

TECHNICAL MEMORANDUM

To: Nevada Environmental Response Trust

Cc: Nevada Division of Environmental Protection
United States Environmental Protection Agency

From: Arul Ayyaswami and Dan Pastor

Date: August 29, 2018

Subject: In-Situ Chromium Treatability Study Monthly Progress Report

At the direction of the Nevada Environmental Response Trust (NERT or Trust), Tetra Tech, Inc. (Tetra Tech) has prepared this memorandum that summarizes Tetra Tech's progress made through July 2018 toward successfully implementing the In-Situ Chromium Treatability Study as outlined in the In-Situ Chromium Treatability Study Work Plan (Work Plan).

Task Progress Update: July 2018

Task M12 – In-Situ Chromium Treatability Study

- Task Leader – Arul Ayyaswami
- Current Status
 - An additional performance groundwater monitoring event was performed from June 21 - 22, 2018 as part of the biological reduction study to further evaluate groundwater velocity, carbon substrate longevity, the degree to which reduction of hexavalent chromium and other chemicals of potential concern could occur within the UMCf, and confirm geochemical conditions return to baseline conditions. Groundwater monitoring was performed at 8 of the 14 downgradient monitoring wells. Groundwater monitoring wells CTMW-03S, CTMW-03D, CTMW-05S, and CTMW-05D were excluded as the previous groundwater monitoring results indicated that these wells were located cross-gradient of the injection wells and showed limited effects from the carbon substrate injections. Groundwater monitoring wells CTMW-02S and CTMW-07S were planned to be sampled but did not contain enough water at the time of the performance groundwater monitoring to be sampled.
 - Summary data tables of the well construction details, groundwater gauging results, and groundwater monitoring results from the June 21 – 22, 2018 event are provided in the attached Tables 1, 2, and 3, respectively. The following provides a brief summary of the analytical results obtained from the additional performance monitoring event (PME #10):

- Hexavalent chromium concentrations in groundwater increased at shallow monitoring wells CTMW-01S and CTMW-04S between performance monitoring events in March 2018 (PME #9) and June 2018 (PME #10), but remain well below baseline concentrations (Table 3). The increases in hexavalent chromium concentrations correspond with total organic carbon concentrations returning to near baseline concentrations in well CTMW-04S (Table 3). At the downgradient monitoring well CTMW-06S, hexavalent chromium concentrations in groundwater remained below detectable concentrations (less than 0.25 µg/L). Hexavalent chromium concentrations in groundwater remained generally consistent or declined at deep monitoring wells between sample events PME #9 and PME#10. Hexavalent chromium concentrations in groundwater from wells CTMW-01D, CTMW-02D, CTMW-04D, and CTMW-06D have decreased by approximately 69%, 35%, 26%, and 85%, respectively, when compared to baseline concentrations. Hexavalent chromium concentrations in groundwater at the deep monitoring well CTMW-07D, screened from 100 to 115 feet bgs, decreased from 24 to 12 µg/L.
- Perchlorate concentrations in groundwater increased between PME #9 and PME #10 at shallow monitoring well CTMW-01S from below detectable concentrations (less than 2.5 µg/L) to 150 µg/L. Perchlorate concentrations in groundwater at the shallow groundwater monitoring well CTMW-06S, located farther downgradient exhibited a decrease from 130 µg/L to 66 µg/L. Overall, perchlorate concentrations in groundwater at CTMW-01S and CTMW-06S have decreased by greater than 99.9% compared to baseline concentrations. Perchlorate concentrations in groundwater at deep monitoring wells CTMW-01D, CTMW-02D, and CTMW-04D were relatively stable or slightly increased from PME #9 to PME #10. At CTMW-06D, perchlorate concentrations in groundwater continued to decrease between PME #9 and PME #10 from 610,000 µg/L to 240,000 µg/L, which represents a decrease of 76% compared to the baseline concentration. Perchlorate concentrations in groundwater at the deep monitoring well CTMW-07D decreased from 6,100 to 1,900 µg/L.
- Chloroform concentrations in groundwater decreased from 3.2 µg/L to below detectable concentrations (less than 0.25 µg/L) at CTMW-01S, remained steady at 570 µg/L at CTMW-04S, and decreased from 16 µg/L to 4.9 µg/L at CTMW-06S from PME #9 to PME #10. Overall, chloroform concentrations in groundwater decreased by approximately 99%, 21%, and 99% at CTMW-01S, CTMW-04S, and CTMW-06S, respectively, compared to baseline levels. Chloroform concentrations in groundwater increased from sampling event PME #9 to PME #10 at deep monitoring wells CTMW-01D, CTMW-02D, and CTMW-04D from 750 µg/L to 1,500 µg/L, 990 µg/L to 1,600 µg/L, and 960 µg/L to 1,300 µg/L, respectively. Chloroform concentrations in groundwater at CTMW-06D decreased from 440 µg/L during PME #9 to 270 µg/L during PME #10. Overall, chloroform concentrations at CTMW-06D has decreased by 82% compared to the baseline concentration. Chloroform concentrations in groundwater at the deep monitoring well CTMW-07D decreased from 1.5 to 0.41 µg/L.
- Organic acids and intermediate fermentation-based products associated with the presence of high concentrations of carbon substrates in a highly reducing environment, such as acetone and methyl ethyl ketone, returned to concentrations at or below baseline concentrations in groundwater at shallow monitoring wells CTMW-01S, CTMW-04S, and CTMW-06S. Acetone and methyl ethyl ketone concentration in groundwater increased at deep well CTMW-01D but are expected to reduce as geochemical conditions return to baseline conditions. Acetone and methyl ethyl ketone concentrations in groundwater

remained below detectable concentrations at deep monitoring wells CTMW-02D, CTMW-04D, and CTMW-06D. Acetone and methyl ethyl ketone concentrations in groundwater at the deep monitoring well CTMW-07D increased from below detectable concentrations (less than 10 and less than 2.5 µg/L) to 34 and 5.3 µg/L, respectively.

- Groundwater concentrations of volatile fatty acids (VFAs), produced during hydrolysis of the long-chain fatty acids of the emulsified oil substrate, decreased to below detectable concentrations at shallow monitoring wells CTMW-01S and CTMW-06S and remained below detectable concentrations at CTMW-04S. Groundwater concentrations of VFAs remained relatively consistent for the deep monitoring well CTMW-01D and below detectable concentrations at deep monitoring wells CTMW-02D, CTMW-04D, and CTMW-06D. Groundwater concentrations of VFAs at CTMW-07D were below detectable concentrations.
 - In general, dissolved metal concentrations for arsenic, iron, and manganese decreased in the shallow monitoring wells sampled during PME #10 as the total organic concentrations decreased and the oxygen reduction potential started to increase. Arsenic concentrations in groundwater at CTMW-01S and CTMW-06S remained elevated at 440 µg/L and 300 µg/L, respectively compared to their baseline concentrations. However, arsenic concentrations in groundwater at CTMW-01S and CTMW-06S remain below the maximum reported concentrations of 910 µg/L and 660 µg/L, respectively. The arsenic concentration in groundwater at CTMW-04S was 61 µg/L, similar to the baseline concentration of 65 µg/L. Iron concentrations in CTMW-04S and CTMW-06S returned to values at or below baseline concentrations while CTMW-01S remains elevated at 230 µg/L, but below the maximum reported concentration of 5,000 µg/L. Manganese concentrations in groundwater decreased to near or below baseline concentrations at CTMW-01S and CTMW-06S but remain elevated at CTMW-04S at 1,600 µg/L, above the baseline concentration of 38 µg/L but below the maximum reported concentration of 2,000 µg/L. These overall decreasing trends in dissolved metal concentrations are expected to continue as geochemical conditions return to baseline conditions. In general, dissolved metal concentrations in groundwater at CTMW-07D increased between PME #9 and PME #10 but remained consistent with the dissolved metal concentrations observed during PME #8.
- Schedule and Progress Updates
 - The results of the additional performance groundwater monitoring events conducted in March and June 2018 will be presented in a Treatability Study report addendum in 3rd Quarter 2018.
 - Health and Safety
 - There were no health and safety incidents related to Task M12 during July 2018.

CERTIFICATION

In-Situ Chromium Treatability Study Monthly Progress Report

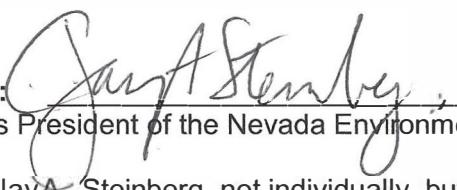
Nevada Environmental Response Trust Site (Former Tronox LLC Site) Henderson, Nevada

Nevada Environmental Response Trust (NERT) Representative Certification

I certify that this document and all attachments submitted to the Division were prepared at the request of, or under the direction or supervision of NERT. Based on my own involvement and/or my inquiry of the person or persons who manage the system(s) or those directly responsible for gathering the information or preparing the document, or the immediate supervisor of such person(s), the information submitted and provided herein is, to the best of my knowledge and belief, true, accurate, and complete in all material respects.

Office of the Nevada Environmental Response Trust

Le Petomane XXVII, not individually, but solely in its representative capacity as the Nevada Environmental Response Trust Trustee

Signature:  _____, not individually, but solely in his representative capacity as President of the Nevada Environmental Response Trust Trustee

Name: Jay A. Steinberg, not individually, but solely in his representative capacity as President of the Nevada Environmental Response Trust Trustee

Title: Solely as President and not individually

Company: Le Petomane XXVII, Inc., not individually, but solely in its representative capacity as the Nevada Environmental Response Trust Trustee

Date: _____

8/29/18

CERTIFICATION

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been prepared in a manner consistent with the current standards of the profession, and to the best of my knowledge, comply with all applicable federal, state, and local statutes, regulations, and ordinances. I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.

Description of Services Provided: Prepared In-Situ Chromium Treatability Study Monthly Progress Report, Nevada Environmental Response Trust Site, Henderson, Nevada.



August 29, 2018

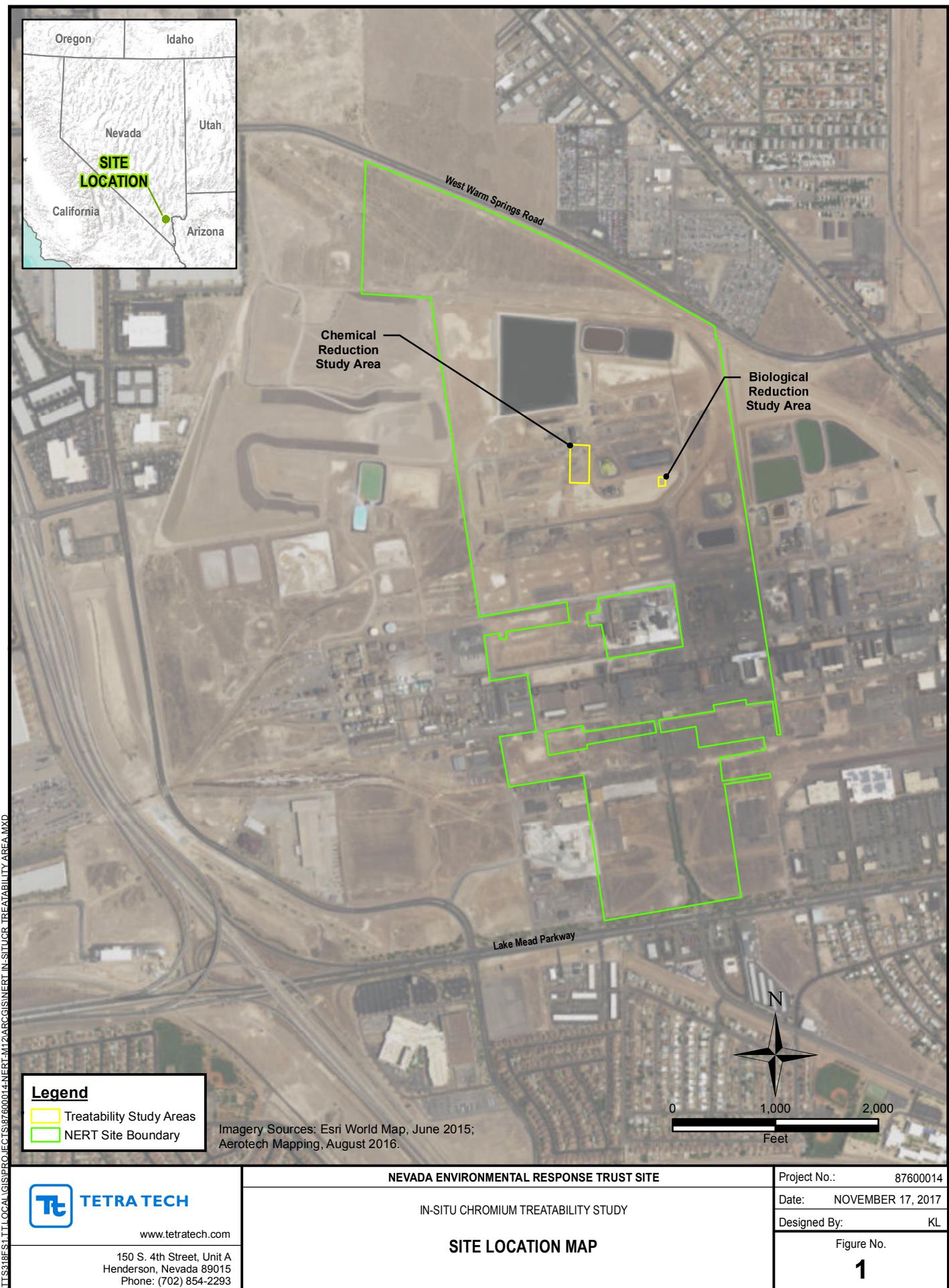
Kyle Hansen, CEM

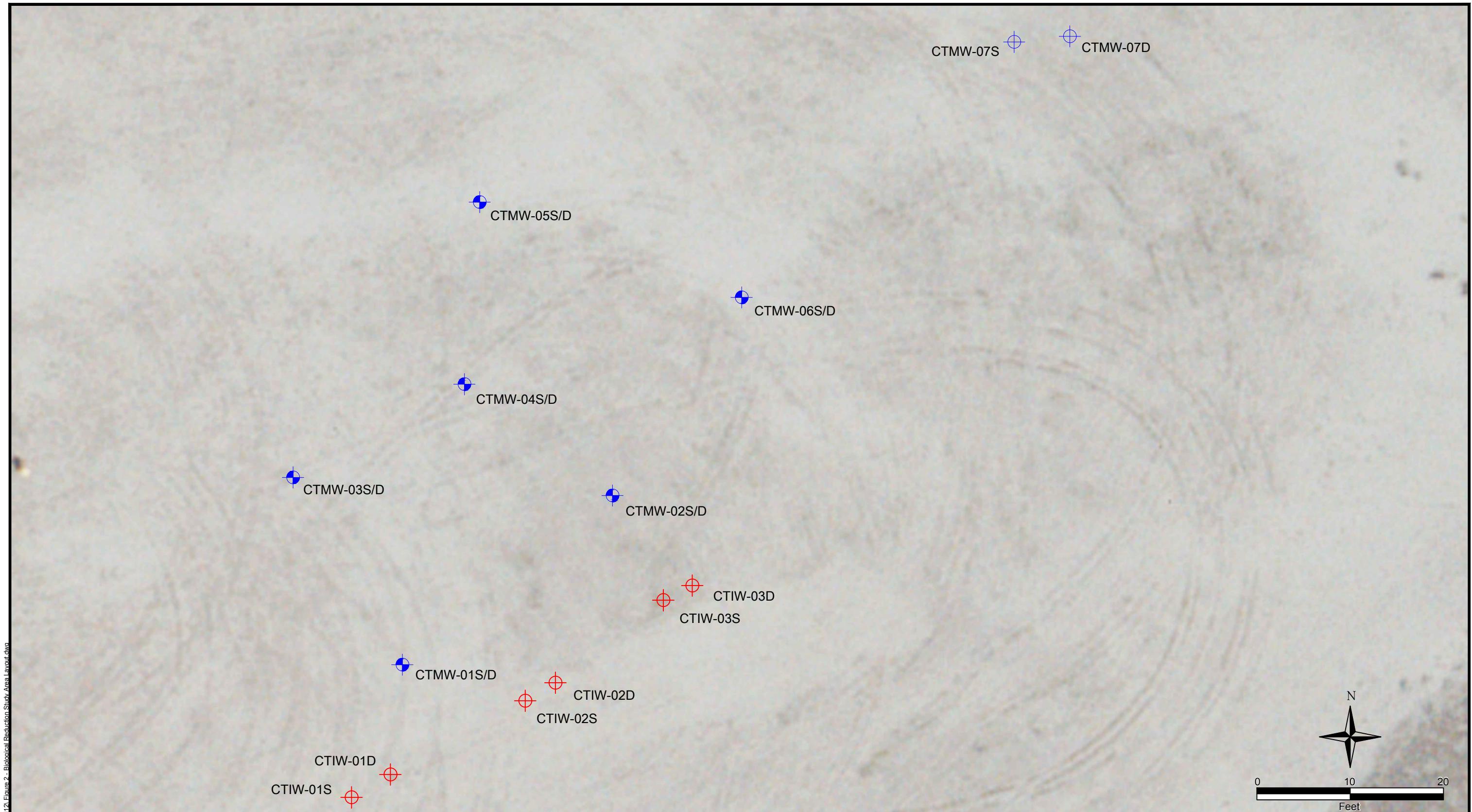
Field Operations Manager/Geologist
Tetra Tech, Inc.

Date

Nevada CEM Certificate Number: 2167
Nevada CEM Expiration Date: September 18, 2020

Figures



**Legend**

CTMW-07S	Monitoring Well (Single Completion)	Qal	Quaternary Alluvium
CTMW-03S/D	Monitoring Well (Dual Completion)	UMCf	Upper Muddy Creek Formation
CTIW-01D	Injection Well (Single Completion)		
S	Shallow Well (Screened in Qal)		
D	Deep Well (Screened in UMCf)		

Note:
1. Imagery Source: Aerotech Mapping, August 2016.



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NEVADA ENVIRONMENTAL RESPONSE TRUST SITE

IN-SITU CHROMIUM TREATABILITY STUDY

BIOLOGICAL REDUCTION STUDY AREA LAYOUT

Project No: 117-7502018

Date: MAY 22, 2018

Designed By: DVK

Figure No.

2

Tables

DRAFT

Table 1
Well Construction Details
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well ID	Northing (feet)	Easting (feet)	Latitude	Longitude	Borehole Size (inches)	Well Diameter (inches)	Well Material (blank casing)	Well Vault	Filter Pack Material	Screen Material	Screen Interval (feet bgs)	Screen Top (feet bgs)	Screen Bottom (feet bgs)	Screen Length (feet)	Total Depth of Borehole (feet bgs)	Total Depth of Well (feet bgs)	TOC Elevation (feet amsl)	Ground Surface Elevation (feet amsl)
CTIW-01S	26719202.713	828135.837	36° 02' 48.27" N	115° 00' 05.74" W	8	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.010"	18.5 - 23.5	18.5	23.5	5	26.5	23.5	1,757.41	1,757.20
CTIW-01D	26719205.172	828140.000	36° 02' 48.29" N	115° 00' 05.69" W	8	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.010"	33 - 38	33	38	5	61.5	38	1,757.34	1,757.08
CTIW-02S	26719213.064	828154.451	36° 02' 48.37" N	115° 00' 05.51" W	8	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	19 - 24	19	24	5	26.5	24	1,757.45	1,757.39
CTIW-02D	26719215.001	828157.687	36° 02' 48.39" N	115° 00' 05.47" W	8	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	34 - 49	34	49	15	51.5	49	1,757.31	1,757.37
CTIW-03S	26719223.844	828169.245	36° 02' 48.48" N	115° 00' 05.33" W	8	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	19 - 24	19	24	5	26.5	24	1,757.32	1,757.31
CTIW-03D	26719225.419	828172.351	36° 02' 48.49" N	115° 00' 05.29" W	8	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	34 - 49	34	49	15	51.5	49	1,757.48	1,757.38
CTMW-01S	26719216.935	828141.284	36° 02' 48.41" N	115° 00' 05.67" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	19 - 24	19	24	5	61.5	24	1,757.16	1,757.18
CTMW-01D	26719217.228	828141.249	36° 02' 48.41" N	115° 00' 05.67" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	34 - 49	34	49	15		49	1,757.14	1,757.18
CTMW-02S	26719235.068	828163.802	36° 02' 48.59" N	115° 00' 05.40" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	19 - 24	19	24	5	61.5	24	1,757.21	1,757.32
CTMW-02D	26719234.810	828163.939	36° 02' 48.59" N	115° 00' 05.39" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	34 - 49	34	49	15		49	1,757.26	1,757.32
CTMW-03S	26719237.005	828129.568	36° 02' 48.61" N	115° 00' 05.81" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.010"	19 - 24	19	24	5	61.5	24	1,757.21	1,757.15
CTMW-03D	26719237.269	828129.763	36° 02' 48.61" N	115° 00' 05.81" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.010"	34 - 39	34	39	5		39	1,757.23	1,757.15
CTMW-04S	26719246.990	828147.930	36° 02' 48.71" N	115° 00' 05.59" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	19 - 24	19	24	5	61.5	24	1,757.00	1,757.17
CTMW-04D	26719246.759	828147.969	36° 02' 48.71" N	115° 00' 05.59" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	34 - 49	34	49	15		29	1,757.00	1,757.17
CTMW-05S	26719266.508	828149.570	36° 02' 49.20" N	115° 00' 05.99" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	19 - 24	19	24	5	61.5	24	1,757.24	1,757.15
CTMW-05D	26719266.615	828149.351	36° 02' 49.20" N	115° 00' 05.99" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	34 - 54	34	54	20		54	1,757.25	1,757.15
CTMW-06S	26719256.295	828177.643	36° 02' 49.23" N	115° 00' 05.74" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	19 - 24	19	24	5	61.5	24	1,757.43	1,757.17
CTMW-06D	26719256.058	828177.537	36° 02' 49.23" N	115° 00' 05.74" W	12	2	Sch. 40 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.020"	34 - 54	34	54	20		54	1,757.42	1,757.17
CTMW-07S	26719283.848	828206.898	36° 02' 49.60" N	115° 00' 04.84" W	8	2	Sch. 80 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.010"	19 - 24	19	24	5	25	24	1,757.50	1,757.50
CTMW-07D	26719284.263	828212.828	36° 02' 49.60" N	115° 00' 04.77" W	8	2	Sch. 80 PVC	18-in. Diameter Round	#2/16 Sand	2-in PVC 0.010"	100 - 115	100	115	15	131.5	115	1,757.38	1,757.38

Notes:

amsl Above mean sea level
 bgs Below ground surface
 btoc Below top of casing
 GW Groundwater
 in Inches
 PVC Polyvinyl Chloride
 Sch. Schedule
 TOC Top of Casing

Table 2
Groundwater Elevations
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well ID	Screen Interval (feet bgs)	TOC Elevation (feet amsl)	Date Gauged	Event	Depth to Product (feet btoc)	Depth to Water (feet btoc)	Product Thickness (feet)	GW Elevation (feet amsl)
CTIW-01S	18.5 - 23.5	1,757.41	04/03/17	Baseline	--	22.26	--	1,735.15
			04/18/17	Injections	--	22.31	--	1,735.10
			05/02/17	PME1	--	22.15	--	1,735.26
			05/16/17	PME2	--	22.29	--	1,735.12
			05/31/17	PME3	--	22.16	--	1,735.25
			06/19/17	PME4	--	22.03	--	1,735.38
			07/17/17	PME5	--	22.25	--	1,735.16
			08/22/17	PME6	--	22.19	--	1,735.22
			09/19/17	PME7	--	22.33	--	1,735.08
			10/03/17	PME8	22.39	22.80	0.41	1,735.01
			03/05/18	PME9	--	21.90	--	1,735.51
			06/21/18	PME10	--	22.42	--	1,734.99
CTIW-01D	33 -38	1,757.34	04/03/17	Baseline	--	22.21	--	1,735.13
			04/18/17	Injections	--	22.26	--	1,735.08
			05/02/17	PME1	--	22.41	--	1,734.93
			05/16/17	PME2	--	22.48	--	1,734.86
			05/31/17	PME3	--	22.36	--	1,734.98
			06/19/17	PME4	--	22.21	--	1,735.13
			07/17/17	PME5	--	22.39	--	1,734.95
			08/22/17	PME6	--	22.95	--	1,734.39
			09/19/17	PME7	--	NM ²	--	--
			10/03/17	PME8	--	22.68	--	1,734.66
			03/05/18	PME9	--	22.23	--	1,735.11
			06/21/18	PME10	--	22.75	--	1,734.59
CTIW-02S	19 - 24	1,757.45	04/03/17	Baseline	--	22.49	--	1,734.96
			04/18/17	Injections	--	22.51	--	1,734.94
			05/02/17	PME1	--	22.20	--	1,735.25
			05/16/17	PME2	--	22.32	--	1,735.13
			05/31/17	PME3	--	22.37	--	1,735.08
			06/19/17	PME4	--	22.13	--	1,735.32
			07/17/17	PME5	--	22.46	--	1,734.99
			08/22/17	PME6	--	21.40	--	1,736.05
			09/19/17	PME7	--	NM ²	--	--
			10/03/17	PME8	--	22.52	--	1,734.93
			03/05/18	PME9	--	22.02	--	1,735.43
			06/21/18	PME10	--	22.61	--	1,734.84
CTIW-02D	34 - 49	1,757.31	04/03/17	Baseline	--	22.52	--	1,734.79
			04/18/17	Injections	--	22.49	--	1,734.82
			05/02/17	PME1	--	23.21	--	1,734.10
			05/16/17	PME2	22.71	23.70	0.99	1,734.57
			05/31/17	PME3	--	23.20	--	1,734.11
			06/19/17	PME4	--	22.70	--	1,734.61
			07/17/17	PME5	--	22.88	0.01	1,734.44
			08/22/17	PME6	--	22.76	--	1,734.55
			09/19/17	PME7	--	22.75	--	1,734.56
			10/03/17	PME8	--	22.83	--	1,734.48
			03/05/18	PME9	--	22.35	--	1,734.96
			06/21/18	PME10	--	22.92	--	1,734.39
CTIW-03S	19 - 24	1,757.32	04/03/17	Baseline	--	22.53	--	1,734.79
			04/18/17	Injections	--	22.56	--	1,734.76
			05/02/17	PME1	--	22.35	--	1,734.97
			05/16/17	PME2	--	22.44	--	1,734.88
			05/31/17	PME3	--	22.51	--	1,734.81
			06/19/17	PME4	--	22.24	--	1,735.08
			07/17/17	PME5	--	22.69	--	1,734.63
			08/22/17	PME6	--	21.75	--	1,735.57
			09/19/17	PME7	--	22.50	--	1,734.82
			10/03/17	PME8	--	22.79	--	1,734.53
			03/05/18	PME9	--	22.25	--	1,735.07
			06/21/18	PME10	--	22.71	--	1,734.61
CTIW-03D	34 - 49	1,757.48	04/03/17	Baseline	--	22.80	--	1,734.68
			04/18/17	Injections	--	22.80	--	1,734.68
			05/02/17	PME1	23.65	23.79	0.14	1,733.83
			05/16/17	PME2	23.59	23.76	0.17	1,733.88
			05/31/17	PME3	--	23.33	--	1,734.15
			06/19/17	PME4	--	23.25	0.20	1,734.42
			07/17/17	PME5	--	23.18	0.02	1,734.30
			08/22/17	PME6	--	24.23	--	1,733.25
			09/19/17	PME7	--	24.11	--	1,733.37
			10/03/17	PME8	--	23.41	--	1,734.07
			03/05/18	PME9	--	22.91	--	1,734.57
			06/21/18	PME10	--	23.35	--	1,734.13
CTMW-01S	19 - 24	1,757.16	04/03/17	Baseline	--	22.21	--	1,734.95
			04/18/17	Injections	--	22.27	--	1,734.89
			05/02/17	PME1	--	22.25	--	1,734.91
			05/16/17	PME2	--	22.13	--	1,735.03
			05/31/17	PME3	--	22.28	--	1,734.88
			06/19/17	PME4	--	22.24	--	1,734.92
			07/17/17	PME5	--	22.45	--	1,734.71
			08/22/17	PME6	--	22.50	--	1,734.66
			09/19/17	PME7	--	22.85	--	1,734.31
			10/03/17	PME8	--	22.67	--	1,734.49
			03/05/18	PME9	--	22.17	--	1,734.99
			06/21/18	PME10	--	22.72	--	1,734.44
CTMW-01D	34 - 49							

Table 2
Groundwater Elevations
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well ID	Screen Interval (feet bgs)	TOC Elevation (feet amsl)	Date Gauged	Event	Depth to Product (feet btoc)	Depth to Water (feet btoc)	Product Thickness (feet)	GW Elevation (feet amsl)
CTMW-03S	19 - 24	1,757.21	04/03/17	Baseline	--	22.36	--	1,734.85
			04/18/17	Injections	--	22.44	--	1,734.77
			05/02/17	PME1	--	22.41	--	1,734.80
			05/16/17	PME2	--	22.45	--	1,734.76
			05/31/17	PME3	--	22.47	--	1,734.74
			06/19/17	PME4	--	22.40	--	1,734.81
			07/17/17	PME5	--	22.59	--	1,734.62
			08/22/17	PME6	--	22.64	--	1,734.57
			09/19/17	PME7	--	22.73	--	1,734.48
			10/03/17	PME8	--	22.74	--	1,734.47
CTMW-03D	34 - 49	1,757.23	03/05/18	PME9	--	22.37	--	1,734.84
			06/21/18	PME10	--	23.02	--	1,734.19
			04/03/17	Baseline	--	22.43	--	1,734.80
			04/18/17	Injections	--	22.51	--	1,734.72
			05/02/17	PME1	--	22.56	--	1,734.67
			05/16/17	PME2	--	22.57	--	1,734.66
			05/31/17	PME3	--	22.58	--	1,734.65
			06/19/17	PME4	--	22.58	--	1,734.65
			07/17/17	PME5	--	22.75	--	1,734.48
			08/22/17	PME6	--	22.80	--	1,734.43
CTMW-04S	19 - 24	1,757.00	09/19/17	PME7	--	22.88	--	1,734.35
			10/03/17	PME8	--	22.85	--	1,734.38
			03/05/18	PME9	--	22.45	--	1,734.78
			06/21/18	PME10	--	23.01	--	1,734.22
			04/03/17	Baseline	--	22.37	--	1,734.63
			04/18/17	Injections	--	22.41	--	1,734.59
			05/02/17	PME1	--	22.61	--	1,734.39
			05/16/17	PME2	--	22.71	--	1,734.29
			05/31/17	PME3	--	22.69	--	1,734.31
			06/19/17	PME4	--	22.66	--	1,734.34
CTMW-04D	34 - 49	1,757.00	07/17/17	PME5	--	22.80	--	1,734.20
			08/22/17	PME6	--	22.89	--	1,734.11
			09/19/17	PME7	--	22.90	--	1,734.10
			10/03/17	PME8	--	22.98	--	1,734.02
			03/05/18	PME9	--	22.48	--	1,734.52
			06/21/18	PME10	--	23.08	--	1,733.92
			04/03/17	Baseline	--	22.62	--	1,734.38
			04/18/17	Injections	--	22.64	--	1,734.36
			05/02/17	PME1	--	22.75	--	1,734.25
			05/16/17	PME2	--	22.88	--	1,734.12
CTMW-05S	19 - 24	1,757.24	05/31/17	PME3	--	22.86	--	1,734.14
			06/19/17	PME4	--	22.85	--	1,734.15
			07/17/17	PME5	--	23.01	--	1,733.99
			08/22/17	PME6	--	23.07	--	1,733.93
			09/19/17	PME7	--	23.13	--	1,733.87
			10/03/17	PME8	--	23.12	--	1,733.88
			03/05/18	PME9	--	22.61	--	1,734.39
			06/21/18	PME10	--	23.16	--	1,733.84
			06/19/17	PME4	--	23.18	--	1,734.06
			07/17/17	PME5	--	23.28	--	1,733.96
CTMW-05D	34 - 54	1,757.25	08/22/17	PME6	--	23.36	--	1,733.88
			09/19/17	PME7	--	23.38	--	1,733.86
			10/03/17	PME8	--	23.42	--	1,733.82
			03/05/18	PME9	--	22.85	--	1,734.39
			06/21/18	PME10	--	23.44	--	1,733.80
			06/19/17	PME4	--	23.36	--	1,733.89
			07/17/17	PME5	--	23.48	--	1,733.77
			08/22/17	PME6	--	23.53	--	1,733.72
			09/19/17	PME7	--	23.56	--	1,733.69
			10/03/17	PME8	--	23.54	--	1,733.71
CTMW-06S	19 - 24	1,757.43	03/05/18	PME9	--	22.98	--	1,734.27
			06/21/18	PME10	--	23.66	--	1,733.59
			06/19/17	PME4	--	23.41	--	1,734.02
			07/17/17	PME5	--	23.53	--	1,733.90
			08/22/17	PME6	--	23.59	--	1,733.84
			09/19/17	PME7	--	23.64	--	1,733.79
			10/03/17	PME8	--	23.65	--	1,733.78
			03/05/18	PME9	--	23.18	--	1,734.25
			06/21/18	PME10	--	23.73	--	1,733.70
			06/19/17	PME4	--	23.74	--	1,733.68
CTMW-07S	19 - 24	1,757.50	07/17/17	PME5	--	23.84	--	1,733.58
			08/22/17	PME6	--	23.96	--	1,733.46
			09/19/17	PME7	--	23.95	--	1,733.47
CTMW-06D	34 - 54	1,757.42	10/03/17	PME8	--	23.95	--	1,733.47
			03/05/18	PME9	--	23.55	--	1,733.87
			06/21/18	PME10	--	23.97	--	1,733.45
CTMW-07S	19 - 24	1,757.50	10/09/17	PME8	--		Well is dry	
			03/05/18	PME9	--	23.82	--	1,733.68
			06/21/18	PME10	--		Well is dry	
CTMW-07D	100 - 115	1,757.38	10/09/17	PME8	--	24.02	--	1,733.36
			03/05/18	PME9	--	20.52	--	1,736.86
			06/21/18	PME10	--	20.71	--	1,736.67

Notes:

- amsl Above mean sea level
bgs Below ground surface
btoc Below top of casing
EVO Em

Table 3
Summary of Groundwater Monitoring Data
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well Location	Sample ID	Sample Date	Event	Perchlorate by USEPA Method 314.0 (ug/L)	Hexavalent Chromium by USEPA Method 7199 (ug/L)	Total Metals by USEPA Method 6010B (mg/L)			USEPA Method 300.1B (ug/L)		General Water Quality Parameters							
						Total Chromium	Total Iron	Total Manganese	Chlorate	Chlorite	pH	Temp (°C)	Specific Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Sulfide (mg/L)	Ferrous Iron (mg/L)
CTMW-01S	CTMW-01S-20170404	04/04/17	Baseline	410,000	11,000	11	--	0.030	2,500,000	<1,000	7.40	26	9.1	170	1.7	0	0.00	0.02
	CTMW-01S-20170503	05/03/17	PME1	340,000	26	1.7	--	0.55	870,000	<10,000	6.00	29	14	-170	1.9	16	0.00	0.00
	CTMW-01S-20170516	05/16/17	PME2	280,000	<0.25	0.49	--	0.55	730,000	<10,000	6.70	24	11	-300	1.2	59	0.11	0.22
	CTMW-01S-20170531	05/31/17	PME3	140,000	<0.25	0.18	1.4	0.99	650,000	<10,000	6.10	29	11	-160	1.1	9.2	0.05	0.04
	CTMW-01S-20170619	06/19/17	PME4	39,000	<0.25 UJ	1.9	17	3.3	64,000	<20,000	6.20	31	14	-130	0.56	460	0.08	0.30
	CTMW-01S-20170720	07/20/17	PME5	4,000	<0.25	0.49	25	5.5	72,000	<5,000	5.90	29	14	-40	0.77	75	0.25	0.19
	CTMW-01S-20170824	08/24/17	PME6	32,000	2.6	2.2	18	3.3	13,000	<10,000	6.50	30	14	-71	2.1	300	0.62	3.30
	CTMW-01S-20170920	09/20/17	PME7	320	0.37 J	0.086	11	3.6	<1,000	<10,000	6.40	31	12	-72	0.15	35	0.49	--
	CTMW-01S-20171003	10/03/17	PME8	150 J+	<0.25	0.084	21	2.8	610 J	<1,000	7.80	26	12	-82	1.1	30	0.08	10
	CTMW-01S-20180305	03/05/18	PME9	<2.5	<0.25	0.061	3.9	0.29	<500	<1,000	7.38	26.20	8.75	-135	1.04	352	0.20	2.30
	CTMW-01S-20180621	06/21/18	PME10	150	8.8	0.085	6.9	0.24	1,200	<10,000	7.94	31.85	8.03	39	6.82	534	0.52	1.19
CTMW-01D	CTMW-01D-20170403	04/03/17	Baseline	1,400,000	24,000	23	--	0.042	4,900,000	<1,000	7.00	26	15	100	1.6	85	0.03	0.070
	CTMW-01D-20170503	05/03/17	PME1	1,400,000	22,000	24	--	0.20	4,900,000	<10,000	6.50	27	17	79	1.4	81	0.01	0.050
	CTMW-01D-20170516	05/16/17	PME2	1,400,000	21,000	24	--	0.037 J	4,500,000	<10,000	7.50	27	14	-23	1.1	4.8	0	0.150
	CTMW-01D-20170531	05/31/17	PME3	1,300,000	22,000	23	0.15 J	0.027 J	4,800,000	<10,000	7.00	27	15	-14	0.83	0.6	0	0.050
	CTMW-01D-20170619	06/19/17	PME4	1,400,000	20,000 J-	22	<0.25	<0.075	4,300,000	R	7.00	29	14	-130	0.49	4.2	0	0
	CTMW-01D-20170720	07/20/17	PME5	1,400,000	16,000	16	<0.10	0.070	4,100,000	R	6.50	27	15	-120	0.36	7.9	0.03	0.030
	CTMW-01D-20170720-FD	07/20/17	PME5	1,300,000	16,000	15	<0.050	0.063	4,100,000	<10,000	--	--	--	--	--	--	--	--
	CTMW-01D-20170824	08/24/17	PME6	1,400,000	13,000	14	0.17 J	0.20	3,700,000	<10,000	6.40	27	16	-160	0.73	27	0.06	0.070
	CTMW-01D-20170920	09/20/17	PME7	1,500,000	12,000	13	0.71	0.21	3,800,000	<10,000	6.50	26	15	-100	0.21	12	0.06	--
	CTMW-01D-20171003	10/03/17	PME8	1,300,000	12,000	11	0.13	0.21	3,500,000	<10,000	7.30	27	14	-19	0.28	0	0.09	0.060
	CTMW-01D-20180305	03/05/18	PME9	910,000	7,500	7.4	<0.050	0.66	2,200,000	<10,000	7.10	26.92	9.31	137	1.39	7.0	0.0	0.0
	CTMW-01D-20180305-FD	03/05/18	PME9	900,000	7,500	7.3	<0.050	0.65	2,300,000	<10,000	--	--	--	--	--	--	--	--
CTMW-02S	CTMW-02S-20170405	04/05/17	Baseline	410,000	11,000	11	--	0.03	2,500,000	<10,000	7.45	27.19	9.23	161	1.56	0.00	0.00	0.09
	CTMW-02S-20170504	05/04/17	PME1	460,000	1,300	2.5	--	0.36	860,000	<10,000	5.05	33.65	13.3	190	7.53	62.9	0.00	0.01
	CTMW-02S-20170516	05/16/17	PME2	380,000	110	0.74	--	0.35	550,000	<10,000	6.75	31.31	11.1	-43	1.68	0.0	0.11	0.16
	CTMW-02S-20170601	06/01/17	PME3	440,000	760	0.68	0.11	0.23	750,000	<10,000	6.70	29.55	11.2	150	1.82	6.6	0.06	0.10
	CTMW-02S-20170620	06/20/17	PME4	110,000	<0.25	0.16	2.1	1.3	<500	<500	6.76	27.70	10.5	-145	0.56	239	0.10	0.30
	CTMW-02S-20170719	07/19/17	PME5	26,000	<0.25	0.084	13	2.7	<500	<10,000	6.60	30.00	11.5	-31	0.77	98.1	0.13	0.17
	--	08/24/17	PME6	Well Dry; Unable to sample												Well Dry; Unable to sample		
	CTMW-02S-20170920	09/20/17	PME7	13,000	<0.25	0.097	13	1.4	<1,000	<10,000	--	--	--	--	--	--	--	--
	CTMW-02S-20171003	10/03/17	PME8	290	<0.25	0.13	7.9	1.1	<500	<1,000	7.30	26.14	9.15	-107	0.26	45.4	0.07	3.23
	CTMW-02S-20180306	03/06/18	PME9	34	<0.25	0.049	4.2	0.51	<50	<50	7.33	20.71	8.39	-61	1.17	83.2	0.10	4.00
CTMW-02D	CTMW-02D-20170404	04/04/17	Baseline	960,000	20,000	23	--	0.090 J	4,800,000	<1,000	7.60	28	13	120	1.2	29	0.06	0.11
	CTMW-02D-20170404-FD	04/04/17	Baseline	930,000	20,000	21	--	0.076 J	4,600,000	<1,000	--	--	--	--	--	--	--	--
	CTMW-02D-20170503	05/03/17	PME1	1,100,000 J	15,000	19	--	0.10	4,200,									

Table 3
Summary of Groundwater Monitoring Data
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well Location	Sample ID	Sample Date	Event	Perchlorate by USEPA Method 314.0 (ug/L)	Hexavalent Chromium by USEPA Method 7199 (ug/L)	Total Metals by USEPA Method 6010B (mg/L)			USEPA Method 300.1B (ug/L)		General Water Quality Parameters							
						Total Chromium	Total Iron	Total Manganese	Chlorate	Chlorite	pH	Temp (°C)	Specific Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Sulfide (mg/L)	Ferrous Iron (mg/L)
CTMW-03S	CTMW-03S-20170405	04/05/17	Baseline	470,000	13,000	14	--	<0.050	2,900,000	<10,000	7.30	28	9.4	160	1.9	0.00	0.00	0.00
	CTMW-03S-20170505	05/05/17	PME1	460,000	13,000	15	--	0.060	3,200,000	<10,000	6.30	25	9.4	-3.0	1.4	0.50	0.00	0.00
	CTMW-03S-20170517	05/17/17	PME2	490,000	14,000	15	--	0.058	3,200,000	<10,000	7.40	21	10	150	4.8	1.00	0.08	0.00
	CTMW-03S-20170601	06/01/17	PME3	610,000	14,000	13	<0.050	0.060	4,000,000	<10,000	6.90	28	11	170	1.1	0.00	0.00	0.00
	CTMW-03S-20170620	06/20/17	PME4	670,000	4,400	5.7	0.23	0.33	1,600,000	<1,000	6.50	26	11	33	0.26	84	0.00	0.00
	CTMW-03S-20170718	07/18/17	PME5	540,000	14,000	14	0.055 J	0.33	3,100,000	<10,000	6.70	28	11	120	0.87	16	0.00	0.00
	CTMW-03S-20170823	08/23/17	PME6	600,000	4,800	5.7	0.15	0.60	1,600,000	<10,000	6.40	28	12	14	1.50	100	0.16	0.16
	CTMW-03S-20170921	09/21/17	PME7	540,000	14,000	16	<0.050	0.38	3,400,000	<10,000	6.90	25	11	67	0.16	2.10	0.12	--
CTMW-03D	CTMW-03D-20170403	10/03/17	PME8	560,000	16,000	16	<0.050	0.36	3,400,000	<10,000	7.30	29	8.8	120	0.84	0.0	0.00	0.05
	CTMW-03D-20170406	04/06/17	Baseline	530,000	17,000	16	--	0.031	3,700,000	<10,000	7.40	23	11	210	3.4	2.1	0.00	0.00
	CTMW-03D-20170505	05/05/17	PME1	490,000	16,000	16	--	0.027	3,500,000	<10,000	6.50	26	12	180	2.1	0.5	0.00	0.00
	CTMW-03D-20170517	05/17/17	PME2	520,000	16,000	15	--	<0.020	3,400,000	R	8.70	23	11	170	4.3	0.8	0.01	0.00
	CTMW-03D-20170601	06/01/17	PME3	570,000	15,000	15	<0.050	0.019 J	3,500,000	R	7.20	28	11	210	0.58	0.0	0.00	0.00
	CTMW-03D-20170620	06/20/17	PME4	520,000	15,000	18	<0.25	<0.075	3,400,000	<1,000	7.70	27	10	-190	1.2	4.6	0.00	0.00
	CTMW-03D-20170719	07/19/17	PME5	580,000	14,000	14	<0.050	0.018 J	3,400,000	<10,000	7.20	26	11	110	0.78	3.0	0.00	0.00
	CTMW-03D-20170823	08/23/17	PME6	610,000	14,000	15	<0.050	0.022	3,200,000	<10,000	7.30	27	11	-28	0.74	55	0.09	0.13
CTMW-04S	CTMW-04S-20170921	09/21/17	PME7	540,000	14,000	16	0.24	0.051	3,400,000	<10,000	7.60	24	9.9	71	0.12	1.0	0.03	--
	CTMW-04S-20171003	10/03/17	PME8	540,000	15,000	16	0.095 J	0.03	3,500,000	<10,000	7.98	26.17	9.26	77	1.57	0.0	0.00	0.15
	CTMW-04S-20170405	04/05/17	Baseline	420,000	9,900	10	--	0.033	2,500,000	<10,000	7.30	23	9.2	140	1.4	0	0.0	0.02
	CTMW-04S-20170504	05/04/17	PME1	420,000	5,400	19	--	0.11	1,800,000	<10,000	5.80	27	12	120	1.4	6	0.0	0.02
	CTMW-04S-20170517	05/17/17	PME2	570,000	150	0.82	--	0.30	910,000	<10,000	6.70	26	11	-12	1.2	47	0.17	0.17
	CTMW-04S-20170602	06/02/17	PME3	650,000	470	1.1	0.19	0.33	1,100,000	<10,000	6.50	27	11	190	1.5	39	0.02	0.03
	CTMW-04S-20170620	06/20/17	PME4	560,000	<0.25	0.78	2.9	0.41	290,000	<1,000	6.90	31	10	-70	0.36	79	0.09	0.25
	CTMW-04S-20170718	07/18/17	PME5	180,000	0.34 J	0.51	2.6	1.1	20,000	<5,000	6.70	30	11	-1	1.4	60	0.07	0.10
	CTMW-04S-20170823	08/23/17	PME6	140,000	<0.25	0.23	8.7	2.1	16,000	<10,000	6.60	31	12	-240	1.5	70	0.17	2.10
CTMW-04D	CTMW-04S-20170921	09/21/17	PME7	510,000	<0.25	0.12	14	2.6	5,100	<10,000	6.70	26	11	-120	0.16	19	0.11	--
	CTMW-04S-20171003	10/03/17	PME8	120,000	<0.25	0.083	15	2.0	320,000	<10,000	6.60	30	11	-240	0.18	32	0.00	2.00
	CTMW-04S-20180307	03/07/18	PME9	840,000	2,500 J	2.2	1.0	1.1	2,600,000	<10,000	6.75	26.40	12.5	157	0.56	3.2	0.00	0.00
	CTMW-04S-20180621	06/21/18	PME10	870,000	5,900	6.1	0.087 J	1.5	3,500,000	<1,000	6.70	34.29	10.4	174	0.92	0.0	0.00	0.00
	CTMW-04D-20170405	04/05/17	Baseline	980,000	19,000	20	--	0.013 J	4,300,000	<10,000	7.20	25	13	140	1.1	4.7	0.01	0.00
	CTMW-04D-20170504	05/04/17	PME1	950,000	16,000	6.2	--	0.16	4,200,000	<10,000	6.20	28	15	200	3.7	12	0.00	0.00
	CTMW-04D-20170517	05/17/17	PME2	870,000	19,000	22	--	<0.020	4,000,000	<10,000	8.70	23	12	190	0.89	14	0.01	0.070
	CTMW-04D-20170517-FD	05/17/17	PME2	890,000	20,000	21	--	<0.020	4,000,000	<10,000	--	--	--	--	--	--	--	--
CTMW-04D	CTMW-04D-20170602	06/02/17	PME3	860,000	19,000	19	0.084 J	<0.010	4,700,000	<10,000	7.10	27	12	180	0.34	6.4	0.00	0.00
	CTMW-04D-20170621	06/21/17	PME4	990,000	19,000	21	<0.050	<0.015	3,700,000	<10,000	7.50	25	12	-66	0.5</			

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Well Location	Sample ID	Sample Date	Event	Perchlorate by USEPA Method 314.0 (ug/L)	Hexavalent Chromium by USEPA Method 7199 (ug/L)	Total Metals by USEPA Method 6010B (mg/L)		USEPA Method 300.1B (ug/L)		General Water Quality Parameters								
						Total Chromium	Total Iron	Total Manganese	Chlorate	Chlorite	pH	Temp (°C)	Specific Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Sulfide (mg/L)	Ferrous Iron (mg/L)
CTMW-05D	CTMW-05D-20170621	06/21/17	PME4	660,000	16,000	16	<0.050	<0.015	3,400,000	<10,000	7.60	27	10	140	1.6	8.8	0.00	0.00
	CTMW-05D-20170621-FD	06/21/17	PME4	590,000	16,000	18	<0.050	0.015 J	3,500,000	<10,000	--	--	--	--	--	--	--	--
	CTMW-05D-20170718	07/18/17	PME5	510,000	15,000 J-	15	<0.050	0.1	3,400,000	R	7.20	26	11	140	0.8	3.4	0.00	0.00
	CTMW-05D-20170822	08/22/17	PME6	550,000	15,000	16	0.055 J	<0.015	3,500,000	<10,000	7.50	26	12	88	0.72	9.6	0.03	0.00
	CTMW-05D-20170919	09/19/17	PME7	550,000	15,000	14	0.25	0.016 J	3,300,000	<10,000	7.30	28	11	110	0.22	8.2	0.02	--
	CTMW-05D-20171004	10/04/17	PME8	650,000	14,000	16	0.78 J+	0.028	3,400,000	R	6.90	25	9.9	140	2.5	15	0.01	0.19
CTMW-06S	CTMW-06S-20170621	06/21/17	PME4	460,000	<0.25	0.31	2.5	2.0	20,000	<10,000	6.70	35	10	-130	0.66	250	0.02	0.40
	CTMW-06S-20170717	07/17/17	PME5	18,000 J-	<0.25	0.29	5.2	4.3	19,000	<10,000	6.60	34	12	-120	0.61	160	0.09	0.05
	CTMW-06S-20170822	08/22/17	PME6	13,000	<0.25	0.13	42	5.7	290	<10,000	6.80	33	13	-92	6.5	120	0.33	2.20
	CTMW-06S-20170919	09/19/17	PME7	<10	<0.25	0.061	68	5.7	<500	<10,000	6.60	30	12	-110	0.18	120	0.08	--
	CTMW-06S-20171004	10/04/17	PME8	<25	<0.25	0.062	49	7.1	<1,000	<10,000	6.50	28	12	-100	0.17	16	0.01	2.70
	CTMW-06S-20180306	03/06/18	PME9	130	<0.25	0.028	7.9	1.4	100	<50	7.17	25.89	5.6	-130	0.83	13.2	0.07	2.80
	CTMW-06S-20180622	06/22/18	PME10	66	<0.25	0.042 J+	3.8	0.63	160	<1,000	7.09	28.35	6.7	-127	2.22	57.8	0.41	0.60
CTMW-06D	CTMW-06D-20170622	06/22/17	PME4	1,000,000	15,000	17	<0.050	0.042	4,000,000	<10,000	7.20	25	11	85	0.15	9.7	0.00	0.00
	CTMW-06D-20170717	07/17/17	PME5	920,000	17,000	18	<0.050	0.035	3,900,000	<10,000	7.00	31	13	87	0.63	7.1	0.00	0.00
	CTMW-06D-20170717-FD	07/17/17	PME5	830,000	17,000	17	0.067 J	0.034	4,200,000	<10,000	--	--	--	--	--	--	--	--
	CTMW-06D-20170822	08/22/17	PME6	950,000	15,000	15	0.63	0.1	3,700,000	<10,000	6.90	26	13	11	0.9	47	0.10	0.00
	CTMW-06D-20170919	09/19/17	PME7	800,000	14,000	13	0.85	0.15	2,700,000	<10,000	6.80	25	13	170	0.49	28	0.10	--
	CTMW-06D-20170919-FD	09/19/17	PME7	810,000	13,000	13	0.79	0.15	2,600,000	<10,000	--	--	--	--	--	--	--	--
	CTMW-06D-20171004	10/04/17	PME8	970,000	12,000	13	0.83	0.19	3,100,000	<10,000	6.60	27	12	180	0.55	91	0.24	0.27
	CTMW-06D-20171004-FD	10/04/17	PME8	990,000	13,000	13	0.71	0.18	3,100,000	<10,000	--	--	--	--	--	--	--	--
	CTMW-06D-20180307	03/07/18	PME9	610,000	5,600	6.4	2.0	0.35	2,000,000	<10,000	7.02	24.30	12.2	115	0.61	28.3	0.00	0.00
	CTMW-06D-20180622	06/22/18	PME10	240,000	2,300	3.3 J+	2.1	0.35	800,000	<1,000	6.93	28.17	10.3	92	0.35	57.8	0.41	0.60
CTMW-07S	--	10/09/17	PME8	Well Dry; Unable to sample														
	CMTW-07S-20180306	03/06/18	PME9	510,000 J-	13,000	14	0.41 J	0.092 J	3,200,000	<10,000	7.38	24.97	9.60	163	2.96	8.9	0.00	0.00
	--	06/22/18	PME10	Well Dry; Unable to sample														
CTMW-07D	CTMW-07D-20171009	10/09/17	PME8	14,000	25	0.097	14	0.27	48,000	<100	5.81	23.59	1.26	231	4.82	78.8	0.00	0.00
	CTMW-07D-20180306	03/06/18	PME9	6,100	24	0.026	0.35 J+	0.11	16,000	<100	9.68	23.99	1.44	0.73	-56	8.5	0.00	0.00
	CTMW-07D-20180622	06/22/18	PME10	1,900	12	0.018 J+	0.075 J	0.015 J	6,200	<1,000	7.78	27.30	0.897	103	0.60	8.9	0.00	0.00

Notes:

- USEPA United States Environmental Protection Agency
- °C Celcius
- ug/L Microgram per liter
- mg/L Milligram per liter
- mV Millivolt
- mgS/cm Millisiemens per centimeter
- NTU Nephelometric Units
- >3.00 Denotes concentration was greater than the test method upper limit indicated.
- < The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
- J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The result is an estimated quantity, but the result may be biased high.
- J- The result is an estimated quantity, but the result may be biased low.
- UJ The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
- The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
- Not Analyzed

Table 3
Summary of Groundwater Monitoring Data
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well Location	Sample ID	Sample Date	Event	Dissolved Metals by USEPA Method 6020 (ug/L)																		
				Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Nickel	Selenium	Silver	Thallium	Uranium	Vanadium	Zinc
CTMW-01S	CTMW-01S-20170404	04/04/17	Baseline	<50	<5.0	85	41	<2.5	<2.5	10,000	<5.0	<5.0	<80	<5.0	32	5.5 J	<5.0	<5.0	38	<50	<25	
	CTMW-01S-20170503	05/03/17	PME1	49	8.8	200	62	<0.25	<0.25	1,100	5.0	10	660	<0.50	510	51	2.5	<0.50	<0.50	200	3.5	9.3 J
	CTMW-01S-20170516	05/16/17	PME2	26	0.53 J	210	58	<0.25	<0.25	360	3.4	4.6	32	0.62 J	480	7.6	2.3	<0.50	<0.50	210	19	10 J
	CTMW-01S-20170531	05/31/17	PME3	<50	<5.0	350	75	<2.5	<2.5	150	<5.0	<5.0	780	<5.0	910	13 J	<5.0	<5.0	190	<10	<25	
	CTMW-01S-20170619	06/19/17	PME4	<50	<5.0	460	47	<2.5	<2.5	150	5.2 J	13 J	370	<5.0	2,600	61	<5.0	<5.0	23	<10	<25	
	CTMW-01S-20170720	07/20/17	PME5	48 J	<2.5	380	400	<1.3	<1.3	110	3.7 J	4.2 J	5,200	<2.5	4,500	37	<2.5	<2.5	6.6	<5.0	17 J	
	CTMW-01S-20170824	08/24/17	PME6	<50	<5.0	910	360	<2.5	<2.5	90	<5.0	<5.0	390	<5.0	2,300	30	<5.0	<5.0	80	19 J	<25	
	CTMW-01S-20170920	09/20/17	PME7	<25	4.2 J	700	570	<1.3	<1.3	67	2.8 J	3.0 J	220	<2.5	3,200	18	<2.5	<2.5	44	8.1 J	<13	
	CTMW-01S-20171003	10/03/17	PME8	<25	<2.5	440	610	<1.3	<1.3	59	<2.5	2.8 J	430	<2.5	3,000	15	<2.5	<2.5	5.2	<5.0	16 J	
	CTMW-01S-20180305	03/05/18	PME9	<25	<2.5	590	390	<1.3	<1.3	43	<2.5	7.2 J	250	<2.5	160	2.9 J	<2.5	<2.5	16	6.1 J	13 J	
	CTMW-01S-20180621	06/21/18	PME10	<25	2.7 J	440	530	<1.3	<1.3	73	<2.5	<5.0	230	<2.5	94	9.0 J	2.7 J	<2.5	<2.5	4.5 J	11	<13
CTMW-01D	CTMW-01D-20170403	04/03/17	Baseline	<500	<50	<50	<25	<25	<25	22,000	<50	<50	<320	<50	<50	<50	<50	<50	<50	<50	<40	<250
	CTMW-01D-20170503	05/03/17	PME1	36	0.96 J	20	47	<0.25	<0.25	28,000	0.77 J	2.5	65	<0.50	44	5.1	3.5	<0.50	<0.50	29	<150	6.7 J
	CTMW-01D-20170516	05/16/17	PME2	12	<0.50	21	43	<0.25	<0.25 UJ	21,000	0.83 J	2.3 J-	55	1.2	58 J-	6.6 J-	2.4 J-	<0.50	<0.50	30	R	9.5 J
	CTMW-01D-20170531	05/31/17	PME3	<50	<5.0	24	43	<2.5	<2.5	21,000	<5.0	<5.0	<80	<5.0	36	6.3 J	<5.0	<5.0	43	<10	<25	
	CTMW-01D-20170619	06/19/17	PME4	<50	<5.0	33	43	<2.5	<2.5	18,000	<5.0	<5.0	<80	<5.0	46	<5.0	<5.0	<5.0	67	R	<25	
	CTMW-01D-20170720	07/20/17	PME5	<25	<2.5	39	47	<1.3	<1.3	15,000	<2.5	3.5 J	<40	<2.5	85	8.0 J	7.3 J	<2.5	<2.5	140	R	32 J
	CTMW-01D-20170720-FD	07/20/17	PME5	<25	<2.5	43	49	<1.3	<1.3	17,000	<2.5	3.2 J	100	<2.5	88	7.6 J	6.8 J	<2.5	<2.5	140	<5.0	<13
	CTMW-01D-20170824	08/24/17	PME6	<50	<5.0	33	50	<2.5	<2.5	11,000	<5.0	<5.0	<80	<5.0	180	8.0 J	6.0 J	<5.0	<5.0	230	<10	<25
	CTMW-01D-20170920	09/20/17	PME7	<25	<2.5	32	51	<1.3	<1.3	12,000	<2.5	3.0 J	83 J	<2.5	200	7.4 J	5.3 J	<2.5	<2.5	230	<5.0	<13
	CTMW-01D-20171003	10/03/17	PME8	6.2 J	0.54 J	29	53	<0.25	<0.25	13,000	0.50 J	0.58 J	<8.0	<0.50	200	2.7	4.8	<0.50	<0.50	220	7.5	3.7 J
CTMW-02S	CTMW-02S-20180305	03/05/18	PME9	<25	<2.5	40	270	<1.3	<1.3	8,600	<2.5	<2.5	<40	<2.5	760	4.7 J	4.7 J	<2.5	<2.5	240	10	45 J
	CTMW-01D-20180305-FD	03/05/18	PME9	<25	<2.5	37	270	<1.3	<1.3	8,400	<2.5	2.6 J	<40	<2.5	740	4.6 J	<2.5	<2.5	220	9.9 J	50 J	
	CTMW-01D-20180621	06/21/18	PME10	<25	<2.5	45	400	<1.3	<1.3	7,400	<2.5	<2.5	<40	<2.5	1,000	4.4 J	4.1 J	<2.5	<2.5	290	9.5 J	<13
	CTMW-01D-20180621-FD	06/21/18	PME10	<25	<2.5	44	370	<1.3	<1.3	7,800	<2.5	<2.5	<40	<2.5	990	4.5 J	<2.5	<2.5	310	9.8 J	<13	
	CTMW-02S-20170405	04/05/17	Baseline	<50	<5.0	73	36	<2.5	<2.5	11,000	<5.0	<5.0	<800 F1	<5.0	38	11 J	<5.0	<5.0	31	<100	86 J	
	CTMW-02S-20170504	05/04/17	PME1	27	1.6 J	85	58	<0.25	<0.25	1,500	2.1	24	79	<0.50	290	11	1.6 J	<0.50	<0.50	200	<150	18 J
	CTMW-02S-20170516	05/16/17	PME2	6.3 J	<0.50	53	53	<0.25	<0.25	240	2.1	5.2	38	<0.50	270	22	2.4	<0.50	<0.50	260	20	13 J
	CTMW-02S-20170601	06/01/17	PME3	8.7 J	<0.50	110	40	<0.25	<0.25	580	1.3	5.1	<8.0	<0.50	180	4.4	2.2	<0.50	<0.50	380	13	5.1 J
	CTMW-02S-20170620	06/20/17	PME4	<50	<5.0	850	58	<2.5	<2.5	130	<5.0	<5.0	2,000	<5.0	1,000	19 J	<5.0	<5.0	420	11 J	<25	
CTMW-02D	CTMW-02S-20170719	07/19/17	PME5	<50	5.0 J	640	350	<2.5	<2.5	42	<5.0	<5.0	6,800	<5.0	2,400	9.0 J	<5					

Table 3
Summary of Groundwater Monitoring Data
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well Location	Sample ID	Sample Date	Event	Dissolved Metals by USEPA Method 6020 (ug/L)																			
				Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Nickel	Selenium	Silver	Thallium	Uranium	Vanadium	Zinc	
CTMW-03S	CTMW-03S-20170405	04/05/17	Baseline	<50	<5.0	120	29	<2.5	<2.5	13,000	<5.0	<5.0	<800	<5.0	9.1 J	<5.0	<5.0	<5.0	27	<100	<25		
	CTMW-03S-20170505	05/05/17	PME1	26 J	<2.5	97	31	<1.3	<1.3	13,000	<2.5	<2.5	<8.0	<2.5	60	3.1 J	4.9 J	<2.5	<2.5	27	<100	<13	
	CTMW-03S-20170517	05/17/17	PME2	30 J	<2.5	110	33	<1.3	<1.3	14,000	<2.5	<2.5	100	<2.5	68	3.3 J	3.9 J	<2.5	<2.5	31	<200	22 J	
	CTMW-03S-20170601	06/01/17	PME3	<50	<5.0	140	45	<2.5	<2.5	17,000	<5.0	<5.0	<80	<5.0	87	<5.0	<5.0	<5.0	43	<10	<25		
	CTMW-03S-20170620	06/20/17	PME4	63 J	<5.0	160	51	<2.5	<2.5	4,800	<5.0	<5.0	<80	<5.0	320	10 J	<5.0	<5.0	<5.0	110	<10	<25	
	CTMW-03S-20170718	07/18/17	PME5	<25	<2.5	130	43	<1.3	<1.3	16,000	<2.5	<2.5	<40	<2.5	240	4.9 J	<2.5	<2.5	47	<5.0	<13		
	CTMW-03S-20170823	08/23/17	PME6	9.2 J	0.51 J	180	61	<0.25	<0.25	4,600	3.1	4.0	36	<0.50	520	7.2	3.0	0.56 J	<0.50	98	R	8.1 J	
	CTMW-03S-20170921	09/21/17	PME7	<25	<2.5	110	43	<1.3	<1.3	14,000	<2.5	4.9 J	<40	<2.5	330	4.6 J	8.6 J	57 J-	<2.5	44	R	<13	
	CTMW-03S-20171003	10/03/17	PME8	<25	<2.5	120	42	<1.3	<1.3	13,000	<2.5	29	<40	<2.5	320	6.5 J	3.9 J	<2.5	<2.5	45	41	31 J	
CTMW-03D	CTMW-03D-20170406	04/06/17	Baseline	110 J-	<5.0	100	32	<2.5	<2.5	16,000	<5.0	<5.0	<80	<5.0	36	<5.0	<5.0	<5.0	29	R	36 J		
	CTMW-03D-20170505	05/05/17	PME1	<25	<2.5	98	30	<1.3	<1.3	14,000	<2.5	4.3 J	9.1 J	<2.5	24	<2.5	5.8 J	12	<2.5	32	R	<13	
	CTMW-03D-20170517	05/17/17	PME2	<25	<2.5	110	31	<1.3	<1.3	15,000	<2.5	3.1 J	42 J	<2.5	22	3.9 J	5.3 J	<2.5	<2.5	36	R	44 J	
	CTMW-03D-20170601	06/01/17	PME3	<50	<5.0	120 J+	36	<2.5	<2.5	16,000	<5.0	<5.0	<80	<5.0	26	5.7 J	<5.0	<5.0	40	R	<25		
	CTMW-03D-20170620	06/20/17	PME4	<50	<5.0	100	29	<2.5	<2.5	14,000	<5.0	<5.0	<80	<5.0	22	<5.0	<5.0	<5.0	46	<10	<25		
	CTMW-03D-20170719	07/19/17	PME5	<50	<5.0	110	31	<2.5	<2.5	15,000	<5.0	<5.0	<80	<5.0	25	<5.0	5.7 J	<5.0	<5.0	52	<10	<25	
	CTMW-03D-20170823	08/23/17	PME6	<25	<2.5	110	31	<1.3	<1.3	14,000	<2.5	<2.5	89 J	<2.5	23	3.8 J	5.3 J	<2.5	<2.5	63	<5.0	<13	
	CTMW-03D-20170921	09/21/17	PME7	<25	<2.5	100	29	<1.3	<1.3	13,000	<2.5	<2.5	<40	<2.5	25	3.1 J	6.0 J	<2.5	<2.5	49	<5.0	<13	
	CTMW-03D-20171003	10/03/17	PME8	<25	<2.5	92	27	<1.3	<1.3	13,000	<2.5	18	<40	<2.5	22	3.3 J	3.4 J	<2.5	<2.5	48	<5.0 UJ	29 J	
CTMW-04S	CTMW-04S-20170405	04/05/17	Baseline	<50	<5.0	65	33	<2.5	<2.5	9,900	<5.0	<5.0	<800	<5.0	38	7.2 J	<5.0	<5.0	34	<100	<25		
	CTMW-04S-20170504	05/04/17	PME1	41	0.89 J	120	35	<0.25	<0.25	6,000	1.2	1.5 J	100	<0.50	150	4.3	3.0	<0.50	<0.50	130	<150	5.5 J	
	CTMW-04S-20170517	05/17/17	PME2	20	<0.50	130	44	<0.25	<0.25	550	2	2.3	29	<0.50	320	6.3	2.7	<0.50	<0.50	260	17	7.1 J	
	CTMW-04S-20170602	06/02/17	PME3	11	<0.50	170	40	<0.25	<0.25	710	1.6	3.1	54	<0.50	290	6.5	2.0	<0.50	<0.50	230	9.6	11 J	
	CTMW-04S-20170620	06/20/17	PME4	<50	<5.0	130	43	<2.5	<2.5	180	5.1 J	<5.0	140 J	<5.0	460	130	<5.0	<5.0	<5.0	320	16 J	26 J	
	CTMW-04S-20170718	07/18/17	PME5	<25	<2.5	510	57	<1.3	<1.3	200	5.3	<2.5	170	<2.5	1,200	53	<2.5	<2.5	<2.5	480	6.4 J	<13	
	CTMW-04S-20170823	08/23/17	PME6	16	2.1	440	99	<0.25	<0.25	120	1.5	1.6 J	460	<0.50	1,800	7.6	1.4 J	<0.50	<0.50	140	4.2	16 J	
	CTMW-04S-20170921	09/21/17	PME7	26	1.3 J	370	100	<0.50	<0.50	86	<1.0	1.9 J	530	<1.0	1,400	160	1.3 J	<1.0	<1.0	40	3.8 J	5.0 J	
	CTMW-04S-20171003	10/03/17	PME8	<25	<2.5	150	200	<1.3	<1.3	70	<2.5	13	62 J	<2.5	2,000	2.5 J	<2.5	<2.5	<2.5	190	<5.0	21 J	
	CTMW-04S-20180307	03/07/18	PME9	20 J+	0.93 J	66	130	<0.25	<0.25	2,000	2.9	1.0 J	41	<0.50 UJ	930	6.2 J-	3.9	<0.50	0.99 J	150	42	7.4 J	
CTMW-04D	CTMW-04D-20170405	04/05/17	Baseline	<50	<5.0	72	39	<2.5	<2.5	18,000	<5.0	<5.0	<800	<5.0	16	<5.0	<5.0	<5.0	32	<100	<25		
	CTMW-04D-20170504	05/04/17	PME1	28	<0.50	78	45	<0.25	<0.25	22,000	0.50 J	1.5 J	52	<0.50	15	3.1	3.3 J-	<0.50	<0.50	33	R	17 J	
	CTMW-04D-20170517	05/17/17	PME2	<25	<2.5	92	41	<1.3	<1.3	19,000</td													

Table 3
Summary of Groundwater Monitoring Data
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well Location	Sample ID	Sample Date	Event	Dissolved Metals by USEPA Method 6020 (ug/L)																			
				Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Nickel	Selenium	Silver	Thallium	Uranium	Vanadium	Zinc	
CTMW-05D	CTMW-05D-20170621	06/21/17	PME4	<50	<5.0	85	34	<2.5	<2.5	14,000	<5.0	<5.0	<80	<5.0	16	<5.0	<5.0	<5.0	40	<10	<25		
	CTMW-05D-20170621-FD	06/21/17	PME4	<50	<5.0	94	33	<2.5	<2.5	14,000	<5.0	<5.0	<80	<5.0	19	<5.0	18 J	<5.0	<5.0	37	<10	<25	
	CTMW-05D-20170718	07/18/17	PME5	<25	<2.5	130	46	<1.3	<1.3	19,000	<2.5	<2.5	<40	<2.5	21	3.5 J	6.1 J	<2.5	<2.5	57 J+	R	<13	
	CTMW-05D-20170822	08/22/17	PME6	92 J	<5.0	110	34	<2.5	<2.5	14,000	<5.0	<5.0	130 J	<5.0	12	5.2 J	6.6 J	<5.0	<5.0	52	<10	<25	
	CTMW-05D-20170919	09/19/17	PME7	<25	<2.5	120	36	<1.3	<5.0	14,000	<2.5	<2.5	<40	<2.5	21	3.9 J	5.6 J	<2.5	<2.5	56	<100	<13	
	CTMW-05D-20171004	10/04/17	PME8	<25	3.6 J	110	34	<1.3	<1.3	13,000	<2.5	16 J-	<40	<2.5	17	<2.5	5.2 J	<2.5	<2.5	60	21	25 J	
CTMW-06S	CTMW-06S-20170621	06/21/17	PME4	56 J	<5.0	190	210	<2.5	<2.5	160	<5.0	<5.0	110 J	<5.0	1,600	15 J	8.3 J	<5.0	<5.0	450	<10	<25	
	CTMW-06S-20170717	07/17/17	PME5	<25	4.0 J	660	1,100	<1.3	<1.3	120	3.1 J	<2.5	<40	<2.5	4,300	34	<2.5	<2.5	<2.5	370	11	<13	
	CTMW-06S-20170822	08/22/17	PME6	58	1.6 J	120	1,400	<0.25	<0.25	62	3.9	1.7 J	410	<0.50	4,700	11	1.2 J	<0.50	<0.50	19	2.7	5.9 J	
	CTMW-06S-20170919	09/19/17	PME7	43	1.9 J	190	1,200	<0.50	<0.50	53	1.3 J	2.9 J	210	<1.0	5,400	8.2	1.1 J	<1.0	<1.0	1.4 J	2.0 J	16 J	
	CTMW-06S-20171004	10/04/17	PME8	7.2 J	2.1	210	920	<0.25	<0.25	47	<0.50	<0.50	100	<0.50	5,600	4.1	0.82 J	<0.50	<0.50	1.3	1.4 J	3.3 J	
	CTMW-06S-20180306	03/06/18	PME9	<25	<2.5	430	510	<1.3	<1.3	27	<2.5	<2.5	89 J	<2.5	1,500	3.3 J	<2.5	<2.5	<2.5	5.6	<5.0	<13	
	CTMW-06S-20180622	06/22/18	PME10	27 J+	1.3 J	300	500	<0.25	0.25 J	35	<0.50	0.75 J	66	<0.50	630	2.8	0.59 J	<0.50	<0.50	13	4.6	<2.5	
CTMW-06D	CTMW-06D-20170622	06/22/17	PME4	<10	<1.0	74	37	<0.50	<0.50	18,000	<1.0	1.9 J	96 J	<1.0	50	3.6 J	3.4 J	<1.0	<1.0	74	<10	7.2 J	
	CTMW-06D-20170717	07/17/17	PME5	<25	<2.5	110	46	<1.3	<1.3	22,000	<2.5	<2.5	<40	<2.5	61	4.7 J	2.9 J	<2.5	<2.5	110	<5.0	<13	
	CTMW-06D-20170717-FD	07/17/17	PME5	<25	<2.5	110	46	<1.3	<1.3	23,000	<2.5	3.8 J	<40	<2.5	55	5.4 J	3.8 J	<2.5	<2.5	110	<5.0	<13	
	CTMW-06D-20170822	08/22/17	PME6	<50	<5.0	90	40	<2.5	<2.5	15,000	<5.0	<5.0	<80	<5.0	92	8.0 J	7.4 J	<5.0	<5.0	130	R	<25	
	CTMW-06D-20170919	09/19/17	PME7	<25	<2.5	99	46	<1.3	<5.0	13,000	<2.5	<2.5	<40	<2.5	140	5.8 J	11	36 J	<2.5	160	R	<13	
	CTMW-06D-20170919-FD	09/19/17	PME7	<25	<2.5	100	46	<1.3	<5.0	13,000	<2.5	<2.5	<40	<2.5	140	5.7 J	5.1 J	<2.5 UJ	<2.5	160	R	<13	
	CTMW-06D-20171004	10/04/17	PME8	<25	<2.5	110	64	<1.3	<1.3	12,000	<2.5	<2.5	<40	<2.5	180	2.7 J	4.1 J	<2.5	<2.5	170	19	<13	
	CTMW-06D-20171004-FD	10/04/17	PME8	35 J	<2.5	120	64	<1.3	<1.3	12,000	<2.5	<2.5	<40	<2.5	180	2.6 J	4.3 J	<2.5	<2.5	180	20	<13	
	CTMW-06D-20180307	03/07/18	PME9	23 J+	<0.50	94	310	<0.25	<0.25	4,600	0.55 J	<0.50	33	<0.50	280	3.1	2.3	<0.50	<0.50	160	10	5.0 J	
	CTMW-06D-20180622	06/22/18	PME10	46 J+	<0.50	77	340	<0.25	<0.25	2,200	0.74 J	0.63 J	29	<0.50	320	3.8	2.1	<0.50	<0.50	270	10	<2.5	
CTMW-07S	--	10/09/17	PME8	Well Dry; Unable to sample																			
	CMTW-07S-20180306	03/06/18	PME9	<25	<2.5	120	30	<1.3	<1.3	14,000	<2.5	3.6 J	<40	<2.5	61	<2.5	5.5 J	38 J-	<2.5	47	44	40 J	
	--	06/22/18	PME10	Well Dry; Unable to sample																			
CTMW-07D	CTMW-07D-20171009	10/09/17	PME8	30	1.1 J	14	12	<0.25	<0.25	23	<0.50	0.55 J	20 J+	<0.50	5.9	0.68 J	2.1	<0.50	<0.50	5.0	7.1	2.5 J	
	CTMW-07D-20180306	03/06/18	PME9	<25	<2.5	<2.5	63	<1.3	<1.3	27	<2.5	5.2 J	<40	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	<5.0	<13	
	CTMW-07D-20180622	06/22/18	PME10	62 J+	<0.50	16	17	<0.25	<0.25	14	<0.50	<0.50	<8.0	<0.50	10	<0.50	1.3 J	<0.50	<0.50	7.1	9.8	<2.5	

Notes:

USEPA United States Environmental Protection Agency

mg/L Milligram per liter

< The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.</div

Table 3
Summary of Groundwater Monitoring Data
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well Location	Sample ID	Sample Date	Event	General Chemistry (mg/L)										Dissolved Methane (mg/L)	Anions by USEPA Method 300.0 (mg/L)			
				Alkalinity as CaCO ₃	Bicarbonate Alkalinity as CaCO ₃	Chemical Oxygen Demand	Total Organic Carbon	Total Sulfide	Total Kjeldahl Nitrogen (TKN)	Total Phosphorus	Total Dissolved Solids	Hardness as CaCO ₃	Orthophosphate as P	Orthophosphorus as PO ₄	Chloride	Nitrate as N	Sulfate	
CTMW-01S	CTMW-01S-20170404	04/04/17	Baseline	200	200	--	2.4	0.024 J	<0.10	0.026 J	8,200	1,700	0.067 J-	0.21 J-	<0.00025	790	120	1,400
	CTMW-01S-20170503	05/03/17	PME1	2,000	2,000	7,100	2,300	<0.020	<2.5	0.52	12,000	3,700	0.34	1.0	<0.00025	950	210	1,400
	CTMW-01S-20170516	05/16/17	PME2	2,600	2,600	12,000	3,000	<0.020	0.76	0.37	11,000	3,300	0.72	2.2	<0.00025	940	55	1,200
	CTMW-01S-20170531	05/31/17	PME3	2,300	2,300	7,200	2,000	3.9	0.20	0.49 J-	10,000	3,100	1.2 J-	3.7 J-	<0.00025	1,500	2.6	1,100
	CTMW-01S-20170619	06/19/17	PME4	5,300	5,300	22,000	6,600	0.36 J-	190 J-	24 J-	18,000	5,700	18 J-	54 J-	<0.00025	1,300	9.5	740
	CTMW-01S-20170720	07/20/17	PME5	6,300	6,300	26,000	9,000	1.2	47	3.4	20,000	11,000	0.65	2.0	0.16	1,500	<0.55	140
	CTMW-01S-20170824	08/24/17	PME6	3,700	3,700	17,000 J-	6,700	<0.027	9,500 J-	5.5	17,000	3,900	5.6 J-	17 J-	0.15	1,300	4.8 J	1,000
	CTMW-01S-20170920	09/20/17	PME7	5,200	5,200	19,000	6,200	0.035 J	240	0.79 J	17,000	4,800	0.76	2.3	0.95	970	<1.1	<130
	CTMW-01S-20171003	10/03/17	PME8	2,700	2,700	17,000	6,300 J-	0.47	210	5.2	16,000	4,300	0.47	1.4	1.8 J-	1,100	<0.55	76
	CTMW-01S-20180305	03/05/18	PME9	3,700	3,700	--	1,200 J	0.031 J	140	1.3	7,300	2,700	0.27	0.83	2.9 J-	780	<1.1	<5.0
	CTMW-01S-20180621	06/21/18	PME10	3,000	3,000	490	91	0.041 J	180	5.0	4,800	1,300	2.0	6.2	0.87 J	1,100	<1.1	97
CTMW-01D	CTMW-01D-20170403	04/03/17	Baseline	140	140	--	25	0.044 J	<0.10	0.054	14,000	3,400	0.17	0.52	<0.00025	1,900	20	1,900
	CTMW-01D-20170503	05/03/17	PME1	130	130	<20	8.0	0.030 J	<0.10	0.11	14,000	3,600	0.082	0.25	<0.00025	1,900	21	1,800
	CTMW-01D-20170516	05/16/17	PME2	140	140	<20	9.8	<0.020	<0.10	<0.025	15,000	3,500	0.082	0.25	<0.00025	1,700	22	1,700
	CTMW-01D-20170531	05/31/17	PME3	160	160	<50	16	<0.30	<0.10	0.035 J	15,000	3,600	0.051 J-	0.16 J-	<0.00025	1,700	20	1,600
	CTMW-01D-20170619	06/19/17	PME4	290	290	R	11	R	0.028 J	14,000	3,400	0.085 J-	0.26 J-	<0.00025	1,700	17	1,700	
	CTMW-01D-20170720	07/20/17	PME5	400	400	<50	66	<0.14	<0.10	0.029 J	12,000	3,700	0.080 J-	0.24 J-	0.00040 J	2,000	14	1,700
	CTMW-01D-20170720-FD	07/20/17	PME5	380	380	<50	66	<0.27	<0.10	0.030 J	12,000	3,600	0.10 J-	0.31 J-	<0.00025	2,000	14	1,700
	CTMW-01D-20170824	08/24/17	PME6	740	740	480 J-	350	<0.027	<0.10	0.22	13,000	4,000	0.10 J-	0.31 J-	0.014	2,300	9.9	1,700
	CTMW-01D-20170920	09/20/17	PME7	640	640	410	430	<0.027	<0.10	0.16	14,000	4,000	0.20	0.61	0.29	2,100	12	1,600
	CTMW-01D-20171003	10/03/17	PME8	920	920	630	440 J-	<0.027	<0.50	0.099	13,000	4,000	0.20	0.62	0.038	2,000	11	1,600
CTMW-02S	CTMW-02S-20170305	03/05/18	PME9	890	890	--	340	<0.027	<0.10	0.090	10,000	3,100	0.072 J	0.22 J	0.039	1,800	6.0	990
	CTMW-01D-20180305-FD	03/05/18	PME9	890	890	--	340	<0.027	<0.10	0.083	10,000	3,100	0.17 J	0.51 J	0.050	1,900	5.0 J	990
	CTMW-01D-20180621	06/21/18	PME10	1,400	1,400	870 J	330	<0.027	<0.10	0.17 J	11,000	4,100	0.21	0.65 J	0.098	2,700	5.2 J	1,200
	CTMW-01D-20180621-FD	06/21/18	PME10	1,400	1,400	650 J	320	<0.027	<0.10	0.062	11,000	4,100	0.16	0.48 J	0.11	2,700	5.0 J	1,200
	CTMW-02S-20170405	04/05/17	Baseline	160	160	--	2.0	<0.020	<0.10	<0.025	8,400	1,500	0.057	0.18	<0.00025	780	160	1,500
	CTMW-02S-20170504	05/04/17	PME1	940	940	58	53	<0.080	<0.10	0.26	10,000	2,500	0.15 J-	0.46 J-	<0.00025	1,300	540	1,500
	CTMW-02S-20170516	05/16/17	PME2	1,200	1,200	37 J	14	<0.020	<0.10	0.39	10,000	2,400	0.19	0.59	<0.00025	1,200	530	1,400
	CTMW-02S-20170601	06/01/17	PME3	1,200	1,200	140	15	<0.14	R	0.26 J-	8,700	1,900	0.27 J-	0.81 J-	<0.00025	1,300	320	1,500
	CTMW-02S-20170620	06/20/17	PME4	3,300	3,300	5,200	1,500	0.090	16	2.1	9,900	2,400	1.2	3.7	0.027	1,500	<1.1	890
CTMW-02D	CTMW-02S-20170719	07/19/17	PME5	3,800	3,800	5,400	2,300	0.16	23	2.6	11,000	2,700	0.56 J-	1.7 J-	0.15	1,400	0.63 J	29
	--	08/24/17	PME6															
	CTMW-02S-20170920	09/20/17	PME7	5,900	5,900	5,400	2,000	<0.027	65	1.8	11,000	2,500	0.39	1.2	1.9	1,600	<0.28	17
	CTMW-02S-20171003	10/03/17	PME8	2,400	2,400	5,700	1,900 J-	0.29	68	1.1	10,000	2,400	0.54	1.7	2.3 J-	1,600	<1.1	6.5 J
	CTMW-02S-20180306	03/06/18	PME9	2,000	2,000	--	35 J	0.078	53	1.9	4,600	850						

Table 3
Summary of Groundwater Monitoring Data
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well Location	Sample ID	Sample Date	Event	General Chemistry (mg/L)										Dissolved Methane (mg/L)	Anions by USEPA Method 300.0 (mg/L)			
				Alkalinity as CaCO ₃	Bicarbonate Alkalinity as CaCO ₃	Chemical Oxygen Demand	Total Organic Carbon	Total Sulfide	Total Kjeldahl Nitrogen (TKN)	Total Phosphorus	Total Dissolved Solids	Hardness as CaCO ₃	Orthophosphate as P	Orthophosphorus as PO ₄	Chloride	Nitrate as N	Sulfate	
CTMW-03S	CTMW-03S-20170405	04/05/17	Baseline	140	140	--	1.8	<0.020	<0.10	<0.025	8,700	1,700	0.036 J	0.11 J	<0.00025	940	55	1,500
	CTMW-03S-20170505	05/05/17	PME1	200	200	<20	2.4	<0.020	<0.10	<0.025	9,600	1,900	0.081 J-	0.25 J-	<0.00025	1,000	27	1,600
	CTMW-03S-20170517	05/17/17	PME2	190	190	<20	2.5	<0.50	R	R	9,500	1,900	0.053 J-	0.16 J-	<0.00025	960	31	1,500
	CTMW-03S-20170601	06/01/17	PME3	200	200	<50	2.1	<0.27	R	0.028 J	9,800	1,900	0.059 J-	0.18 J-	<0.00025	1,000	38	1,500
	CTMW-03S-20170620	06/20/17	PME4	1,200	1,200	850	250	<0.14	<0.10	0.88	10,000	2,400	0.44	1.4	<0.00025	1,700	34	1,600
	CTMW-03S-20170718	07/18/17	PME5	320	320	R	5.4	0.077 J-	R	0.046 J	9,400	2,000	0.17 J-	0.51 J-	0.0033	1,100	30	1,600
	CTMW-03S-20170823	08/23/17	PME6	880	880	<20	39	<0.027	<0.10	0.18	9,600	2,200	0.1	0.31	0.025	1,800	17	1,400
	CTMW-03S-20170921	09/21/17	PME7	300	300	<50	2.8	<0.027	<0.10	0.094	10,000	2,000	0.18 J-	0.54 J-	0.014	1,100	26	1,500
CTMW-03D	CTMW-03D-20171003	10/03/17	PME8	370	370	<20	2.6	<0.027	<0.50	0.049 J	10,000	2,000	0.16	0.48	0.41	1,100	26	1,500
	CTMW-03D-20170406	04/06/17	Baseline	130	130	--	2.7	<0.020	<0.10	<0.025	9,600	1,800	0.038 J	0.12 J	<0.00025	1,100	47	1,600
	CTMW-03D-20170505	05/05/17	PME1	150	150	<20	3.0	<0.020	<0.10	<0.025	11,000	1,700	0.044 J	0.14 J	<0.00025	1,100	48	1,600
	CTMW-03D-20170517	05/17/17	PME2	150	150	R	2.5	<0.50	R	R	9,800	1,700	0.033 J	0.10 J	<0.00025	960	41	1,500
	CTMW-03D-20170601	06/01/17	PME3	160	160	<50 UJ	2.0	<0.27	R	<0.025 UJ	9,900	1,700	0.031 J	0.094 J	<0.00025	1,000	34	1,500
	CTMW-03D-20170620	06/20/17	PME4	170	170	<20	2.2	<0.081	<0.10	<0.025	9,700	1,700	0.022 J	0.068 J	<0.00025	1,200	33	1,600
	CTMW-03D-20170719	07/19/17	PME5	180	180	<20	2.0	<0.054	<0.10	<0.025	10,000	1,800	0.064 J-	0.20 J-	<0.00025	1,100	27	1,500
	CTMW-03D-20170823	08/23/17	PME6	170	170	<20	2.0	<0.027	<0.10	0.040 J	9,900	1,700	0.042 J	0.13 J	0.030	1,100	23	1,500
CTMW-04S	CTMW-04S-20170921	09/21/17	PME7	150	150	<50	1.9	<0.027	<0.10	<0.025	9,800	1,700	0.055 J-	0.17 J-	0.0084	1,100	23	1,500
	CTMW-04S-20171003	10/03/17	PME8	180	180	<20	2.8	<0.027	<0.50	<0.025	9,700	1,700	0.058	0.18	0.0096	1,100	24	1,500
	CTMW-04S-20170405	04/05/17	Baseline	180	180	--	2.0	<0.020	<0.10	0.037 J	8,200	1,700	0.078	0.24	<0.00025	780	150	1,500
	CTMW-04S-20170504	05/04/17	PME1	730	730	<20	56	<0.020	<0.10	0.095	8,700	2,000	0.049 J	0.15 J-	<0.00025	1,100	120	1,500
	CTMW-04S-20170517	05/17/17	PME2	1,600	1,600	1,100	250	<0.50	R	0.32 J-	8,800	2,600	0.54 J-	1.6 J-	<0.00025	1,500	93	1,400
	CTMW-04S-20170602	06/02/17	PME3	1,400	1,400	360	58	<0.11	<0.10	0.41 J-	9,600	2,500	0.067 J-	0.21 J-	<0.00025	1,500	51	1,400
	CTMW-04S-20170620	06/20/17	PME4	1,600	1,600	820	170	<0.054	<0.10	0.43	8,300	2,300	0.23	0.69	<0.00025	1,800	18	1,500
	CTMW-04S-20170718	07/18/17	PME5	1,900	1,900	980	320	0.073 J-	R	0.38 J-	7,600	2,400	0.51 J-	1.6 J-	0.0037	1,900	<1.1	1,100
CTMW-04D	CTMW-04S-20170823	08/23/17	PME6	2,900	2,900	3,000	1,800	0.41	<0.10	0.97	9,300	2,700	1.0	3.1	0.0052	2,000	<1.1	190
	CTMW-04S-20170921	09/21/17	PME7	1,600	1,600	1,400	820	<0.027	1.8	1.3	8,000	2,400	0.036 J	0.11 J	<0.00025	2,200	<1.1	390 J+
	CTMW-04S-20171003	10/03/17	PME8	2,100	2,100	440	140 J-	0.47	<0.50	1.0	8,000	2,300	0.43	1.3	0.094 J-	2,300	5.3 J	920
	CTMW-04S-20180307	03/07/18	PME9	640	640	--	4.9	<0.027	<0.10	0.026 J	10,000	2,400	0.082	0.25	3.6	1,400	130	1,500
	CTMW-04S-20180621	06/21/18	PME10	500	500	<20	3.1	<0.027	<0.10	<0.025	10,000	2,100	0.061	0.19	2.2	1,300	90	1,400
	CTMW-04D-20170405	04/05/17	Baseline	120	120	--	5.7	0.020 J	<0.10	<0.025	12,000	2,500	0.029 J	0.089 J	<0.00025	1,600	26	1,700
	CTMW-04D-20170504	05/04/17	PME1	140	140	<20	2.9	<0.040	<0.10	0.041 J	12,000	2,400	0.037 J	0.11 J	<0.00025	1,400	33	1,700
	CTMW-04D-20170517	05/17/17	PME2	140	140	<20	3.4	<0.50	R	R	12,000	2,400	0.044 J	0.14 J	<0.00025	1,200	32	1,500
CTMW-04D	CTMW-04D-20170517-FD	05/17/17	PME2	140	140	<20	3.6	<0.50	R	R	12,000	2,400	0.058 J-	0.18 J-	<0.00025	1,200	33	1,500
	CTMW-04D-20170602	06/02/17	PME3	140	140	<50	3.0	<0.14	<0.10	<0.025	12,000	2,500	0.055	0.17	<0.00025	1,500	31	1,600

Table 3
Summary of Groundwater Monitoring Data
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well Location	Sample ID	Sample Date	Event	General Chemistry (mg/L)										Dissolved Methane (mg/L)	Anions by USEPA Method 300.0 (mg/L)			
				Alkalinity as CaCO ₃	Bicarbonate Alkalinity as CaCO ₃	Chemical Oxygen Demand	Total Organic Carbon	Total Sulfide	Total Kjeldahl Nitrogen (TKN)	Total Phosphorus	Total Dissolved Solids	Hardness as CaCO ₃	Orthophosphate as P	Orthophosphorus as PO ₄	Chloride	Nitrate as N	Sulfate	
CTMW-05D	CTMW-05D-20170621	06/21/17	PME4	160	160	<50	3.5	<0.054	<0.10	<0.025	9,900	1,900	0.078	0.24	<0.00025	1,000	73	1,400
	CTMW-05D-20170621-FD	06/21/17	PME4	160	160	<50	3.1	<0.054	<0.10	<0.025	9,900	1,900	0.054	0.17	<0.00025	1,100	73	1,500
	CTMW-05D-20170718	07/18/17	PME5	160	160	R	2.3	<0.027 UJ	R	R	9,700	1,900	0.053 J-	0.16 J-	<0.00025	1,100	64 J+	1,500
	CTMW-05D-20170822	08/22/17	PME6	160	160	<20	2.6	<0.027	<0.17	<0.025	10,000	1,800	0.024 J	0.073 J	<0.00025	1,100	52	1,500
	CTMW-05D-20170919	09/19/17	PME7	140	140	<20	2.3	<0.027	<0.10	<0.025	11,000	2,000	0.42	1.3	<0.00025	1,100	52	1,500
	CTMW-05D-20171004	10/04/17	PME8	180	180	R	2.3	<0.027 UJ	R	<0.025 UJ	10,000	1,800	0.077 J-	0.24 J-	0.00044 J	1,100	48	1,500
CTMW-06S	CTMW-06S-20170621	06/21/17	PME4	2,400	2,400	3,300	730	0.58	0.48	0.4	7,300	2,600	0.084	0.26	<0.00025	1,700	<1.1	950
	CTMW-06S-20170717	07/17/17	PME5	3,800	3,800	9,800	3,100	7.3	15	0.93	11,000	3,700	0.67	2.0	0.0084	1,600	1.2 J	230
	CTMW-06S-20170822	08/22/17	PME6	4,400	4,400	6,700	3,200	<0.027	30	2.0	11,000	3,600	0.3	0.93	0.049	1,700	<1.1	14
	CTMW-06S-20170919	09/19/17	PME7	2,300	2,300	7,100	2,700	<0.027	44	1.6	12,000	3,700	2.7	8.2	0.078 J-	1,700	<1.1	<5.0
	CTMW-06S-20171004	10/04/17	PME8	2,600	2,600	10,000	3,000 J-	0.20	54	2.7	12,000	3,700	2.2	6.7	0.27 J-	1,600	<2.8	<13
	CTMW-06S-20180306	03/06/18	PME9	1,800	1,800	--	17	0.15	22	0.86	3,500	910	0.23	0.69	6.0 J-	1,200	<1.1	6.4 J
	CTMW-06S-20180622	06/22/18	PME10	1,700	1,700	<50	13	0.14	18	0.61	4,400	1,000	0.45	1.4	2.1	1,400	<0.55	24
CTMW-06D	CTMW-06D-20170622	06/22/17	PME4	240	240	<50	3.5	<0.11	<0.10	<0.025	12,000	2,600	0.054	0.17	<0.00025	1,300	97	1,500
	CTMW-06D-20170717	07/17/17	PME5	210	210	<50	4.9	0.030 J	<0.10	<0.025	11,000	2,600	0.064	0.20	<0.00025	1,400	84	1,500
	CTMW-06D-20170717-FD	07/17/17	PME5	210	210	<50	5.8	0.029 J	<0.10	<0.025	12,000	2,700	0.057	0.18	<0.00025	1,500	84	1,500
	CTMW-06D-20170822	08/22/17	PME6	340	340	<50	25	<0.027	<0.10	0.13	12,000	2,700	0.084	0.26	0.00071 J	1,400	52	1,400
	CTMW-06D-20170919	09/19/17	PME7	390	390	<20	85	R	<0.10	0.034 J	11,000	2,600	0.58	1.8 J	0.00034 J	1,700	48	1,500
	CTMW-06D-20170919-FD	09/19/17	PME7	400	400	<20	82	R	<0.10	0.040 J	11,000	2,600	0.44	1.3 J	0.00033 J	1,600	48	1,500
	CTMW-06D-20171004	10/04/17	PME8	590	590	<50	120	<0.027	<0.10	<0.025	11,000	2,800	0.15	0.46	0.0029	1,700	41	1,400
	CTMW-06D-20171004-FD	10/04/17	PME8	590	590	<20	110	<0.027	<0.10	0.029 J	11,000	2,700	0.12	0.36	0.0024	1,700	39	1,400
	CTMW-06D-20180307	03/07/18	PME9	1,300	1,300	--	52	<0.027	<0.10	0.032 J	10,000	2,500	0.11	0.33	1.3	1,800	18	1,100
	CTMW-06D-20180622	06/22/18	PME10	1,400	1,400	<50	20	<0.027	<0.10	<0.025	8,000	1,900	0.11	0.33	1.7	2,000	19	860
CTMW-07S	--	10/09/17	PME8	Well Dry; Unable to sample														
	CMTW-07S-20180306	03/06/18	PME9	210	210	--	1.9	R	R	R	9,000	1,600	0.049 J	0.15 J-	1.0	990	66	1,400
	--	06/22/18	PME10	Well Dry; Unable to sample														
CTMW-07D	CTMW-07D-20171009	10/09/17	PME8	100	100	55	1.7	<0.027	0.21	0.54	770	380	0.16	0.48	0.00050 J	140	2.0	230
	CTMW-07D-20180306	03/06/18	PME9	170	<4.0	--	2.3	<0.027	0.93	0.045 J	570	36	0.031 J	0.096 J	0.073	85	0.099 J	140
	CTMW-07D-20180622	06/22/18	PME10	120	120	<10	4.4	<0.027	<0.10	0.25	600	150	0.54	1.7	0.19	91	1.3	180

Notes:

- USEPA United States Environmental Protection Agency
- mg/L Milligram per liter
- < The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
- J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The result is an estimated quantity, but the result may be biased high.
- J- The result is an estimated quantity, but the result may be biased low.
- UJ The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
- R The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
- Not Analyzed

Table 3
Summary of Groundwater Monitoring Data
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well Location	Sample ID	Sample Date	Event	Detected VOCs by USEPA Method 8260B (ug/L)																		Volatile Fatty Acids (mg/L)								
				Acetone	Benzene	Bromodichloro-methane	Bromoform	2-Butanone (MEK)	Carbon Tetrachloride	Chlorobenzene	Chloroform	1,1-Dichloroethene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Hexachlorobutadiene	2-Hexanone	Methylene Chloride	Methyl-t-Butyl Ether (MTBE)	p-Isopropyltoluene	Tetrachloro-ethene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	Trichloro-ethene	Acetic Acid	Formic-acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid
CTMW-01S	CTMW-01S-20170404	04/04/17	Baseline	<100	<2.5	<2.5	<4.0	<25	<2.5	<2.5	850	<2.5	<2.5	<2.5	<2.5	<25	<8.8	<2.5	<2.5	<4.0	<4.0	<2.5	<4.0	<2.5	<0.29	3.0	<0.31	<0.26	<0.35	<7.4
	CTMW-01S-20170503	05/03/17	PME1	2,800	<2.5	<2.5	<4.0	360	<2.5	<2.5	420	<2.5	<2.5	<2.5	<2.5	<25	<8.8	<2.5	<2.5	<4.0	<4.0	<2.5	<4.0	<2.5	820	400	660	990	200	<7.4
	CTMW-01S-20170516	05/16/17	PME2	<1,000	<25	<25	<40	1,200	<25	<25	340	<25	<25	<25	<25	<25	<88	<25	<25	<40	<40	<25	540	180	<31	1,600	300	<37		
	CTMW-01S-20170531	05/31/17	PME3	<250	<6.3	<6.3	<10	1,300	<6.3	<6.3	230	<6.3	<6.3	<6.3	<6.3	<63	45 J,B	<6.3	<6.3	<6.3	<10	<10	<6.3	880	<13	<16	<13	380	<19	
	CTMW-01S-20170619	06/19/17	PME4	300 J	<6.3	<6.3	<10	3,500	<6.3	<6.3	140	<6.3	<6.3	<6.3	<6.3	<63	27 J	<6.3	<6.3	<6.3	<10	<10	<6.3	3,000	<26	<31	4,100	2,000	<37	
	CTMW-01S-20170720	07/20/17	PME5	<400	<10	<10	<16	2,400	<10	<10	130	<10	<10	<10	<10	<100	<35	<10	<10	<16	<16	<10	<15	<13	<16	<13	<18	<19		
	CTMW-01S-20170824	08/24/17	PME6	630 J	<13	<13	<20	6,400	<13	<13	86	<13	<13	<13	<13	<130	78 J	<13	<13	<20	<20	<13	3,900	<5.2	<6.2	2,400	1,800	<7.4		
	CTMW-01S-20170920	09/20/17	PME7	750 J	<13	<13	<20	7,200	<13	<13	19 J	<13	<13	<13	<13	<130	<44	<13	<13	<20	<20	<13	4,400	<2.6	<3.1	2,600	2,000	<3.7		
	CTMW-01S-20171003	10/03/17	PME8	R	R	R	R	11,000	R	R	35 J	R	R	R	R	140 J	R	R	R	R	R	4,200	<5.2	<6.2	2,500	1,900	<7.4			
	CTMW-01S-20180305	03/05/18	PME9	600	0.44 J	<0.25	<0.40	6,600	<0.25	<0.25	3.2	<0.25	0.45 J	0.55	0.58	<0.25	4.5 J	1.4 J	0.36 J	0.62	<0.25	1.0	0.49 J	<0.25	560	3.6 J	<3.1	8.5 J	2,000	<3.7
	CTMW-01S-20180621	06/21/18	PME10	54 J	<0.25 R	<0.25 R	<0.40 R	<0.25 R	<0.40 R	<0.25 R	<0.25 R	<0.25 R	<0.25 R	<0.25 R	<0.25 R	<0.88 R	<0.25 R	<0.25 R	<0.40 R	<0.40 R	<0.25 R	<2.9	<2.6	<3.1	<2.6	<3.5	<3.7 UJ			
CTMW-01D	CTMW-01D-20170403	04/03/17	Baseline	<200	<5.0	<5.0	<8.0	<50	<5.0	1,800	<5.0	<5.0	<5.0	<5.0	<5.0	<50	<18	<5.0	<5.0	<8.0	<5.0	<5.0	<0.29	<0.26	<0.31	<0.26	<0.35	<7.4		
	CTMW-01D-20170503	05/03/17	PME1	<250	<6.3	<6.3	<10	<63	<6.3	1,700	<6.3	<6.3	<6.3	<6.3	<63	<22	<6.3	<6.3	<10	<6.3	<6.3	<15	<13	<16	<13	<18	<19			
	CTMW-01D-20170516	05/16/17	PME2	<400	<10	<10	<16	<100	<10	1,700	<10	<10	<10	<10	<100	<35	<10	<10	<16	<10	<10	<15	<13	<16	<13	<18	<19			
	CTMW-01D-20170531	05/31/17	PME3	<250	<6.3	<6.3	<10	<63	<6.3	1,800	<6.3	<6.3	<6.3	<6.3	<63	<22	<6.3	<6.3	<10	<6.3	<6.3	<15	<13	<16	<13	<18	<19			
	CTMW-01D-20170619	06/19/17	PME4	<250	<6.3	<6.3	<10	<63	<6.3	1,600	<6.3	<6.3	<6.3	<6.3	<63	<22	<6.3	<6.3	<10	<6.3	<6.3	<15 F1	<13	<16	<13	<18	<19			
	CTMW-01D-20170720	07/20/17	PME5	<250	<6.3	<6.3	<10	<63	<6.3	1,700	<6.3	<6.3	<6.3	<6.3	<63	<22	<6.3	<6.3	<10	<6.3	<6.3	50	<5.2	22	<5.2	<7.0	<7.4 UJ			
	CTMW-01D-20170720-FD	07/20/17	PME5	<250	<6.3	<6.3	<10	<63	<6.3	1,700	<6.3	<6.3	<6.3	<6.3	<63	<22	<6.3	<6.3	<10	<6.3	<6.3	38	<5.2	18 J	<5.2	<7.0	<7.4			
	CTMW-01D-20170824	08/24/17	PME6	320 J	<5.0	<5.0	<8.0	150	<5.0	50	1,500	<5.0	<5.0	<5.0	<5.0	<50	<18	<5.0	<5.0	<8.0	<5.0	<5.0	170	<5.2	80	70 J	<7.4			
	CTMW-01D-20170920	09/20/17	PME7	440	<5.0	<5.0	<8.0	360	<5.0	50	1,500	<5.0	<5.0	<5.0	<5.0	<50	<18	<5.0	<5.0	<8.0	<5.0	<5.0	160	<2.6	54	350	<3.5	<3.7 UJ		
	CTMW-01D-20171003	10/03/17	PME8	560 J	<10	<10	<16	440	<10	<10	1,300	<10	<10	<10	<10	<100	<35	<10	<10	<16	<10	<10	160	<5.2	36	350	33 J+	<7.4 UJ		
	CTMW-01D-20180305	03/05/18	PME9	640	<2.5	<2.5	<4.0	730	<2.5	<2.5	750	<2.5	<2.5	<2.5	<2.5	<25	13 J	<2.5	<2.5	<4.0	<2.5	<2.5	260	<2.6	<3.1	110	71	<3.7		
CTMW-02S	CTMW-02S-201704																													

Table 3
Summary of Groundwater Monitoring Data
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well Location	Sample ID	Sample Date	Event	Detected VOCs by USEPA Method 8260B (ug/L)																		Volatile Fatty Acids (mg/L)								
				Acetone	Benzene	Bromodichloro-methane	Bromoform	2-Butanone (MEK)	Carbon Tetrachloride	Chlorobenzene	Chloroform	1,1-Dichloroethene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Hexachlorobutadiene	2-Hexanone	Methylene Chloride	Methyl-t-Butyl Ether (MTBE)	p-Isopropyltoluene	Tetrachloro-ethene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	Trichloro-ethene	Acetic Acid	Formic-acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid
CTMW-03S	CTMW-03S-20170405	04/05/17	Baseline	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	930	<5.0	<5.0	<5.0	<5.0	<50	21 J	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	<1.5	<1.3 UJ	<1.6 UJ	<1.3	<1.8	<1.9 UJ	
	CTMW-03S-20170505	05/05/17	PME1	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,100	<5.0	<5.0	<5.0	<5.0	<50	18 J	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	<0.29	<0.26	<0.31	<0.26	<0.35	<7.4	
	CTMW-03S-20170517	05/17/17	PME2	<100	<2.5	<2.5	<4.0	<25	<2.5	<2.5	970	<2.5	<2.5	<2.5	<2.5	<25	17 J	<2.5	<2.5	<2.5	<4.0	<4.0	<2.5	<15	<13	<16	<13	<18	<19	
	CTMW-03S-20170601	06/01/17	PME3	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,200	<5.0	<5.0	<5.0	<5.0	<50	18 J	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	<15	<13	<16	<13	<18	<19	
	CTMW-03S-20170620	06/20/17	PME4	250	<2.5	<2.5	<4.0	690	<2.5	<2.5	920	<2.5	<2.5	<2.5	<2.5	<25	16 J	<2.5	<2.5	<2.5	<4.0	<4.0	<2.5	120	<13	<16	140	72	<19	
	CTMW-03S-20170718	07/18/17	PME5	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,300	<5.0	<5.0	<5.0	<5.0	<50	<18	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	<1.5	<1.3	<1.6	<1.3	<1.8	<19	
	CTMW-03S-20170823	08/23/17	PME6	<100	<2.5	<2.5	<4.0	280	<2.5	<2.5	900	<2.5	<2.5	<2.5	<2.5	<25	19 J	<2.5	<2.5	<2.5	<4.0	<4.0	<2.5	66	<5.2	<6.2	<5.2	<7.0	<7.4	
	CTMW-03S-20170921	09/21/17	PME7	<50	<1.3	<1.3	<2.0	<13	<1.3	<1.3	510	<1.3	<1.3	<1.3	<1.3	<13	<4.4	<1.3	<1.3	<1.3	<2.0	<2.0	<1.3	<1.5	<1.3	<1.6	<1.3	<1.8	<1.9	
	CTMW-03S-20171003	10/03/17	PME8	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	700	<5.0	<5.0	<5.0	<5.0	<50	<18	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	<2.9	<2.6	<3.1	<2.6	<3.5	<3.7	
CTMW-03D	CTMW-03D-20170406	04/06/17	Baseline	<250	<6.3	<6.3	<10	<63	<6.3	<6.3	880	<6.3	<6.3	<6.3	<6.3	<63	<22	<6.3	<6.3	<6.3	<10	<10	<6.3	<1.5	<1.3	<1.6	<1.3	<1.8	<1.9	
	CTMW-03D-20170505	05/05/17	PME1	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,300	<5.0	<5.0	<5.0	<5.0	<50	19 J	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	<0.29	<0.26	<0.31	<0.26	<0.35	<7.4	
	CTMW-03D-20170517	05/17/17	PME2	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,100	<5.0	<5.0	<5.0	<5.0	<50	26 J	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	<15	<13	<16 UJ	<13	<18	<19	
	CTMW-03D-20170601	06/01/17	PME3	<100	<2.5	<2.5	<4.0	<25	<2.5	<2.5	1,400	<2.5	<2.5	<2.5	<2.5	<25	11 J	<2.5	<2.5	<2.5	<4.0	<4.0	2.5 J	<15	<13	<16	<13	<18	<19	
	CTMW-03D-20170620	06/20/17	PME4	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,200	<5.0	<5.0	<5.0	<5.0	<50	29 J	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	<15	<13	<16	<13	<18	<19	
	CTMW-03D-20170719	07/19/17	PME5	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,300	<5.0	<5.0	<5.0	<5.0	<50	<18	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	<1.5	<1.3	<1.6	<1.3	<1.8	<19	
	CTMW-03D-20170823	08/23/17	PME6	<50	<1.3	<1.3	<2.0	<13	<1.3	<1.3	1,100	<1.3	<1.3	<1.3	<1.3	<13	<4.4	<1.3	<1.3	<1.3	<2.0	<2.0	3.0	<5.8	<5.2	<6.2	<5.2	<7.0	<7.4	
	CTMW-03D-20170921	09/21/17	PME7	<10	<0.25	<0.25	<0.40	<2.5	0.58	<0.25	1,100	<0.25	<0.25	<0.25	<0.25	<2.5	0.88	1.2	<0.25	0.37 J	<0.40	<0.40	2.9	<1.5	<1.3	<1.6	<1.3	<1.8	<1.9	
	CTMW-03D-20171003	10/03/17	PME8	<400	<10	<10	<16	<100	<10	<10	1,000	<10	<10	<10	<10	<100	<35	<10	<10	<10	<16	<16	<10	<2.9	<2.6	<3.1	<2.6	<3.5	<3.7	
CTMW-04S	CTMW-04S-20170405	04/05/17	Baseline	<10	<0.25	<0.25	0.82 J	<2.5	0.41 J	<0.25	720	<0.25	<0.25	<0.25	<0.25	<0.58	<2.5	<0.88	0.86	<0.25	0.26 J	<0.40	<0.40	2.0	<1.5	<1.3	<1.6	<1.3	<1.8	<1.9
	CTMW-04S-20170504	05/04/17	PME1	220	<2.5	<2.5	<4.0	<25	<2.5	810	<2.5	<2.5	<2.5	<2.5	<25	<8.8	<2.5	<2.5	<2.5	<4.0	<4.0	<2.5	55	<0.26	<0.31	<0.26	<0.35	<7.4		
	CTMW-04S-20170517	05/17/17	PME2	1,800	<2.5	<2.5	<4.0	1,000	<2.5	640	<2.5	<2.5	<2.5	<2.5	<25	<8.8	<2.5	<2.5	<2.5	<4.0	<4.0	<2.5								

Table 3
Summary of Groundwater Monitoring Data
In-Situ Chromium Treatability Study (Biological Reduction Study Area)

Well Location	Sample ID	Sample Date	Event	Detected VOCs by USEPA Method 8260B (ug/L)																		Volatile Fatty Acids (mg/L)								
				Acetone	Benzene	Bromodichloro-methane	Bromoform	2-Butanone (MEK)	Carbon Tetrachloride	Chlorobenzene	Chloroform	1,1-Dichloroethene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Hexachlorobutadiene	2-Hexanone	Methylene Chloride	Methyl-t-Butyl Ether (MTBE)	p-Isopropyltoluene	Tetrachloro-ethene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	Trichloro-ethene	Acetic Acid	Formic-acid	Lactic Acid	n-Butyric Acid	Propionic Acid	Pyruvic Acid
CTMW-05D	CTMW-05D-20170621	06/21/17	PME4	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,300	<5.0	<5.0	<5.0	<5.0	<50	30 J	<5.0	<5.0	<5.0	<8.0	<5.0	<15	<13	<16	<18	<18	<19		
	CTMW-05D-20170621-FD	06/21/17	PME4	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,300	<5.0	<5.0	<5.0	<5.0	<50	35 J	<5.0	<5.0	<5.0	<8.0	<8.0	<15	<13	<16	<18	<18	<19		
	CTMW-05D-20170718	07/18/17	PME5	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,300	<5.0	<5.0	<5.0	<5.0	<50	<18	<5.0	<5.0	<5.0	<8.0	<8.0	<1.5 UJ	<1.3 UJ	<1.6 UJ	<1.3	<1.8 UJ	<19 UJ		
	CTMW-05D-20170822	08/22/17	PME6	<250	<6.3	<6.3	<10	<63	<6.3	<6.3	1,200	<6.3	<6.3	<6.3	<6.3	<63	<22	<6.3	<6.3	<6.3	<10	<10	<6.3	<15	<13	<16	<18	<19	<19	
	CTMW-05D-20170919	09/19/17	PME7	<100	<2.5	<2.5	<4.0	<25	<2.5	<2.5	630	<2.5	<2.5	<2.5	<2.5	<25	<8.8	<2.5	<2.5	<2.5	<4.0	<4.0	<2.5	<1.5	<1.3	<1.6	<1.3	<1.8	<1.9	
	CTMW-05D-20171004	10/04/17	PME8	<250	<6.3	<6.3	<10	<63	<6.3	<6.3	1,000	<6.3	<6.3	<6.3	<6.3	<63	<22	<6.3	<6.3	<6.3	<10	<10	<6.3	<2.9	<2.6	<3.1 UJ	<2.6	<3.5 UJ	<19 UJ	
CTMW-06S	CTMW-06S-20170621	06/21/17	PME4	1,700	<2.5	<2.5	<4.0	730	<2.5	<2.5	670	<2.5	<2.5	<2.5	<2.5	<25	18 J	<2.5	<2.5	<2.5	<4.0	<4.0	<2.5	430	<13	<16	240	100	<19	
	CTMW-06S-20170717	07/17/17	PME5	1,400	<10	<10	<16	2,800	<10	<10	610	<10	<10	<10	<10	<100	<35	<10	<10	<10	<16	<16	<10	2,800	<13	<16	710	550	<19	
	CTMW-06S-20170822	08/22/17	PME6	1,400	<5.0	<5.0	<8.0	3,200	<5.0	<5.0	320	<5.0	<5.0	<5.0	<5.0	<50	30 J	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	3,200	<13	<16	690	550	<19	
	CTMW-06S-20170919	09/19/17	PME7	780 J-	R	R	R	3,700 J-	R	R	170 J-	R	R	R	R	R	41 J-	R	R	R	R	R	R	3,600	<5.2	<6.2	970	440	<7.4	
	CTMW-06S-20171004	10/04/17	PME8	620 J-	2.6 J	R	R	4,000 J-	R	R	120 J-	R	R	R	R	R	13 J	R	R	R	R	R	R	3,700	<13	<16	1,200	750	<19	
	CTMW-06S-20180306	03/06/18	PME9	<10	<0.25	<0.25	<0.40	<2.5	<0.25	<0.25	16	<0.25	0.43 J	0.74	<0.25	0.52	<2.5	1.7 J	0.30 J	<0.25	<0.25	0.64 J	<0.40	<0.25	3.1 J	3.5 J	<3.1	<2.6	<3.5	<3.7
	CTMW-06S-20180622	06/22/18	PME10	12 J	<0.25 R	<0.25 R	<0.40 R	<2.5 R	<0.25 R	<0.25 R	4.9 J	<0.25 R	0.33 J	<0.25 R	0.30 J	<2.5 R	1.4 J	<0.25 R	<0.25 R	0.49 J	<0.40 R	<0.25 R	<2.9	<2.6	<3.1	<2.6	<3.5	<3.7		
CTMW-06D	CTMW-06D-20170622	06/22/17	PME4	<400	<10	<10	<16	<100	<10	<10	1,500	<10	<10	<10	<10	<100	<35	<10	<10	<10	<16	<16	<10	<5.8	<5.2	<6.2	<5.2	<7.0	<7.4	
	CTMW-06D-20170717	07/17/17	PME5	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,700	<5.0	<5.0	<5.0	<5.0	<50	<18	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	<5.8	<5.2	<6.2	<5.2	<7.0	<7.4	
	CTMW-06D-20170717-FD	07/17/17	PME5	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,700	<5.0	<5.0	<5.0	<5.0	<50	<18	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	<5.8	<5.2	<6.2	<5.2	<7.0	<7.4	
	CTMW-06D-20170822	08/22/17	PME6	<250	<6.3	<6.3	<10	<63	<6.3	<6.3	1,400	<6.3	<6.3	<6.3	<6.3	<63	<22	<6.3	<6.3	<6.3	<10	<10	<6.3	<29	<26	<31	<26	<35	<37	
	CTMW-06D-20170919	09/19/17	PME7	<200	<5.0	<5.0	<8.0	<50	<5.0	<5.0	1,200	<5.0	<5.0	<5.0	<5.0	<50	<18	<5.0	<5.0	<5.0	<8.0	<8.0	<5.0	96	<1.3	<1.6	26	<1.8	<1.9	
	CTMW-06D-20170919-FD	09/19/17	PME7	250	<0.25	0.27 J	<0.40	150	0.54	<0.25	1,000	<0.25	3.6	0.32 J	1.0	0.45 J	<2.5	1.1 J	0.68	<0.25	0.44 J	0.72 J	<0.40	1.0	97	<1.3	<1.6	26	<1.8	<1.9
	CTMW-06D-20171004	10/04/17	PME8	<250	<6.3	<6.3	<10	<63	<6.3	<6.3	1,200	<6.3	<6.3	<6.3	<6.3	<63	<22	<6.3	<6.3	<6.3	<10	<10	<6.3	140	<2.6	<3.1	16	<3.5 UJ	<19	
	CTMW-06D-20171004-FD	10/04/17	PME8	<250	<6.3	<6.3	<10	<63	<6.3	<6.3	1,200	<6.3	<6.3	<6.3	<6.3	<63	<22	<6.3	<6.3	<6.3	<10	<10	<6.3	130	<2.6	11	<2.6	26 J	<19	
	CTMW-06D-20180307	03/07/18	PME9	69 J	<1.3	<1.3	<2.0	140	<1.3	<1.3	440 J																			