

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	84.6	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:13	AMA	EPA 8000C	
Metals Results													
Chromium	23.0	mg/kg	0.13	0.40	0.80	0.80	5.00		10/28/2016 06:00	10/30/16 23:06	NAH	EPA 6010C	^
Iron	13500	mg/kg	1.7	5.1	10	10	5.00		10/28/2016 06:00	10/30/16 23:06	NAH	EPA 6010C	^
Manganese	1120	mg/kg	0.14	0.43	0.86	0.86	5.00		10/28/2016 06:00	10/30/16 23:06	NAH	EPA 6010C	^

CT LAB#: 794526 Sample Description: PS32 Client Sample #: Sampled: 10/19/2016 1629

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	43.5	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:36	AMA	EPA 8000C

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 794526 Sample Description: PS32 Client Sample #: Sampled: 10/19/2016 1629

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Metals Results													
Chromium	2570	mg/kg	0.055	0.17	0.34	0.34	1.00		10/28/2016 06:00	10/30/16 23:27	NAH	EPA 6010C	^
Iron	57300	mg/kg	0.72	2.2	4.3	4.3	1.00		10/28/2016 06:00	10/30/16 23:27	NAH	EPA 6010C	^
Manganese	22000	mg/kg	1.2	3.6	7.2	7.2	20.00		10/28/2016 06:00	11/4/16 17:01	NAH	EPA 6010C	^

CT LAB#: 794527 Sample Description: WRS46 Client Sample #: Sampled: 10/19/2016 0958

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	76.4	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:36	AMA	EPA 8000C	
Metals Results													
Chromium	137	mg/kg	0.030	0.092	0.18	0.18	1.00		10/28/2016 06:00	10/30/16 23:35	NAH	EPA 6010C	^
Iron	23200	mg/kg	0.39	1.2	2.4	2.4	1.00		10/28/2016 06:00	10/30/16 23:35	NAH	EPA 6010C	^
Manganese	3180	mg/kg	0.033	0.098	0.20	0.20	1.00		10/28/2016 06:00	10/30/16 23:35	NAH	EPA 6010C	^

CT LAB#: 794528 Sample Description: WRS25 Client Sample #: Sampled: 10/20/2016 0913

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Inorganic Results													
Solids, Percent	69.7	%	0.1	0.1	0.1	0.1	1.00			10/28/16 10:36	AMA	EPA 8000C	
Metals Results													
Chromium	102	mg/kg	0.033	0.10	0.20	0.20	1.00	Y,M	10/28/2016 06:00	10/30/16 23:42	NAH	EPA 6010C	^
Iron	25900	mg/kg	0.43	1.3	2.6	2.6	1.00	M	10/28/2016 06:00	10/30/16 23:42	NAH	EPA 6010C	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 794528 Sample Description: WRS25 Client Sample #: Sampled: 10/20/2016 0913

Analyte	Result	Units	DL	DOD LOD	DOD LOO	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method	
Manganese	2720	mg/kg	0.036	0.11	0.22	0.22	1.00	M	10/28/2016 06:00	10/30/16 23:42	NAH	EPA 6010C	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method. DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

Submitted by: Brett M. Szymanski
Project Manager
608-356-2760

QC Qualifiers

Code	Description
B	Analyte detected in the associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
I	BOD incubator temperature was outside acceptance limits during test period.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
U	Analyte concentration was below detection limit.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Specified calibration criteria was not met.

Current CT Laboratories Certifications

Kansas NELAP ID# E-10368
Kentucky ID# 0023
ISO/IEC 17025-2005 A2LA Cert # 3806.01
North Carolina ID# 674
Wisconsin (WDNR) Chemistry ID# 157066030
Wisconsin (DATCP) Bacteriology ID# 105-289
DoD-ELAP A2LA 3806.01
GA EPD Stipulation ID E871111, Expires Annually
Louisiana ID # 115843
Virginia ID# 7608
Illinois NELAP ID # 002413
Wisconsin (WOSB) ID# WI-5499-WBE
Maryland ID# 344

QC SUMMARY REPORT

TETRA TECH **Project Name: SH BELL XRF SITE**

SDG #: 0 **Folder #: 123177** **Project Number: 3X90260015S051609003**

Duplicate

Analytical Run #:	131894	Analysis Date:	10/28/2016	Prep Batch #:		Matrix:	SOIL
CTLab #:	797076	Analysis Time:	10:13	Prep Date/Time:		Method:	SW8000C
Parent Sample #:	794525	Analyst:	AMA	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Solids, Percent	86.1	%	84.6					2	8

Duplicate

Analytical Run #:	131895	Analysis Date:	10/28/2016	Prep Batch #:		Matrix:	SOIL
CTLab #:	797077	Analysis Time:	10:36	Prep Date/Time:		Method:	SW8000C
Parent Sample #:	794528	Analyst:	AMA	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Solids, Percent	68.3	%	69.7					2	8

Duplicate

Analytical Run #:	132101	Analysis Date:	10/31/2016	Prep Batch #:		Matrix:	SOIL
CTLab #:	798198	Analysis Time:	14:09	Prep Date/Time:		Method:	SW8000C
Parent Sample #:	794523	Analyst:	AMA	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Solids, Percent	76.0	%	76.0					0	8

Duplicate

Analytical Run #:	132044	Analysis Date:	10/30/2016	Prep Batch #:	59828	Matrix:	SOIL
CTLab #:	795705	Analysis Time:	19:28	Prep Date/Time:	10/28/2016 06:00	Method:	SW6010
Parent Sample #:	794506	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chromium	18.5	mg/kg	17.2				5.6	7	20
Iron	22000	mg/kg	14900				72	38	20
Manganese	1140	mg/kg	663				6.0	53	20

TETRA TECH **Project Name: SH BELL XRF SITE**

SDG #: 0 **Folder #: 123177** **Project Number: 3X90260015S051609003**

Lab Control Spike Soil

Analytical Run #:	132044	Analysis Date:	11/04/2016	Prep Batch #:	59828	Matrix:	SOLID
CTLab #:	795704	Analysis Time:	02:45	Prep Date/Time:	10/28/2016 06:00	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chromium	9.8	mg/kg			10.0	98	80 --- 120		
Iron	54.8	mg/kg			50.0	110	80 --- 120		
Manganese	27.0	mg/kg			25.0	108	80 --- 120		

Method Blank Soil

Analytical Run #:	132044	Analysis Date:	10/30/2016	Prep Batch #:	59828	Matrix:	SOLID
CTLab #:	795703	Analysis Time:	19:06	Prep Date/Time:	10/28/2016 06:00	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chromium	0.023	mg/kg		U	0		0.125		
Iron	0.3	mg/kg		U	0		0.9		
Manganese	0.025	mg/kg		U	0		0.075		

TETRA TECH **Project Name: SH BELL XRF SITE**

SDG #: 0 **Folder #: 123177** **Project Number: 3X90260015S051609003**

Matrix Spike Duplicate Soil

Analytical Run #:	132044	Analysis Date:	10/30/2016	Prep Batch #:	59828	Matrix:	SOIL
CTLab #:	795707	Analysis Time:	20:02	Prep Date/Time:	10/28/2016 06:00	Method:	SW6010
Parent Sample #:	795706	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chromium	15.4	mg/kg	17.2		13.3	0	80 --- 120	43	20
Iron	23200	mg/kg	14900		66.6	12462	80 --- 120	7	20
Manganese	1190	mg/kg	663		33.3	1583	80 --- 120	6	20

TETRA TECH **Project Name: SH BELL XRF SITE**

SDG #: 0 **Folder #: 123177** **Project Number: 3X90260015S051609003**

Matrix Spike Soil

Analytical Run #:	132044	Analysis Date:	10/30/2016	Prep Batch #:	59828	Matrix:	SOIL
CTLab #:	795706	Analysis Time:	19:35	Prep Date/Time:	10/28/2016 06:00	Method:	SW6010
Parent Sample #:	794506	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chromium	23.8	mg/kg	17.2		13.3	50	80 --- 120		
Iron	21700	mg/kg	14900		66.6	10210	80 --- 120		
Manganese	1120	mg/kg	663		33.3	1372	80 --- 120		

TETRA TECH **Project Name: SH BELL XRF SITE**

SDG #: 0 **Folder #: 123177** **Project Number: 3X90260015S051609003**

Duplicate

Analytical Run #:	132045	Analysis Date:	10/30/2016	Prep Batch #:	59829	Matrix:	SOIL
CTLab #:	795710	Analysis Time:	23:56	Prep Date/Time:	10/28/2016 06:00	Method:	SW6010
Parent Sample #:	794528	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chromium	81.8	mg/kg	102				5.6	22	20
Iron	27400	mg/kg	25900				72	6	20
Manganese	2350	mg/kg	2720				6.0	15	20

TETRA TECH **Project Name: SH BELL XRF SITE**

SDG #: 0 **Folder #: 123177** **Project Number: 3X90260015S051609003**

Lab Control Spike Soil

Analytical Run #:	132045	Analysis Date:	10/30/2016	Prep Batch #:	59829	Matrix:	SOLID
CTLab #:	795709	Analysis Time:	23:14	Prep Date/Time:	10/28/2016 06:00	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chromium	10.3	mg/kg			10.0	103	80 --- 120		
Iron	58.3	mg/kg			50.0	117	80 --- 120		
Manganese	26.5	mg/kg			25.0	106	80 --- 120		

Method Blank Soil

Analytical Run #:	132045	Analysis Date:	10/30/2016	Prep Batch #:	59829	Matrix:	SOLID
CTLab #:	795708	Analysis Time:	23:20	Prep Date/Time:	10/28/2016 06:00	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chromium	0.023	mg/kg		U	0		0.125		
Iron	1.7	mg/kg			0		0.9		
Manganese	0.80	mg/kg			0		0.075		

TETRA TECH **Project Name: SH BELL XRF SITE**

SDG #: 0 **Folder #: 123177** **Project Number: 3X90260015S051609003**

Matrix Spike Duplicate Soil

Analytical Run #:	132045	Analysis Date:	10/31/2016	Prep Batch #:	59829	Matrix:	SOIL
CTLab #:	795712	Analysis Time:	00:11	Prep Date/Time:	10/28/2016 06:00	Method:	SW6010
Parent Sample #:	795711	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chromium	101	mg/kg	102		13.7	0	80 --- 120	0	20
Iron	27200	mg/kg	25900		68.6	1895	80 --- 120	4	20
Manganese	2380	mg/kg	2720		34.3	0	80 --- 120	5	20

Matrix Spike Soil

Analytical Run #:	132045	Analysis Date:	10/31/2016	Prep Batch #:	59829	Matrix:	SOIL
CTLab #:	795711	Analysis Time:	00:04	Prep Date/Time:	10/28/2016 06:00	Method:	SW6010
Parent Sample #:	794528	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Chromium	103	mg/kg	102		14.0	7	80 --- 120		
Iron	26700	mg/kg	25900		70.0	1143	80 --- 120		
Manganese	2540	mg/kg	2720		35.0	0	80 --- 120		

CT LABORATORIES
delivering more than data from your environmental analyses

Sample Condition Report

Folder #: 123177
Client: TETRA TECH

Print Date / Time: 10/26/2016 12:51
Received Date / Time / By: 10/26/2016 10:00 BNA

Project Name: SH BELL XRF SITE
Project Phase:

Log-In Date / Time / By: 10/26/2016 12:40 JLS
Project #: 3X90260015S051609003 PM: BMS

Coolers: UNMARKED
Custody Seals Present : **Y**

Temperature: 1.1 C On Ice: **Y**
COC Present:? **Y** Complete? **Y**

Seal Intact? **Y**
Ship Method: UPS
Adequate Packaging: **Y**

Numbers: DATED AND SIGNED
Tracking Number: 1Z3401RV0172714588
Temp Blank Enclosed? **Y**

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT, BOTH DATED 10/25/16 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794506 WRS15				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	**(*SOLIDS*) =**	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794507 WRS24				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	**(*SOLIDS*) =**	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794508 WRS45				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	**(*SOLIDS*) =**	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794509 WRS46D				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	**(*SOLIDS*) =**	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794510 WRSAM1				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	**(*SOLIDS*) =**	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794511 WRSAM2				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	(***SOLIDS***) =	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794512 ERS02				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	(***SOLIDS***) =	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794513 ERS12				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	(***SOLIDS***) =	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794514 ERS15				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	(***SOLIDS***) =	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794515 NRS01				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	(***SOLIDS***) =	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794516 PS02				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	(***SOLIDS***) =	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794517 PS12				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	(***SOLIDS***) =	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794518 PS23				
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	(***SOLIDS***) =	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

794519 PS26

SOLIDS 1 / %SOL,ICP

Total # of Containers of Type (*SOLIDS*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

794520 PS32D

SOLIDS 1 / %SOL,ICP

Total # of Containers of Type (*SOLIDS*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

794521 PS33

SOLIDS 1 / %SOL,ICP

Total # of Containers of Type (*SOLIDS*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

794522 WRS01

SOLIDS 1 / %SOL,ICP

Total # of Containers of Type (*SOLIDS*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

794523 WRS05

SOLIDS 1 / %SOL,ICP

Total # of Containers of Type (*SOLIDS*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

794524 WRS11

SOLIDS 1 / %SOL,ICP

Total # of Containers of Type (*SOLIDS*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

794525 WRS13

SOLIDS 1 / %SOL,ICP

Total # of Containers of Type (*SOLIDS*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

794526 PS32

SOLIDS 1 / %SOL,ICP

Total # of Containers of Type (*SOLIDS*) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests

794527 WRS46

	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	**(*SOLIDS*) =**	**1**	

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
794528 WRS25				
	SOLIDS	1	/	%SOL,ICP
	SOLIDS	1	/	%SOL,ICP
	SOLIDS	1	/	%SOL,ICP
	Total # of Containers of Type	**(*SOLIDS*) =**	**3**	

Condition Code	*Condition Description*
1	Sample Received OK

123177

Rev. 2/2013

CHAIN OF CUSTODY

Company: Tetra Tech, EMI (Tt)
Project Contact: Jason Cashmere
Telephone: 724.524.0813
Project Name: SH Bell XRF Site
Project #: 103X9026001 5S051609003
Location: East Liverpool, OH
Sampled By: JC

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Folder #: 123177
Company: TETRA TECH
Project: HS BELL PROPERTY
Logged By: JLS PM BM

Program:
QSM RCRA SDWA NPDES
Solid Waste Other

PO # 1111200

Report To: Jason Cashmere
EMAIL: jason.cashmere@tetratech.com
Company: Tetra Tech, EMI
Address: 6777 Engle Rd., Ste. L
Middleburg Heights, OH 44130

Invoice To:* Dan Poro
EMAIL: dan.poro@tetratech.com
Company: Tetra Tech, EMI
Address: 1 S. Wacker Dr. 37th Floor
Chicago, IL 60606

Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Turnaround Time
Normal RUSH*
Date Needed: 11/2/16
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

ANALYSES REQUESTED

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	Iron 60610C	Chromium 6010C	Manganese 6010C	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
10/20/16	0819	S	Grab		WRS15		X	X	X			794506
10/20/16	0839	S	Grab		WRS24		X	X	X			794507
10/20/16	0855	S	Grab		WRS45		X	X	X			" 508
10/19/16	0958	S	Grab		WRS46D		X	X	X			509
10/19/16	1557	S	Grab		WRSAM1		X	X	X			510
10/19/16	1603	S	Grab		WRSAM2		X	X	X			511
10/19/16	1453	S	Grab		ERS02		X	X	X			512
10/19/16	1505	S	Grab		ERS12		X	X	X			513
10/19/16	1400	S	Grab		ERS15		X	X	X			514
10/19/16	1314	S	Grab		NRS01		X	X	X			515

Fill in Spaces with Bottles per Test

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/24/16 1700		
Received by:	Date/Time	Received for Laboratory by: [signature]	Date/Time 10/26/16 1240

Lab Use Only
Ice Present Yes No
Temp 1.1 / 1.4 IR Gun #
Cooler # Unmarked

10/26/16 1000 BNA

Rev. 2/2013

CHAIN OF CUSTODY

Company: Tetra Tech, EMI (Tt)
Project Contact: Jason Cashmere
Telephone: 724.524.0813
Project Name: SH Bell XRF Site
Project #: 103X90260015S051609003
Location: East Liverpool, OH
Sampled By: JC

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Lab Use Only
Place Header Sticker Here:

123177

Program:
QSM RCRA SDWA NPDES
Solid Waste Other

PO # 1111200

Report To: Jason Cashmere
EMAIL: jason.cashmere@tetratech.com
Company: Tetra Tech, EMI
Address: 6777 Engle Rd., Ste. L
Middleburg Heights, OH 44130

Invoice To:* Dan Poro
EMAIL: dan.poro@tetratech.com
Company: Tetra Tech, EMI
Address: 1 S. Wacker Dr. 37th Floor
Chicago, IL 60606

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

ANALYSES REQUESTED

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	Iron 60610C	Chromium 6010C	Manganese 6010C	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
							Fill in Spaces with Bottles per Test					
10/19/16	1430	S	Grab		PS02		X	X	X			516
10/19/16	1012	S	Grab		PS12		X	X	X			517
10/20/16	0855	S	Grab		PS23		X	X	X			518
10/19/16	1444	S	Grab		PS26		X	X	X			519
10/19/16	1629	S	Grab		PS32D		X	X	X			520
10/20/16	1021	S	Grab		PS33		X	X	X			521
10/20/16	1013	S	Grab		WRS01		X	X	X			522
10/20/16	1021	S	Grab		WRS05		X	X	X			523
10/20/16	1043	S	Grab		WRS11		X	X	X			524
10/20/16	0939	S	Grab		WRS13		X	X	X			525

Relinquished By:	Date/Time	Received By:	Date/Time	Lab Use Only
[signature]	10/24/16 1700			Ice Present Yes No
Received by:	Date/Time	Received for Laboratory by: [signature]	Date/Time 1240 10/26/16	Temp 1.1 / 1.4 IR Gun #
				Cooler # unmarked

10/26/16 1000 BNA

Rev. 2/2013

CHAIN OF CUSTODY

Company: Tetra Tech, EMI (Tt)
Project Contact: Jason Cashmere
Telephone: 724.524.0813
Project Name: SH Bell XRF Site
Project #: 103X90260015S051609003
Location: East Liverpool, OH
Sampled By: JC

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Lab Use Only
Place Header Sticker Here:

123177

Program:
QSM RCRA SDWA NPDES
Solid Waste Other

PO # 1111200

Report To: Jason Cashmere
EMAIL: jason.cashmere@tetratech.com
Company: Tetra Tech, EMI
Address: 6777 Engle Rd., Ste. L
Middleburg Heights, OH 44130

Invoice To:* Dan Poro
EMAIL: dan.poro@tetratech.com
Company: Tetra Tech, EMI
Address: 1 S. Wacker Dr. 37th Floor
Chicago, IL 60606

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Matrix:
GW – groundwater SW - surface water WW - wastewater DW - drinking water
S - soil/sediment SL - sludge A - air M - misc/waste

Turnaround Time
Normal RUSH*
Date Needed: _____
Rush analysis requires prior CT Laboratories' approval
Surcharges:
24 hr 200%
2-3 days 100%
4-9 days 50%

ANALYSES REQUESTED

Collection Date	Collection Time	Matrix	Grab/ Comp	Sample #	Sample ID Description	Filtered? Y/N	Iron 60610C	Chromium 6010C	Manganese 6010C	Total # Containers	Designated MS/MSD	CT Lab ID # (Lab use only)
10/19/16	1629	S	Grab		PS32		X	X	X			14 526
10/19/16	0958	S	Grab		WRS46		X	X	X			" 527
10/20/16	0913	S	Grab		WRS25		X	X	X		X	" 528

Fill in Spaces with Bottles per Test

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/24/16 1700		
Received by:	Date/Time	Received for Laboratory by: [signature]	Date/Time 10/26/16 1240

Lab Use Only
Ice Present (Yes) No
Temp 10 IR Gun # 14
Cooler # unmarked

10/26/16 1000 BNA

Cooler Receipt Form

Ice Present YES NO

Temperature 1.1

IR Gun # 14

Initials BA

Date 10-26-16 Time 1000

Cooler #: XXXX

JASON CASHMERE
(440) 297-2178
6777 ENGLE ROAD
MIDDLEBURG HEIG OH 44130

28 LBS 1 OF 1
SHP WT: 28 LBS
DATE: 25 OCT 2016
AH

SHIP SAMPLE RECEIVING
TO: CT LABORATORIES
1230 LANGE CT

BARABOO WI 53913-3109

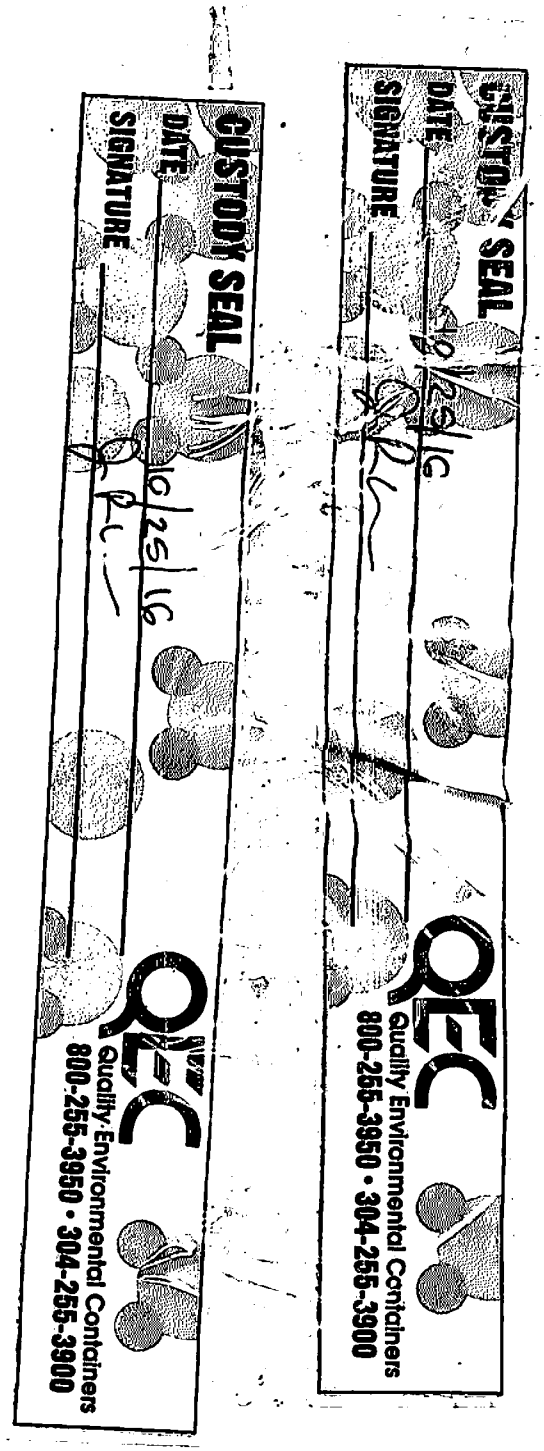
WI 539 0-10

UPS NEXT DAY AIR 1
TRACKING #: 1Z 340 1RV 01 7271 4588

CT LABORATORIES
1230 LANGE CT

BARABOO WI 53913

P:NORTH S: DAN I:77D
10G-1003
1Z3401RV017271 4588 1030
KUT9XUG WILAK129 OCT 26 09:06:58 2016
US 5390 HIP 16.3.5 ZEBRAZM400

ISH 13.00H 22P 450 81.5U 10/2016

Shipper authorizes UPS to act as forwarding agent for export control and customs purposes. It agrees that the goods will not be exported from the US in accordance with the Export Administration Regulations.
ECD # 1014