TETRA TECH

TECHNICAL MEMORANDUM

To:	**Nevada Environmental Response Trust**
Cc:	Nevada Division of Environmental Protection United States Environmental Protection Agency
From:	Chris Hayes and Dana Grady
Date:	October 24, 2023
Subject:	**Unit 4 Source Area In-Situ Bioremediation 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 to summarize Tetra Tech's progress during August 2023 toward successfully implementing the Unit 4 Source Area In-Situ Bioremediation (ISB) Treatability Study.

Task Progress Update: August 2023

Task M21 – Unit 4 Source Area ISB Treatability Study

- Current Status –

  Phase 2 of the Unit 4 Source Area ISB Treatability Study is ongoing. A layout map and construction details of all injection, monitoring, and extraction wells are provided on Figure 1 and in Table 1, respectively. Operations, maintenance, and monitoring activities completed during August 2023 are summarized below.

  - Operations and Maintenance
    - Area 1 –The first phase of the treatability study for Area 1 consisted of a total dissolved solids (TDS) reduction period prior to the injection of a carbon substrate due to the presence of elevated TDS concentrations in groundwater in the Area 1 deep zone. This phase included the injection of clean water (formerly known as stabilized Lake Mead water [SLMW]) in a pulsed manner and continuous groundwater extraction to reduce TDS concentrations to levels that will allow biodegradation processes to proceed (i.e., TDS concentrations to below 21,000 milligrams per liter [mg/L] prior to carbon substrate/water injections). The TDS reduction period began on September 8, 2022 in the Area 1 deep zone. Once TDS concentrations were below the TDS goal of 21,000 mg/L for three consecutive events, a baseline groundwater sampling event was performed and the second phase of the treatability study, which included the start-up of carbon substrate injections for application of ISB into Area 1 intermediate and deep zones, was initiated. The baseline groundwater sampling event was performed in March 2023 and the carbon substrate injections as part of the ISB phase began on April 6, 2023.

The ISB injection process into Area 1 consists of daily-pulsed injections of a carbon substrate solution, followed by daily injections of anaerobic distribution water (clean water amended with Vitamin C). The carbon substrate solution initially consisted of 0.5 percent molasses solution, 0.5 molar sodium bicarbonate solution, trace mineral solution, and vitamin B12. The carbon substrate solution also initially contained filtered biosolids collected from the on-site fluidized bed reactors. The addition of the biosolids in the carbon substrate solution was discontinued on June 6, 2023, after the Area 1 60-day evaluation period (in accordance with the NDEP-approved Unit 4 Source Area ISB Treatability Study Work Plan Addendum). In addition, the molasses concentration was increased from 0.5 percent to 1 percent on July 12, 2023 in an effort to meet the large theoretical carbon demand due to the high concentrations of chemicals of potential concern present in Area 1. The macronutrient solution consisting of urea and diammonium phosphate is not currently being added to the injectate solution to minimize precipitate formation. The macronutrient solution may be added in the future if required based on effectiveness monitoring results. Summaries of Area 1 extractions and injections are provided in Tables 2 and 3, respectively. Specific details of ongoing operations in August 2023 include the following:

- Area 1 Intermediate Zone – A total of 25,882 gallons of groundwater was extracted from two extraction wells screened within Area 1 intermediate zone while approximately 28,603 gallons of carbon substrate solution and 21,888 gallons of distribution water were injected into two injection wells.
- Area 1 Deep Zone – Approximately 13,998 gallons of groundwater were extracted from one extraction well screened within the Area 1 deep zone, while approximately 24,087 gallons of carbon substrate solution and 17,792 gallons of distribution water were injected into four Area 1 deep injection wells. On July 15, 2023 the injection rates into injection wells U4-E-01D and U4-E-02D were increased from approximately 0.4 gpm to 0.75 gpm in an effort to increase the distribution of carbon in the northern portion of the Area 1 deep zone.

- Area 2 – Because TDS concentrations in Area 2 were lower than Area 1 and averaged approximately 19,500 mg/L during baseline sampling, ISB injection/extraction activities were implemented without an initial TDS reduction step. Carbon substrate solution/water injection and groundwater extraction operations in both the intermediate and deep zones within Area 2 began on September 13, 2022 and are ongoing. The injection process consists of daily-pulsed injections of a carbon substrate solution, followed by daily injections of anaerobic distribution water (clean water amended with Vitamin C). The carbon substrate solution initially consisted of 0.5 percent molasses solution, 0.5 molar sodium bicarbonate solution, trace mineral solution, and vitamin B12. The molasses concentration was increased from 0.5 percent to 1 percent on July 12, 2023 in an effort to meet the theoretical carbon requirements for Area 2 by the end of treatability study. The carbon substrate solution also initially contained filtered biosolids collected from the on-site fluidized bed reactors. The addition of the biosolids in the carbon substrate solution was discontinued on December 15, 2022 following completion of the first 90 days of system operation (in accordance with the NDEP-approved Unit 4 Source Area ISB Treatability Study Work Plan Addendum). The macronutrient solution consisting of urea and diammonium phosphate is not currently being added to the injectate solution to minimize precipitate formation. This macronutrient solution may be added in the future if required based on effectiveness monitoring results. Summaries of Area 2 extractions and injections are provided in Tables 2 and 4, respectively. Specific details of ongoing operations during August 2023 include the following:

- Area 2 Intermediate Zone – Approximately 6,207 gallons of groundwater were extracted from two extraction wells, while approximately 15,261 gallons of carbon substrate solution and 11,867 gallons of distribution water were injected into two injection wells.
- Area 2 Deep Zone – Approximately 38,253 gallons of carbon substrate solution and 29,801 gallons of distribution water were injected into five injection wells. As presented in the previous monthly progress report, extraction operations in the Area 2 deep zone were discontinued on July 17, 2023.

- Effectiveness Monitoring – The effectiveness monitoring program included a baseline groundwater sampling event completed in April 2022 prior to system start-up. Following start-up in early September 2022, the effectiveness monitoring program was implemented in accordance with the Work Plan Addendum. During the first month of operations in Area 2, one biweekly sampling event of Area 2 monitoring wells was conducted in September 2022. The monitoring program shifted to monthly sampling in October 2022 and is ongoing for both Areas 1 and 2. In March 2023, groundwater samples were collected from all Area 1 intermediate and deep injection, extraction, and monitoring wells to establish baseline conditions prior to the startup of carbon substrate solution injections in Area 1, which began on April 6, 2023. The April 2023 sampling event was performed approximately two weeks after ISB start-up in Area 1, and therefore serves as a biweekly sampling event for Area 1 monitoring wells and the regular monthly sampling event for Area 2. Similar to the Area 2 monitoring program, the sampling in Area 1 then shifted to a monthly basis in May 2023 and coincides with the monthly sampling performed for Area 2. Available draft groundwater analytical results from the baseline sampling event and subsequent monitoring events performed from September 2022 to July 2023 are presented in Table 5. The July 2023 groundwater results are summarized below. Groundwater analytical results from the most recent effectiveness monitoring event performed from August 10 to August 14, 2023 will be provided in future monthly progress reports as data become available from the laboratory. Final validated data will be provided in the final treatability study results report.
  - Area 1 Intermediate – The July 2023 sampling event was conducted approximately three months after the start of ISB injections into Area 1 and included collection of groundwater samples from two extraction wells screened in the Area 1 intermediate zone, and three monitoring wells, located within the Area 1 intermediate study area. Groundwater analytical results from the July 2023 sampling event are summarized below.
    - During the July 2023 sampling event (performed approximately three months after the start of ISB operations in Area 1), results from groundwater samples collected from two intermediate monitoring wells located within the immediate vicinity of the Area 1 intermediate treatment zone (i.e., U4-MW-02I and U4-MW-05I) indicated perchlorate concentration reductions ranging from 45 percent to greater than 99 percent compared to pre-ISB baseline concentrations in March 2023. The greatest concentration reduction occurred in the groundwater sample collected from U4-MW-02I, with perchlorate concentrations reducing from 1,300 mg/L in the March 2023 pre-ISB baseline sampling event to 0.158 mg/L in July 2023. The perchlorate concentration in the groundwater sample collected from monitoring well U4-MW-07I increased from 0.0483 mg/L in June 2023 to 391 mg/L in July 2023. Similarly, the groundwater sample collected from U4-MW-05I in July 2023 indicated a higher perchlorate concentration of 563 mg/L compared to 4.03 mg/L measured in the previously sampling event in June 2023. These perchlorate concentration increases in the intermediate zone are likely related to

the operational change that occurred in the underlying deep zone in July 2023. Specifically, it has been observed during this treatability study that when injection rates are increased within the underlying deep zone, concentrations increase within the overlying intermediate zone. This is likely a result of hydraulic gradient changes that can cause a flux of untreated groundwater into the intermediate treatment zone. It is anticipated that as the system reaches homeostasis under the new injection scheme, this influx of perchlorate mass will be treated and perchlorate concentrations within Area 1 intermediate will decrease over time.

- Chlorate and nitrate concentration trends were similar to perchlorate, with chlorate reductions ranging from 69 percent to greater than 99 percent in groundwater samples collected from monitoring wells U4-MW02I and U4-MW-05I and nitrate reductions ranging from 75 percent to greater than 99 percent in groundwater samples collected from all three monitoring wells within the immediate vicinity of the Area 1 intermediate treatment zone (i.e., U4-MW-02I, U4-MW-05I and U4-MW-07I). As observed with perchlorate, chlorate concentrations in the groundwater samples collected from monitoring wells U4-MW-05I and U4-MW-07I significantly increased between the June 2023 and July 2023 sampling events (e.g., from 2.62 mg/L to 2,940 mg/L at U4-E-07I). As previously explained, these concentration increases are likely related to the increase in the Area 1 deep zone injection rates that occurred in July 2023.
- During the July 2023 sampling event, groundwater samples collected from all three monitoring wells located in the immediate vicinity of the Area 1 intermediate treatment zone (i.e., U4-MW-02I, U4-MW-05I, and U4-MW-07I) continued to indicate hexavalent chromium reductions ranging from 29 percent to greater than 99 percent, with concentrations ranging from less than 0.30 μg/L to 5,340 μg/L. The hexavalent chromium concentration of 0.30 μg/L is the lowest concentration measured to date in groundwater collected from U4-MW-02I. Similar to perchlorate and chlorate, hexavalent concentrations in the groundwater samples collected from monitoring wells U4-MW-05I and U4-E-07I increased significantly between the June 2023 and July 2023 sampling events (e.g., from 4.86 μg/l to 5,340 μg/L at U4-E-05I) likely due to operational changes performed in July 2023..
- Elevated TOC concentrations continued to be observed three months after the start of ISB, with TOC concentrations in groundwater samples collected from monitoring wells located within the immediate vicinity of the Area 1 intermediate treatment zone ranging from 47.9 mg/L to 255 mg/L in July 2023. Though TOC concentrations remain above pre-ISB March 2023 baseline levels, TOC concentrations showed a significant reduction in groundwater samples collected from monitoring wells U4-MW-05I and U4-MW-07I in July 2023. The groundwater sample collected from monitoring well U4-MW-05I reduced from 485 mg/L in June 2023 to 54.6 mg/L in July 2023 and the groundwater sample collected from monitoring well U4-MW-07I reduced from 171 mg/L in June 2023 to 47.9 mg/L in July 2023. These results correlate with the rebound in perchlorate, chlorate, and hexavalent chromium concentrations in groundwater samples collected from monitoring wells U4-MW-05I and U4-MW-07I in July 2023.

- Area 1 Deep – During the July 2023 sampling event performed three months after the start of ISB operations in Area 1, groundwater samples were collected from one deep extraction well and four deep monitoring wells within Area 1. Groundwater analytical results from the July 2023 sampling event are summarized below.
  - The groundwater sample collected from one of the four Area 1 deep zone monitoring wells (U4-MW-05D) indicated a 36 percent reduction in perchlorate concentration compared to pre-ISB baseline concentrations in March 2023. Perchlorate concentrations increased in groundwater samples collected from three monitoring wells U4-MW-05D, U4-MW-07D and M-251-100 during the July 2023 sampling event compared to the June 2023 sampling event. For example, the perchlorate concentration in groundwater collected from monitoring well M-251-100 increased from 219 mg/L in June 2023 to 1,530 mg/L in July 2023. The operational change that occurred during the July 2023 sampling event to increase flow rates in northern injection wells U4-E-01D and U4-E-02D likely altered the horizontal gradients within the Area 1 deep zone resulting in the high concentration groundwater in the northern portion of the Area 1 deep zone influencing the perchlorate concentrations in the lower concentration portions of the Area 1 deep zone. It is anticipated that as the system reaches homeostasis under the new injection scheme, this influx of perchlorate mass will be treated and perchlorate concentrations within Area 1 deep will decrease over time.
  - Chlorate concentration trends were similar to perchlorate, with overall concentration reductions generally observed when compared to baseline but increases in concentrations observed when comparing the results from the July 2023 sampling event to the June 2023 sampling event. This is consistent with the increases observed in perchlorate concentrations in groundwater samples collected from these monitoring wells in July 2023.The higher-than-expected chlorate and nitrate concentrations are also likely related to the increase in Area 1 deep zone injection rates that occurred in July 2023 and are expected to decrease over time.
  - In general, hexavalent chromium concentration trends followed similar pattern to perchlorate, chlorate, and nitrate (i.e., concentration increases between the June 2023 and July 2023 sampling events likely due to July operational changes). Despite the increases observed between the June 2023 and July 2023 sampling events, a 73 percent reduction in hexavalent chromium concentration was observed in the groundwater sample collected from monitoring well U4-MW-05D (7,530 μg/L in July 2023 compared to 28,200 μg/L in the March 2023 pre-ISB baseline).
  - TOC concentrations in groundwater samples collected from U4-MW-05D and U4-MW-07D in June 2023 were 129 mg/L and 392 mg/L, respectively, which are significantly elevated above baseline concentrations (less than 2 mg/L). Although still elevated above baseline, groundwater samples collected from U4-MW-05D and U4-MW-07D in July 2023 indicated lower TOC concentrations of 22.1 mg/L and 38.9 mg/L. These results correlate with the increases observed in perchlorate, chlorate, and hexavalent chromium concentrations in groundwater samples collected from monitoring wells U4-MW-05D and U4-MW-07D in July 2023, which are likely due to the July 2023 operational changes. It is anticipated that as the system reaches homeostasis under the new injection scheme, TOC concentrations will increase to concentrations greater than the

July 2023 values. In addition to the increase in injection rates in July 2023, the molasses concentration in the injectate solution was also increased from 0.5 percent to 1 percent in an effort to increase the available carbon in the subsurface (i.e., increase TOC concentrations) and improve the distribution of carbon substrate within the deep zone.

- Area 2 Intermediate – In July 2023 approximately ten months after the start of ISB in Area 2, groundwater samples were collected from three intermediate monitoring wells located within Area 2 and two extraction wells screened in the Area 2 intermediate zone. Groundwater analytical results from the July 2023 sampling event are summarized below.
  - Perchlorate concentrations in groundwater samples collected in July 2023 from all three intermediate monitoring wells located within the immediate vicinity of the Area 2 treatment zone (i.e., U4-MW-11I, U4-MW-12I, and U4-MW-13I) ranged from 0.469 mg/L to 13.6 mg/L, representing perchlorate concentration reductions of greater than 99 percent compared to baseline concentrations.
  - As with perchlorate, both chlorate and nitrate concentrations in groundwater samples collected from all three Area 2 intermediate monitoring wells continued to be reduced by greater than 98 percent in July 2023 compared to baseline concentrations.
  - Hexavalent chromium concentrations in groundwater samples collected from all three intermediate monitoring wells within the immediate vicinity of the Area 2 treatment zone were reduced by greater than 99 percent compared to baseline, with concentrations ranging from less than 0.5 μg/L to 99 μg/L in July 2023.
  - Groundwater samples collected in July 2023 from intermediate monitoring wells within the immediate vicinity of the Area 2 continued to exhibit elevated TOC concentrations ranging from 21.3 mg/L to 126 mg/L, which are significantly higher than the average baseline concentration of 1.25 mg/L. The combination of contaminant concentration decreases and TOC concentration increases indicate that the injected carbon substrate solution is being successfully distributed throughout the targeted Area 2 intermediate treatment zone.
- Area 2 Deep – During the July 2023 sampling event performed ten months after the start of ISB operations in Area 2, groundwater samples were collected from one deep extraction well and three deep monitoring wells within Area 2. Groundwater analytical results from the July 2023 sampling event are summarized below.
  - When compared to baseline, perchlorate concentration reductions ranging from 23 percent to 83 percent were observed in groundwater samples collected from the three deep monitoring wells located within Area 2 (i.e., U4-MW-11D, U4-MW-12D, and U4-MW-13D).The perchlorate concentration in the groundwater sample collected in July 2023 from monitoring well U4-MW-12D measured 366 mg/L, which represents a 71 percent reduction compared to the baseline concentration of 1,280 mg/L and is the lowest perchlorate concentration observed to date in groundwater samples collected from U4-MW-12D.
  - Concentration reductions for chlorate and nitrate in the groundwater samples collected from the three deep monitoring wells within Area 2 were slightly greater than perchlorate (reductions of up to 88 percent for chlorate and up to 95 percent for nitrate compared to baseline concentrations). As with perchlorate, the chlorate and nitrate concentrations in groundwater collected in July 2023 from monitoring well U4-MW-12D are the lowest concentrations observed to date in groundwater samples collected from this location, representing

reductions of 71 percent and 86 percent, respectively, compared to baseline concentrations.

- Hexavalent chromium concentration reductions ranging from 31 percent to 85 percent when compared to baseline concentrations were observed in groundwater samples collected from the three deep monitoring wells located within Area 2. The hexavalent chromium concentration in groundwater collected from U4-MW-12D reduced from 35,200 µg/L in June 2023 to 16,800 µg/L in July 2023, which is the lowest hexavalent chromium concentrations observed to date in groundwater samples collected from this location.
- TOC concentrations were slightly higher than baseline concentrations in groundwater samples collected from U4-MW-11D, U4-MW-12D, and U4-MW-13D with concentrations ranging from 3.02 mg/L to 13.7 mg/L (baseline concentration average of 2.17 mg/L). The system modifications performed in July 2023, which included increasing the molasses concentration to 1 percent and converting the extraction well U4-E-08D into an injection well, were incorporated into the operations in an effort to improve distribution of carbon substrate throughout the Area 2 deep zone.

- Schedule and Progress Updates
  - Area 1 ISB operations are anticipated to continue through April 2024.
  - Area 2 ISB operations were anticipated to continue through September 2023. However, the initial 12-month ISB operational period for Area 2 will be extended for an additional six months to more fully evaluate the effects of recent July 2023 operational modifications made in an effort to improve the distribution of carbon substrate throughout Area 2 Deep. Therefore, Area 2 ISB operations are anticipated to continue through March 2024.
- Health and Safety
  - There were no health and safety incidents related to Task M21 in August 2023.

CERTIFICATION

Unit 4 Source Area In-Situ Bioremediation 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 systems(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

Not Individually, but Solely
as President of the 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

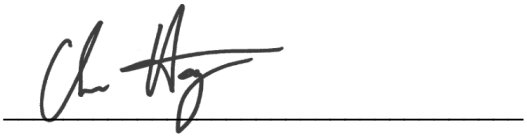
Date: 10/24/23

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 Unit 4 Source Area In-Situ Bioremediation Treatability Study Monthly Progress Report.



October 24,2023

Christopher Hayes, CEM Date
Environmental Engineer
Tetra Tech, Inc.

Nevada CEM Certificate Number: EM2499
Nevada CEM Expiration Date: December 15, 2024

Figures

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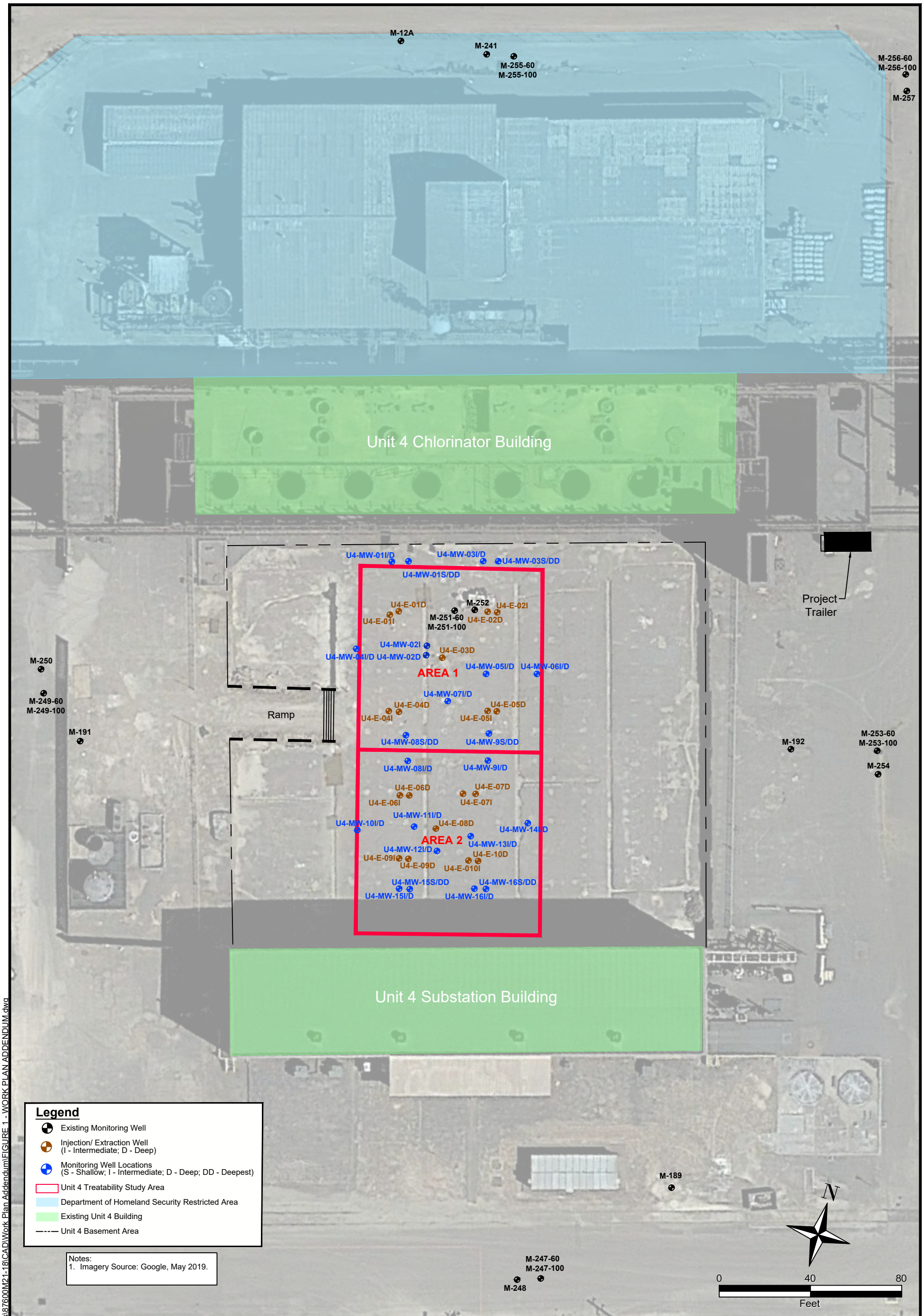

Legend

- Existing Monitoring Well
- Injection/ Extraction Well (I - Intermediate; D - Deep)
- Monitoring Well Locations (S - Shallow; I - Intermediate; D - Deep; DD - Deepest)
- Unit 4 Treatability Study Area
- Department of Homeland Security Restricted Area
- Existing Unit 4 Building
- Unit 4 Basement Area

Notes:
1. Imagery Source: Google, May 2019.

\\tts318fs3.ttl.local\CES\Projects\87600M21-18\CAD\Work Plan Addendum\FIGURE 1 - WORK PLAN ADDENDUM.dwg

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NEVADA ENVIRONMENTAL RESPONSE TRUST SITE

UNIT 4 SOURCE AREA IN-SITU BIOREMEDIATION TREATABILITY STUDY
HENDERSON, NEVADA

INJECTION/ EXTRACTION AND MONITORING WELL LAYOUT

Project No.:	117-7502021-M21
Date:	May 10, 2022
Designed By:	AC

Figure No.

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Tables

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Table 1
Well Construction Details
Unit 4 Source Area In-Situ Bioremediation Treatability Study

Well ID	Screened Lithology	Northing	Easting	Ground Surface Elevation[1]	Top of Casing Elevation	Construction Type	Casing Material	Screen Material	Slot Size	Filter Pack Gradation	Borehole Diameter	Borehole Total Depth	Well Diameter	Nominal Screen Length	Well Total Depth	Bottom of Screen	Top of Screen
				feet amsl	feet amsl				inches		inches	feet bgs[1]	inches	feet	feet bgs[1]	feet bgs[1]	feet bgs[1]
U4-E-01D	UMCf	26717332.49	828215.74	1805.50	1805.11	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	115.0	4	15	110.3	94.7	109.7
U4-E-01I	UMCf	26717330.42	828212.11	1805.40	1805.15	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	92.0	4	15	90.3	74.6	89.6
U4-E-02D	UMCf	26717338.47	828258.40	1805.55	1804.99	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	115.0	4	15	110.3	94.4	109.4
U4-E-02I	UMCf	26717338.14	828254.24	1805.51	1804.99	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	92.0	4	15	90.3	74.4	89.4
U4-E-04D	UMCf	26717288.90	828222.53	1805.49	1804.95	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	115.0	4	15	110.3	95.0	110.0
U4-E-03D	UMCf	26717310.37	828241.13	1805.49	1804.94	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	113.0	4	15	111.1	110.1	95.1
U4-E-04I	UMCf	26717288.51	828217.91	1805.64	1805.03	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	92.0	4	15	90.3	75.0	90.0
U4-E-05D	UMCf	26717295.64	828264.86	1805.48	1804.95	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	115.0	4	15	110.3	95.0	110.0
U4-E-05I	UMCf	26717295.15	828260.95	1805.58	1804.72	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	92.0	4	15	90.3	75.0	90.0
U4-E-06D	UMCf	26717253.44	828232.43	1805.44	1804.74	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	112.0	4	15	111.1	110.1	95.1
U4-E-06I	UMCf	26717252.90	828228.29	1805.47	1805.04	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	92.5	4	15	89.2	88.2	73.2
U4-E-07D	UMCf	26717258.48	828261.02	1805.62	1805.31	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	111.5	4	15	110.6	109.6	94.6
U4-E-07I	UMCf	26717257.68	828255.56	1805.62	1805.16	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	92.0	4	15	90.7	89.7	74.7
U4-E-08D	UMCf	26717240.82	828246.11	1805.45	1804.91	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	120.0	4	15	110.6	109.6	94.6
U4-E-09D	UMCf	26717225.92	828236.22	1805.45	1804.91	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	112.0	4	15	110.5	109.5	94.5
U4-E-09I	UMCf	26717225.46	828232.18	1805.47	1805.14	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	93.3	4	15	90.9	89.9	74.9
U4-E-10D	UMCf	26717229.55	828266.50	1805.66	1805.28	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	112.0	4	15	110.5	109.5	94.5
U4-E-10I	UMCf	26717229.15	828262.34	1805.71	1805.37	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	92.0	4	15	90.2	89.2	74.2
U4-MW-01I	UMCf	26717353.59	828209.51	1805.57	1805.14	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	108.0	2	10	86.7	86.7	76.7
U4-MW-01D	UMCf	26717353.51	828209.25	1805.57	1805.10		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	106.7	106.7	96.7
U4-MW-01S	UMCf	26717354.83	828216.42	1805.57	1805.02	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	131.0	2	10	64.7	64.7	54.7
U4-MW-01DD	UMCf	26717354.86	828216.87	1805.57	1805.09		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	129.9	129.9	119.9
U4-MW-02D	UMCf	26717315.33	828230.47	1805.50	1805.07	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	115.0	4	15	110.3	95.0	110.0
U4-MW-02I	UMCf	26717319.45	828230.17	1805.47	1805.07	Single	Schedule 80 PVC	Stainless Steel	0.010	#2/16	8	92.0	4	15	90.3	75.0	90.0
U4-MW-03I	UMCf	26717359.79	828248.76	1805.61	1805.17	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	108.3	2	10	86.6	86.6	76.6
U4-MW-03D	UMCf	26717360.01	828249.20	1805.61	1805.18		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	106.6	106.6	96.6
U4-MW-03S	UMCf	26717360.79	828255.35	1805.56	1805.19	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	131.3	2	10	64.5	64.5	54.5
U4-MW-03DD	UMCf	26717360.84	828255.62	1805.56	1805.20		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	129.7	129.7	119.7
U4-MW-04I	UMCf	26717313.50	828199.89	1805.49	1805.13	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	108.5	2	10	86.8	86.8	76.8
U4-MW-04D	UMCf	26717313.36	828199.55	1805.49	1805.15		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	107.0	107.0	97.0
U4-MW-05I	UMCf	26717311.18	828257.53	1805.52	1805.06	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	108.0	2	10	86.6	86.6	76.6
U4-MW-05D	UMCf	26717311.18	828257.89	1805.52	1805.05		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	108.2	108.2	98.2
U4-MW-06I	UMCf	26717314.46	828279.53	1805.52	1805.21	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	108.3	2	10	86.5	86.5	76.5
U4-MW-06D	UMCf	26717314.51	828279.82	1805.52	1805.20		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	107.1	107.1	97.1
U4-MW-07I	UMCf	26717296.98	828242.85	1805.36	1805.16	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	109.2	2	10	86.8	86.8	76.8
U4-MW-07D	UMCf	26717296.68	828242.80	1805.36	1805.01		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	106.5	106.5	96.5
U4-MW-08I	UMCf	26717268.25	828229.36	1805.45	1804.97	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	108.0	2	10	88.0	88.0	78.0
U4-MW-08D	UMCf	26717268.30	828229.62	1805.45	1804.99		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	108.6	108.6	98.6
U4-MW-08S	UMCf	26717279.33	828226.78	1805.47	1804.94	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	131.2	2	10	64.9	64.9	54.9
U4-MW-08DD	UMCf	26717279.35	828227.22	1805.47	1804.95		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	129.8	129.8	119.8
U4-MW-09I	UMCf	26717273.70	828264.04	1805.62	1805.22	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	108.0	2	10	86.8	86.8	76.8
U4-MW-09D	UMCf	26717273.73	828264.40	1805.62	1805.20		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	106.9	106.9	96.9
U4-MW-09S	UMCf	26717285.44	828262.62	1805.55	1805.12	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	132.0	2	10	65.3	65.3	55.3
U4-MW-09DD	UMCf	26717285.52	828263.00	1805.55	1805.12		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	129.8	129.8	119.8
U4-MW-10I	UMCf	26717234.83	828212.05	1805.55	1805.10	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	109.0	2	10	87.1	87.1	77.1
U4-MW-10D	UMCf	26717235.18	828212.26	1805.55	1805.07		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	106.9	106.9	96.9
U4-MW-11I	UMCf	26717240.19	828236.42	1805.41	1805.03	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	109.0	2	10	87.0	87.0	77.0
U4-MW-11D	UMCf	26717240.23	828236.77	1805.41	1804.96		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	107.4	107.4	97.4
U4-MW-12I	UMCf	26717231.25	828247.87	1805.47	1805.11	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	108.0	2	10	86.8	86.8	76.8
U4-MW-12D	UMCf	26717231.22	828248.29	1805.47	1805.12		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	107.1	107.1	97.1
U4-MW-13I	UMCf	26717242.66	828261.00	1805.64	1805.28	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	109.0	2	10	87.1	87.1	77.1
U4-MW-13D	UMCf	26717242.70	828261.37	1805.64	1805.35		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	108.2	108.2	98.2
U4-MW-14I	UMCf	26717249.26	828285.32	1805.43	1805.13	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	109.0	2	10	87.3	87.3	77.3
U4-MW-14D	UMCf	26717249.24	828285.84	1805.43	1805.05		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	107.3	107.3	97.3
U4-MW-15I	UMCf	26717212.34	828233.91	1805.48	1805.03	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	109.0	2	10	86.8	86.8	76.8
U4-MW-15D	UMCf	26717212.35	828234.41	1805.48	1804.97		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	106.0	106.0	96.0
U4-MW-15S	UMCf	26717212.89	828238.61	1805.44	1805.05	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	132.0	2	10	64.8	64.8	54.8
U4-MW-15DD	UMCf	26717212.87	828239.01	1805.44	1804.98		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	130.3	130.3	120.3
U4-MW-16I	UMCf	26717217.25	828266.62	1805.68	1805.36	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	108.5	2	10	87.0	87.0	77.0
U4-MW-16D	UMCf	26717217.40	828266.90	1805.68	1805.27		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	106.8	106.8	96.8
U4-MW-16S	UMCf	26717217.87	828271.70	1805.59	1805.24	Dual-Nested	Schedule 80 PVC	Stainless Steel	0.010	#2/16	11	131.0	2	10	64.8	64.8	54.8
U4-MW-16DD	UMCf	26717218.04	828271.95	1805.59	1805.32		Schedule 80 PVC	Stainless Steel	0.010	#2/16			2	10	130.8	130.8	120.8

Notes
amsl - above mean sea level
bgs - below ground surface
bTOC - below top of casing
PVC - polyvinyl chloride
UMCf - Upper Muddy Creek formation
1. Ground surface refers to the concrete floor of the Unit 4 basement, which is approximately 8 feet below the surrounding grade.
2. Well names including E indicate an extraction/injection well. Well names including MW indicate a monitoring well.

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Table 2
Summary of Groundwater Extraction Activities - August 2023
Unit 4 Source Area Bioremediation Treatability Study

Study Area			Area 1 Deep						Area 1 Intermediate									Area 2 Intermediate					
Well ID			U4-E-03D						U4-E-01I			U4-E-02I						U4-E-06I			U4-E-07I		
Date	Time	Duration	Average Flow Rate	Volume Extracted	Cumulative Total Volume	Time	Duration		Average Flow Rate	Volume Extracted	Cumulative Total Volume	Average Flow Rate	Volume Extracted	Cumulative Total Volume				Average Flow Rate	Volume Extracted	Cumulative Total Volume	Average Flow Rate	Volume Extracted	Cumulative Total Volume
		minutes	gpm	gallons	gallons		minutes		gpm	gallons	gallons	gpm	gallons	gallons				gpm	gallons	gallons	gpm	gallons	gallons
8/1/2023	15:05	1,440	0.3	424.22	252,614.60	15:05	545		1.1	621.64	135,029.68	0.5	249.02	136,313.44				0.3	170.81	115,909.44	0.1	56.96	61,667.73
8/2/2023	15:04	1,439	0.3	461.11	253,075.71	15:04	545		1.2	661.56	135,691.24	0.4	244.44	136,557.88				0.3	155.42	116,064.86	0.1	53.65	61,721.38
8/3/2023	15:04	1,440	0.3	456.24	253,531.95	15:04	544		1.3	687.26	136,378.50	0.4	241.97	136,799.85				0.3	154.95	116,219.81	0.1	54.56	61,775.94
8/4/2023	15:04	1,440	0.3	442.70	253,974.65	15:04	544		1.2	653.26	137,031.76	0.4	239.00	137,038.85				0.3	153.57	116,373.38	0.2	85.77	61,861.71
8/5/2023	15:04	1,440	0.3	423.90	254,398.55	15:04	544		1.2	676.11	137,707.87	0.4	238.90	137,277.75				0.3	159.19	116,532.57	0.1	54.10	61,915.81
8/6/2023	15:05	1,441	0.3	405.70	254,804.25	15:05	546		1.2	635.52	138,343.39	0.4	232.98	137,510.73				0.3	154.20	116,686.77	0.1	55.89	61,971.70
8/7/2023	15:05	1,440	0.3	408.44	255,212.69	15:05	546		1.1	620.39	138,963.78	0.4	231.15	137,741.88				0.3	156.63	116,843.40	0.1	47.12	62,018.82
8/8/2023	15:04	1,439	0.3	429.01	255,641.70	15:04	545		1.2	631.73	139,595.51	0.4	227.36	137,969.24				0.3	158.00	117,001.40	0.1	44.15	62,062.97
8/9/2023	15:06	1,442	0.3	426.30	256,068.00	15:06	546		1.2	654.69	140,250.20	0.4	220.56	138,189.80				0.3	148.81	117,150.21	0.1	37.23	62,100.20
8/10/2023	15:03	1,437	0.3	406.50	256,474.50	15:03	544		1.3	690.13	140,940.33	0.4	218.62	138,408.42				0.3	151.74	117,301.95	0.1	39.44	62,139.64
8/11/2023	15:28	1,440	0.1	215.13	256,689.63	15:28	547		1.3	710.60	141,650.93	0.4	220.89	138,629.31				0.3	149.38	117,451.33	0.1	43.72	62,183.36
8/12/2023	15:03	547	0.1	68.89	256,758.52	15:03	544		1.1	610.59	142,261.52	0.4	215.06	138,844.37				0.3	149.90	117,601.23	0.1	37.96	62,221.32
8/13/2023	15:05	1,442	0.1	152.41	256,910.93	15:05	544		1.2	629.09	142,890.61	0.4	210.86	139,055.23				0.3	150.20	117,751.43	0.1	38.99	62,260.31
8/14/2023	15:03	1,438	0.1	185.99	257,096.92	15:03	544		1.2	663.46	143,554.07	0.4	210.81	139,266.04				0.3	149.03	117,900.46	0.1	37.72	62,298.03
8/15/2023	15:04	1,441	0.2	357.67	257,454.59	15:04	545		1.1	626.63	144,180.70	0.4	212.27	139,478.31				0.3	146.51	118,046.97	0.1	69.16	62,367.19
8/16/2023	5:00	836	0.4	336.27	257,790.86	15:04	545		1.2	631.26	144,811.96	0.4	208.66	139,686.97				0.3	144.57	118,191.54	0.1	66.74	62,433.93
8/17/2023	15:04	2,044	0.4	817.98	258,608.84	15:04	544		1.1	613.43	145,425.39	0.4	208.48	139,895.45				0.3	141.06	118,332.60	0.1	59.28	62,493.21
8/18/2023	15:04	1,440	0.4	594.67	259,203.51	15:04	544		1.1	573.33	145,998.72	0.4	207.47	140,102.92				0.3	140.21	118,472.81	0.1	60.89	62,554.10
8/19/2023	15:03	1,439	0.4	582.48	259,785.99	15:03	544		1.1	601.17	146,599.89	0.4	205.56	140,308.48				0.3	139.23	118,612.04	0.1	55.08	62,609.18
8/20/2023	15:05	1,442	0.4	565.20	260,351.19	15:05	543		1.1	588.42	147,188.31	0.3	186.86	140,495.34				0.3	142.50	118,754.54	0.1	63.45	62,672.63
8/21/2023	15:14	1,449	0.4	567.74	260,918.93	15:14	547		1.1	604.19	147,792.50	0.3	188.25	140,683.59				0.3	150.84	118,905.38	0.1	68.12	62,740.75
8/22/2023	15:04	1,430	0.4	571.72	261,490.65	15:04	545		1.0	571.54	148,364.04	0.3	189.94	140,873.53				0.3	141.23	119,046.61	0.1	71.64	62,812.39
8/23/2023	15:04	1,440	0.4	548.08	262,038.73	15:04	545		1.2	628.60	148,992.64	0.4	199.59	141,073.12				0.2	134.35	119,180.96	0.1	71.18	62,883.57
8/24/2023	15:05	1,441	0.4	535.98	262,574.71	15:05	545		1.1	601.85	149,594.49	0.4	195.61	141,268.73				0.2	129.87	119,310.83	0.1	61.84	62,945.41
8/25/2023	15:09	1,444	0.4	528.92	263,103.63	15:09	550		1.2	641.30	150,235.79	0.4	199.30	141,468.03				0.2	131.60	119,442.43	0.1	61.26	63,006.67
8/26/2023	15:03	1,434	0.4	532.11	263,635.74	15:03	544		1.2	631.46	150,867.25	0.4	199.21	141,667.24				0.2	129.22	119,571.65	0.1	67.80	63,074.47
8/27/2023	15:06	1,443	0.4	518.73	264,154.47	15:06	546		1.1	602.65	151,469.90	0.4	196.63	141,863.87				0.2	115.50	119,687.15	0.1	67.09	63,141.56
8/28/2023	15:04	1,438	0.4	503.91	264,658.38	15:04	545		1.0	554.19	152,024.09	0.4	199.06	142,062.93				0.2	119.25	119,806.40	0.1	68.62	63,210.18
8/29/2023	15:05	1,441	0.4	509.89	265,168.27	15:05	545		1.1	589.33	152,613.42	0.4	200.79	142,263.72				0.2	127.57	119,933.97	0.1	64.16	63,274.34
8/30/2023	15:05	1,440	0.4	509.29	265,677.56	15:05	545		1.0	557.40	153,170.82	0.4	195.43	142,459.15				0.2	117.62	120,051.59	0.1	61.28	63,335.62
8/31/2023	15:04	1,439	0.4	510.40	266,187.96	15:04	545		1.0	528.66	153,699.48	0.4	195.59	142,654.74				0.2	107.87	120,159.46	0.1	61.51	63,397.13
August 2023 Total					**13,998**						**19,291**			**6,590**						**4,421**			**1,786**
Cumulative Total					**266,188**						**153,699**			**142,655**						**120,159**			**63,397**

Notes:

gpm - gallons per minute

1. Extraction operations are active 24 hours per day. Volume and duration quantities represent gallons or minutes of extraction since previous record indicated. On January 18, 2023, Area 2 intermediate wells were transitioned from 24-hour operation to 12-hour operation in an effort to improve daily extraction rates. On June 7, 2023, all extraction wells except U4-E-03D were transitioned to a 12-hour operation to help improve daily extraction rates.

2. Extraction well U4-E-08D was converted to an injection well when operations resumed on July 21, 2023.

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Table 3
Summary of Injection Activities
Area 1 - August 2023
Unit 4 Source Area Bioremediation Treatability Study

Study Area				Area 1 Intermediate								Area 1 Deep								Area 1 Deep							
Well ID				U4-E-04I				U4-E-05I				U4-E-01D				U4-E-02D				U4-E-04D				U4-E-05D			
Date	Injection Start Time	Injection Stop Time	Duration[1]	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3,4]	Average Flow Rate	Maximum Injection Pressure	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3,4]	Average Flow Rate	Maximum Injection Pressure	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3,4]	Average Flow Rate	Maximum Injection Pressure	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3,4]	Average Flow Rate	Maximum Injection Pressure	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3,4]	Average Flow Rate	Maximum Injection Pressure	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3,4]	Average Flow Rate	Maximum Injection Pressure
			minutes	gallons	gallons	gpm	psi	gallons	gallons	gpm	psi	gallons	gallons	gpm	psi	gallons	gallons	gpm	psi	gallons	gallons	gpm	psi	gallons	gallons	gpm	psi
8/1/2023	6:15	14:14	465	450.07	340.60	1.7	25	459.09	362.71	1.8	13	190.31	129.83	0.7	12	186.7	141.02	0.7	28	182.13	136.16	0.7	36	208.61	142.47	0.8	37
8/2/2023	6:15	14:04	455	426.47	340.87	1.7	24	460.64	352.34	1.7	13	185.48	150.98	0.7	12	189.0	132.00	0.7	29	191.14	137.59	0.7	36	157.85	148.52	0.7	40
8/3/2023	6:15	14:11	462	456.24	347.17	1.7	23	478.12	349.20	1.8	13	201.73	158.00	0.8	10	200.3	137.03	0.7	28	189.02	136.22	0.7	38	181.61	143.40	0.7	39
8/4/2023	6:15	14:15	467	453.29	349.26	1.7	22	448.89	350.01	1.7	12	193.68	149.92	0.7	12	197.0	145.96	0.7	28	193.10	142.28	0.7	35	165.39	142.49	0.7	38
8/5/2023	6:15	14:03	454	449.69	342.00	1.7	20	457.05	352.09	1.7	13	193.34	139.63	0.7	12	191.8	150.68	0.7	28	197.81	141.15	0.7	38	186.49	148.37	0.7	40
8/6/2023	6:15	14:09	459	446.49	357.47	1.7	20	459.42	365.11	1.8	12	194.91	135.21	0.7	8	183.3	137.29	0.7	27	191.08	139.68	0.7	37	182.13	148.96	0.7	38
8/7/2023	6:15	14:10	461	467.17	354.28	1.8	19	473.76	352.90	1.8	15	183.31	125.71	0.7	8	190.5	143.32	0.7	28	196.55	128.83	0.7	36	130.07	119.16	0.5	38
8/8/2023	6:15	14:15	467	472.52	354.53	1.8	19	454.22	342.58	1.7	14	175.46	120.41	0.6	8	187.6	139.53	0.7	28	205.08	144.75	0.8	35	161.94	139.46	0.6	38
8/9/2023	6:15	14:10	463	457.41	358.50	1.8	21	464.02	362.04	1.8	14	190.85	134.40	0.7	8	189.8	139.89	0.7	28	185.05	145.55	0.7	36	211.66	140.41	0.8	38
8/10/2023	6:15	14:19	471	464.32	371.99	1.8	22	474.91	376.42	1.8	14	213.13	158.78	0.8	10	203.4	145.18	0.7	29	211.29	139.41	0.8	37	203.27	116.69	0.7	38
8/11/2023	6:15	14:08	458	467.69	363.04	1.8	21	478.67	348.04	1.8	14	206.10	152.77	0.8	9	198.8	140.46	0.7	28	197.11	146.70	0.7	36	188.04	146.61	0.7	38
8/12/2023	6:15	14:10	462	485.89	352.27	1.8	21	478.74	372.78	1.8	14	196.90	154.25	0.8	10	195.5	149.22	0.7	28	221.17	142.51	0.8	38	177.24	117.55	0.6	39
8/13/2023	6:15	14:08	460	463.81	352.90	1.8	20	478.34	351.63	1.8	14	192.98	145.11	0.7	9	177.8	135.80	0.7	28	188.36	146.30	0.7	36	198.21	142.55	0.7	38
8/14/2023	6:15	14:10	461	464.65	361.24	1.8	20	476.95	350.52	1.8	14	203.64	165.88	0.8	10	196.0	149.19	0.7	29	194.23	162.14	0.8	36	215.56	136.16	0.8	39
8/15/2023	6:15	14:12	463	474.86	367.42	1.8	20	458.70	360.61	1.8	14	196.90	151.45	0.7	6	200.4	141.48	0.7	28	189.89	149.07	0.7	37	201.96	154.13	0.8	40
8/16/2023	6:15	14:06	458	451.01	351.51	1.7	20	477.70	354.88	1.8	14	179.43	144.53	0.7	10	192.1	138.80	0.7	28	202.40	138.77	0.7	36	221.65	150.09	0.8	37
8/17/2023	6:15	14:11	462	459.43	362.35	1.8	21	485.69	358.05	1.8	15	197.21	155.89	0.8	9	200.8	146.22	0.7	29	204.01	152.53	0.8	37	216.06	157.59	0.8	39
8/18/2023	6:15	14:06	458	473.81	362.42	1.8	21	463.34	355.06	1.8	25	192.04	139.76	0.7	10	206.0	155.56	0.8	30	198.83	151.79	0.8	37	213.43	151.29	0.8	37
8/19/2023	6:15	14:03	454	452.88	348.20	1.7	23	449.86	345.98	1.7	16	183.50	150.05	0.7	11	195.8	153.86	0.8	30	191.92	144.42	0.7	37	197.13	144.81	0.7	40
8/20/2023	6:15	14:05	457	457.37	351.40	1.7	22	475.01	353.45	1.8	16	191.36	128.71	0.7	8	199.6	138.43	0.7	32	193.17	139.21	0.7	38	172.37	143.52	0.7	39
8/21/2023	6:15	14:09	459	448.00	363.75	1.7	22	470.40	343.52	1.8	16	183.42	147.78	0.7	8	204.6	139.37	0.7	32	202.82	143.05	0.7	38	216.77	139.68	0.8	40
8/22/2023	6:15	14:13	465	456.74	351.26	1.7	21	443.33	346.40	1.7	15	184.38	134.38	0.7	10	198.5	146.57	0.7	30	192.00	149.43	0.7	38	195.01	152.22	0.7	38
8/23/2023	6:15	14:12	464	442.23	344.14	1.7	22	459.65	362.50	1.8	14	181.29	145.79	0.7	7	198.4	150.12	0.7	30	202.24	139.55	0.7	34	197.72	146.09	0.7	40
8/24/2023	6:15	14:12	456	456.06	350.38	1.7	21	469.32	342.29	1.7	14	186.64	117.52	0.7	8	192.5	146.72	0.7	30	190.37	139.95	0.7	37	215.45	147.33	0.8	37
8/25/2023	6:15	14:10	462	444.83	349.18	1.7	21	473.34	348.17	1.8	14	183.68	148.15	0.7	8	202.9	141.85	0.7	29	190.97	144.39	0.7	34	203.89	143.23	0.7	36
8/26/2023	6:15	14:05	456	428.50	348.99	1.7	21	458.28	346.66	1.7	13	150.63	148.66	0.6	10	201.6	156.56	0.8	29	193.59	141.34	0.7	35	205.29	152.29	0.8	37
8/27/2023	6:15	14:06	457	450.91	342.56	1.7	20	456.40	349.92	1.7	14	201.36	138.97	0.7	18	194.7	142.41	0.7	30	194.45	136.70	0.7	35	192.58	144.19	0.7	37
8/28/2023	6:15	14:07	459	451.97	349.85	1.7	21	441.22	356.52	1.7	14	191.16	139.51	0.7	10	194.8	148.18	0.7	30	188.59	152.11	0.7	33	201.92	145.98	0.7	37
8/29/2023	6:15	14:18	468	456.81	352.01	1.7	20	478.69	361.07	1.8	14	191.49	138.03	0.7	8	206.0	153.81	0.8	30	196.16	150.40	0.7	33	203.02	151.43	0.8	37
8/30/2023	6:15	14:05	455	468.60	349.58	1.8	20	463.99	340.13	1.7	14	189.95	148.14	0.7	8	200.3	145.03	0.7	30	182.31	142.48	0.7	32	196.08	139.44	0.7	35
8/31/2023	6:15	14:07	458	460.78	339.76	1.7	20	475.14	343.05	1.8	13	183.88	146.13	0.7	10	214.5	138.65	0.8	30	214.39	135.21	0.8	34	215.75	141.76	0.8	35
August 2023 Total				14,160	10,931			14,443	10,957			5,890	4,444			6,091	4,470			6,071	4,440			6,034	4,438		
Cumulative Total				74,221	56,386			63,094	57,127			20,401	151,809			17,782	148,675			30,162	157,958			27,993	155,042		

Notes:
gpm - gallons per minute
psi - pounds per square inch
1. Injection duration indicates the total minutes of active injection per day, accounting for any downtime in injections that may have occurred throughout the day. Therefore, injection duration may be less than the difference in daily injection start and stop times indicated.
2. Carbon substrate solution is batch mixed. Batches of carbon substrate solution includes the following components in solution with Stabilized Lake Mead Water (SLMW): 1% molasses, 2.5% 0.5 Molar Sodium Bicarbonate Solution, 0.001% trace mineral solution, and 5 milligrams per liter Vitamin B12.
3. Distribution water solution is batch mixed. Batches of distribution water solution includes 0.0025 pounds of Vitamin C per gallon of Stabilized Lake Mead Water (SLMW).
4. Prior to April 6, 2023, injections into Area 1 Deep wells consisted of only Stabilized Lake Mead Water as part of the total dissolved solids (TDS)-reduction period of the treatability study water injection.

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Table 4
Summary of Injection Activities
Area 2 - August 2023
Unit 4 Source Area Bioremediation Treatability Study

Study Area				Area 2 Intermediate								Area 2 Deep							
Well ID				U4-E-09I				U4-E-10I				U4-E-06D				U4-E-07D			
Date	Injection Start Time	Injection Stop Time	Duration[1]	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3]	Average Flow Rate	Maximum Injection Pressure	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3]	Average Flow Rate	Maximum Injection Pressure	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3]	Average Flow Rate	Maximum Injection Pressure	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3]	Average Flow Rate	Maximum Injection Pressure
			minutes	gallons	gallons	gpm	psi	gallons	gallons	gpm	psi	gallons	gallons	gpm	psi	gallons	gallons	gpm	psi
8/1/2023	6:15	14:14	465	227.20	188.96	0.9	21	244.67	204.13	1.0	17	241.21	164.44	0.9	30	246.46	209.65	1.0	20
8/2/2023	6:15	14:04	455	208.48	199.96	0.9	22	256.86	193.74	1.0	16	225.26	194.58	0.9	32	259.83	190.39	1.0	20
8/3/2023	6:15	14:11	462	255.44	197.06	1.0	20	243.37	191.10	0.9	16	230.76	186.56	0.9	32	232.17	202.35	0.9	19
8/4/2023	6:15	14:15	467	250.95	188.39	0.9	18	248.07	189.94	0.9	14	233.37	188.37	0.9	31	240.63	202.20	0.9	20
8/5/2023	6:15	14:03	454	233.42	199.73	1.0	17	266.77	203.23	1.0	14	240.96	185.03	0.9	30	250.80	199.13	1.0	20
8/6/2023	6:15	14:09	459	236.56	180.23	0.9	15	257.14	194.82	1.0	14	247.64	178.25	0.9	28	238.24	196.10	0.9	20
8/7/2023	6:15	14:10	461	255.97	176.03	0.9	14	250.48	193.70	1.0	16	246.35	178.84	0.9	29	253.54	203.89	1.0	19
8/8/2023	6:15	14:15	467	253.72	178.43	0.9	14	256.48	198.52	1.0	18	246.01	188.71	0.9	29	260.17	190.20	1.0	24
8/9/2023	6:15	14:10	463	237.17	173.46	0.9	16	255.11	202.87	1.0	20	246.80	195.14	1.0	30	241.42	189.98	0.9	24
8/10/2023	6:15	14:19	471	251.23	162.06	0.9	17	256.62	205.28	1.0	22	227.98	195.73	0.9	30	269.12	208.43	1.0	25
8/11/2023	6:15	14:08	458	237.09	203.44	1.0	17	250.20	192.46	1.0	22	242.77	192.13	0.9	31	266.15	183.80	1.0	25
8/12/2023	6:15	14:10	462	222.34	190.79	0.9	16	255.67	197.05	1.0	23	235.08	191.82	0.9	30	259.20	200.34	1.0	25
8/13/2023	6:15	14:08	460	226.36	186.82	0.9	18	262.74	190.98	1.0	23	232.58	185.02	0.9	31	250.06	193.88	1.0	26
8/14/2023	6:15	14:10	461	262.25	168.01	0.9	16	253.57	196.63	1.0	23	230.44	194.16	0.9	31	251.11	201.00	1.0	26
8/15/2023	6:15	14:12	463	210.62	192.85	0.9	16	269.63	198.36	1.0	20	237.76	184.14	0.9	30	273.23	191.95	1.0	23
8/16/2023	6:15	14:06	458	253.80	170.86	0.9	16	251.73	195.75	1.0	17	248.01	186.60	0.9	31	250.85	199.79	1.0	24
8/17/2023	6:15	14:11	462	251.67	195.70	1.0	15	260.87	196.37	1.0	15	223.01	193.17	0.9	30	245.05	198.60	1.0	24
8/18/2023	6:15	14:06	458	254.12	176.74	0.9	14	253.70	206.40	1.0	15	236.10	208.15	1.0	32	246.61	197.24	1.0	25
8/19/2023	6:15	14:03	454	236.36	186.00	0.9	14	241.70	192.33	1.0	14	219.32	185.47	0.9	31	243.67	197.10	1.0	25
8/20/2023	6:15	14:05	457	249.27	175.11	0.9	14	268.78	194.88	1.0	14	245.93	178.68	0.9	30	245.92	194.16	1.0	23
8/21/2023	6:15	14:09	459	230.49	204.54	0.9	14	254.79	193.40	1.0	14	234.62	190.21	0.9	29	250.93	197.37	1.0	22
8/22/2023	6:15	14:13	465	223.54	191.72	0.9	13	234.64	202.43	0.9	16	242.41	188.41	0.9	28	268.41	209.36	1.0	20
8/23/2023	6:15	14:12	464	222.59	171.75	0.8	14	234.50	176.22	0.9	14	242.37	194.85	0.9	28	265.26	195.72	1.0	28
8/24/2023	6:15	14:12	456	180.87	182.09	0.8	14	259.32	178.58	1.0	14	253.42	185.65	1.0	28	250.25	198.91	1.0	20
8/25/2023	6:15	14:10	462	262.09	192.51	1.0	14	254.07	203.70	1.0	14	251.73	184.43	0.9	27	248.00	205.98	1.0	22
8/26/2023	6:15	14:05	456	231.83	166.26	0.9	15	287.05	186.18	1.0	14	255.14	178.87	1.0	28	240.36	199.53	1.0	21
8/27/2023	6:15	14:06	457	263.83	198.84	1.0	14	249.06	195.80	1.0	14	250.74	189.31	1.0	26	266.13	193.84	1.0	22
8/28/2023	6:15	14:07	459	227.73	203.21	0.9	13	254.95	194.69	1.0	14	234.74	166.56	0.9	30	258.77	193.34	1.0	23
8/29/2023	6:15	14:18	468	213.46	207.37	0.9	15	266.02	207.48	1.0	15	219.20	197.39	0.9	29	267.37	189.36	1.0	24
8/30/2023	6:15	14:05	455	247.15	194.64	1.0	16	256.67	205.08	1.0	21	239.16	185.22	0.9	30	247.55	201.65	1.0	28
8/31/2023	6:15	14:07	458	247.86	185.17	0.9	14	240.54	195.68	1.0	15	236.44	194.98	0.9	30	260.79	190.03	1.0	26
			August 2023 Total	**7,365.46**	**5,788.73**			**7,895.77**	**6,077.78**			**7,397.31**	**5,810.87**			**7,848.05**	**6,125.27**		
			Cumulative Total	**115,203.04**	**92,642.48**			**116,217.91**	**93,974.86**			**79,191.98**	**55,830.93**			**80,916.23**	**56,196.77**		

Notes:

gpm - gallons per minute

psi - pounds per square inch

1. Injection duration indicates the total minutes of active injection per day, accounting for any downtime in injections that may have occurred throughout the day. Therefore, injection duration may be less than the difference in daily injection start and stop times indicated.

2. Carbon substrate solution is batch mixed. Batches of carbon substrate solution includes the following components in solution with Stabilized Lake Mead Water (SLMW): 1% molasses, 2.5% 0.5 Molar Sodium Bicarbonate Solution, 0.001% trace mineral solution, and 5 milligrams per liter Vitamin B12.

3. Distribution water solution is batch mixed. Batches of distribution water solution includes 0.0025 pounds of Vitamin C per gallon of Stabilized Lake Mead Water (SLMW).

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Table 4
Summary of Injection Activities
Area 2 - August 2023
Unit 4 Source Area Bioremediation Treatability Study

Study Area				Area 2 Deep											
Well ID				U4-E-08D				U4-E-09D				U4-E-010D			
Date	Injection Start Time	Injection Stop Time	Duration[1]	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3]	Average Flow Rate	Maximum Injection Pressure	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3]	Average Flow Rate	Maximum Injection Pressure	Volume Carbon Solution Injected[2]	Volume Distribution Water Solution Injected[3]	Average Flow Rate	Maximum Injection Pressure
			minutes	gallons	gallons	gpm	psi	gallons	gallons	gpm	psi	gallons	gallons	gpm	psi
8/1/2023	6:15	14:14	465	248	196	1.0	18	251.47	187.96	0.9	14	237.73	169.11	0.9	20
8/2/2023	6:15	14:04	455	266	209	1.0	15	246.35	169.57	0.9	16	241.26	172.41	0.9	22
8/3/2023	6:15	14:11	462	238	205	1.0	17	241.20	194.16	0.9	13	227.04	183.36	0.9	21
8/4/2023	6:15	14:15	467	265	188	1.0	14	257.97	192.76	1.0	12	221.13	174.83	0.8	20
8/5/2023	6:15	14:03	454	252	199	1.0	16	246.62	187.61	1.0	13	224.78	177.71	0.9	21
8/6/2023	6:15	14:09	459	248	198	1.0	12	256.61	193.24	1.0	13	251.93	165.47	0.9	22
8/7/2023	6:15	14:10	461	261	216	1.0	13	249.96	186.88	0.9	14	234.97	188.74	0.9	24
8/8/2023	6:15	14:15	467	260	216	1.0	13	255.75	196.71	1.0	14	202.40	180.49	0.8	22
8/9/2023	6:15	14:10	463	254	211	1.0	12	254.40	193.32	1.0	16	232.43	193.22	0.9	21
8/10/2023	6:15	14:19	471	245	213	1.0	12	242.54	196.07	0.9	17	229.08	191.54	0.9	22
8/11/2023	6:15	14:08	458	248	204	1.0	13	248.38	186.29	0.9	18	233.87	189.86	0.9	21
8/12/2023	6:15	14:10	462	257	202	1.0	13	232.43	196.21	0.9	17	239.52	200.95	1.0	20
8/13/2023	6:15	14:08	460	268	225	1.1	14	256.08	180.70	0.9	16	250.28	179.27	0.9	22
8/14/2023	6:15	14:10	461	267	211	1.0	13	260.80	211.49	1.0	18	233.61	193.12	0.9	21
8/15/2023	6:15	14:12	463	281	214	1.1	13	246.24	195.27	1.0	18	252.73	183.37	0.9	19
8/16/2023	6:15	14:06	458	275	215	1.1	14	258.22	194.47	1.0	18	242.17	165.91	0.9	22
8/17/2023	6:15	14:11	462	254	208	1.0	14	255.73	201.73	1.0	19	232.31	188.62	0.9	22
8/18/2023	6:15	14:06	458	258	191	1.0	14	240.30	199.75	1.0	20	246.59	179.69	0.9	22
8/19/2023	6:15	14:03	454	246	195	1.0	18	242.84	180.39	0.9	19	225.91	199.63	0.9	21
8/20/2023	6:15	14:05	457	263	211	1.0	14	257.57	190.33	1.0	18	207.50	169.18	0.8	22
8/21/2023	6:15	14:09	459	236	210	1.0	14	248.84	188.08	1.0	16	256.74	173.63	0.9	20
8/22/2023	6:15	14:13	465	276	197	1.0	16	252.31	174.60	0.9	16	254.78	154.03	0.9	22
8/23/2023	6:15	14:12	464	255	215	1.0	17	248.09	178.35	0.9	16	228.26	185.26	0.9	20
8/24/2023	6:15	14:12	456	269	203	1.0	16	258.93	183.20	1.0	17	204.74	196.67	0.9	21
8/25/2023	6:15	14:10	462	287	205	1.1	17	251.49	192.45	1.0	16	216.20	163.68	0.8	22
8/26/2023	6:15	14:05	456	270	202	1.0	17	258.51	197.00	1.0	17	225.13	186.80	0.9	20
8/27/2023	6:15	14:06	457	271	197	1.0	18	238.47	193.88	0.9	18	229.03	187.65	0.9	20
8/28/2023	6:15	14:07	459	261	210	1.0	17	242.06	188.89	0.9	19	253.99	167.58	0.9	21
8/29/2023	6:15	14:18	468	254	203	1.0	18	245.71	189.50	0.9	20	235.43	166.85	0.9	22
8/30/2023	6:15	14:05	455	249	212	1.0	21	262.78	190.73	1.0	18	229.44	181.33	0.9	28
8/31/2023	6:15	14:07	458	238	205	1.0	18	237.12	183.96	0.9	18	240.76	175.85	0.9	24
August 2023 Total				**8,020.10**	**6,383.03**			**7,745.77**	**5,895.55**			**7,241.74**	**5,585.81**		
Cumulative Total				**10,611.86**	**8,545.88**			**79,897.81**	**56,653.28**			**78,475.37**	**56,056.78**		

Notes:

gpm - gallons per minute

psi - pounds per square inch

1. Injection duration indicates the total minutes of active injection per day, accounting for any downtime in injections that may have occurred throughout the day. Therefore, injection duration may be less than the difference in daily injection start and stop times indicated.

2. Carbon substrate solution is batch mixed. Batches of carbon substrate solution includes the following components in solution with Stabilized Lake Mead Water (SLMW): 1% molasses, 2.5% 0.5 Molar Sodium Bicarbonate Solution, 0.001% trace mineral solution, and 5 milligrams per liter Vitamin B12.

3. Distribution water solution is batch mixed. Batches of distribution water solution includes 0.0025 pounds of Vitamin C per gallon of Stabilized Lake Mead Water (SLMW).

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	E314.0	E300.1		E350.1	E351.2	E365.1	Anions by E300.0/SW9065A			Alkalinity by SM2320B		Alkalinity by SM2320B		Dissolved Metals by SW6010B/SW6020						
						Perchlorate	Chlorate	Chlorite	Ammonia (as N)	Total Kjeldahl Nitrogen (TKN)	Phosphorus	Chloride	Nitrate (as N)	Sulfate	Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
M-247-100	4/20/2022	N	BL02	UMCf	100.5 - 110.5	3,080	12,800	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-249-100	4/20/2022	N	BL02	UMCf	99.6 - 109.6	2,850,000	26,900,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-251-100	4/19/2022	N	BL02	UMCf	92.5 - 102.5	3,110,000	21,100,000	<240,000	----	----	----	5,360,000	52,900	1,480,000	----	----	----	----	----	----	----	----	----	----	----
M-251-100	10/13/2022	N	EM02	UMCf	92.5 - 102.5	2,000,000	11,700,000	----	----	----	----	----	29,700	----	----	----	----	----	----	----	----	----	----	----	----
M-251-100	11/2/2022	N	EM03	UMCf	92.5 - 102.5	1,410,000	679	----	----	----	----	----	21,500	----	----	----	----	----	----	----	----	----	----	----	----
M-251-100	12/8/2022	N	EM04	UMCf	92.5 - 102.5	1,210,000	7,040,000	----	----	----	----	----	22,300	----	----	----	----	----	----	----	----	----	----	----	----
M-251-100	1/11/2023	N	EM05	UMCf	92.5 - 102.5	1,600,000	7,360,000	----	----	----	----	----	31,100 J+	----	----	----	----	----	----	----	----	----	----	----	----
M-251-100	2/13/2023	N	EM06	UMCf	92.5 - 102.5	886,000	4,550,000	----	----	----	----	----	15,000	----	----	----	----	----	----	----	----	----	----	----	----
M-251-100	3/17/2023	N	EM07	UMCf	92.5 - 102.5	955,000	6,010,000	<24,000	<117	<700	<33.3	1,480,000 J+	15,000 J-	388,000 J	109,000	109,000	<8,450	<8,450	<56.1	<5.15	12.4	75.8	<0.330	<0.750	500,000
M-251-100	4/21/2023	N	EM08	UMCf	92.5 - 102.5	1,340,000	6,790,000	<240,000	<117	<1,400	42.7 J	2,250,000	23,000	503,000	----	----	----	----	----	----	----	----	----	----	----
M-251-100	5/9/2023	N	EM09	UMCf	92.5 - 102.5	1,500,000	10,000,000	<240,000	<117	<1,400	64.2 J	2,290,000	23,200	513,000	----	----	----	----	----	----	----	----	----	----	----
M-251-100	6/14/2023	N	EM10	UMCf	92.5 - 102.5	1,280,000	7,880,000	<240,000	<117	<1,400	51.7 J	2,120,000	24,500 J-	469,000 J	73,000	73,000	<8,450	<8,450	143 J	<5.15	9.84 J	117	<0.330	<0.750	775,000
M-251-100	7/14/2023	N	EM11	UMCf	92.5 - 102.5	1,530,000	9,340,000	<240,000	<117	<1,400	<33.3	2,390,000	23,800	519,000	----	----	----	----	----	----	----	----	----	----	----
M-251-60	4/18/2022	N	BL02	UMCf	52.3 - 62.3	27,900	316,000	<2,400	----	----	----	234,000	2,360	1,220,000	----	----	----	----	----	----	----	----	----	----	----
M-251-60	3/15/2023	N	EM07	UMCf	52.3 - 62.3	30,800	326,000	<2,400	<117	<140	<33.3	240,000	4,430	1,130,000	139,000	<8,450	68,100	70,900	138 J	2.99 J	49.8	28.8	<0.330	<0.150	30,600
M-251-60	6/14/2023	N	EM10	UMCf	52.3 - 62.3	29,700	316,000	<2,400	<117	<140	50.4 J	246,000	3,720 J	1,150,000	126,000	<8,450	72,000	54,200	105 J	1.82 J	60.3	7.04	<0.330	<0.150	22,200
M-252	4/21/2022	N	BL02	UMCf	132.3 - 142.3	91,200	381,000	<2,400	----	----	----	259,000	2,440	180,000	----	----	----	----	----	----	----	----	----	----	----
M-252	3/15/2023	N	EM07	UMCf	132.3 - 142.3	180,000	835,000	<2,400	<117	<140	<33.3	344,000	1,230	153,000	49,300	49,300	<8,450	<8,450	<56.1	<1.03	4.03	661	<0.330	<0.150	382,000
M-253-100	4/20/2022	N	BL02	UMCf	100.8 - 110.8	457,000	505,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-255-100	4/20/2022	N	BL02	UMCf	100.2 - 110.2	75,100	564,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-01D	4/18/2022	N	BL02	UMCf	94.7 - 109.7	2,500,000	19,700,000	<240000 R	----	----	----	4,560,000	45,200	1,020,000	----	----	----	----	----	----	----	----	----	----	----
U4-E-01D	3/14/2023	N	EM07	UMCf	94.7 - 109.7	41.5 J+	1,360	<24.0	<117	346	<33.3	108,000	357	229,000	140,000	140,000	<8,450	<8,450	<56.1	<1.03	1.52 J	133	<0.330	<0.150	84,300
U4-E-01I	4/19/2022	N	BL02	UMCf	74.6 - 89.6	219,000	1,670,000	<24,000	----	----	----	542,000	4,170	1,050,000	----	----	----	----	----	----	----	----	----	----	----
U4-E-01I	4/19/2022	FD	BL02	UMCf	74.6 - 89.6	253,000	2,010,000	<24,000	----	----	----	706,000	6,420	1,030,000	----	----	----	----	----	----	----	----	----	----	----
U4-E-01I	3/14/2023	N	EM07	UMCf	74.6 - 89.6	394,000 J+	3,630,000	<24,000	<117	<560	<33.3	892,000	8,200	389,000	109,000	109,000	<8,450	<8,450	<56.1	<1.03	15.1	49.5	<0.330	<0.150	370,000
U4-E-01I	4/20/2023	N	EM08	UMCf	74.6 - 89.6	262,000	2,310,000	<24,000	----	----	----	693,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-01I	5/10/2023	N	EM09	UMCf	74.6 - 89.6	262,000	2,590,000	<24,000	----	----	----	686,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-01I	6/12/2023	N	EM10	UMCf	74.6 - 89.6	466,000	4,230,000	<24000 UJ	----	----	----	1,410,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-01I	7/11/2023	N	EM11	UMCf	74.6 - 89.6	138,000	912,000	131,000	----	----	----	528,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-02D	4/20/2022	N	BL02	UMCf	94.4 - 109.4	1,040,000	5,060,000	<24,000	----	----	----	1,460,000	12,200	1,120,000	----	----	----	----	----	----	----	----	----	----	----
U4-E-02D	3/14/2023	N	EM07	UMCf	94.4 - 109.4	618 J+	2,490 J+	<240	<117	351	<33.3	109,000	311	234,000	140,000	140,000	<8,450	<8,450	<56.1	<1.03	1.39 J	138	<0.330	<0.150	82,600
U4-E-02I	4/18/2022	N	BL02	UMCf	74.4 - 89.4	428,000	2,390,000	<24000 R	----	----	----	842,000	7,430	1,020,000	----	----	----	----	----	----	----	----	----	----	----
U4-E-02I	3/14/2023	N	EM07	UMCf	74.4 - 89.4	75,800 J+	393,000	<2,400	<117	<140	116	218,000	374	253,000	143,000	143,000	<8,450	<8,450	<56.1	<1.03	18.2	58.1	<0.330	<0.150	87,500
U4-E-02I	4/20/2023	N	EM08	UMCf	74.4 - 89.4	274,000	1,140,000	<24,000	----	----	----	503,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-02I	5/11/2023	N	EM09	UMCf	74.4 - 89.4	309,000	1,190,000	<24,000	----	----	----	604,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-02I	6/12/2023	N	EM10	UMCf	74.4 - 89.4	194,000	913,000	64,100 J-	----	----	----	569,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-02I	7/11/2023	N	EM11	UMCf	74.4 - 89.4	193,000	859,000	39,200 J	----	----	----	576,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	4/19/2022	N	BL02	UMCf	95.1 - 110.1	2,170,000	16,600,000	<24,000	----	----	----	4,310,000	48,700	1,420,000	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	10/13/2022	N	EM02	UMCf	95.1 - 110.1	1,320,000	8,100,000	<240,000	----	----	----	2,400,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	11/3/2022	N	EM03	UMCf	95.1 - 110.1	1,090,000	7,560,000	<240,000	----	----	----	1,950,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	12/6/2022	N	EM04	UMCf	95.1 - 110.1	1,110,000 J+	6,630,000	<240000 UJ	----	----	----	1,740,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	1/9/2023	N	EM05	UMCf	95.1 - 110.1	937,000	6,670,000	<240,000	----	----	----	1,730,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	2/13/2023	N	EM06	UMCf	95.1 - 110.1	948,000	6,890,000	<24,000	----	----	----	1,620,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	3/13/2023	N	EM07	UMCf	95.1 - 110.1	654,000 J-	6,260,000	<24,000	----	----	----	1,690,000	16,100	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	3/14/2023	N	EM07	UMCf	95.1 - 110.1	833,000 J+	6,370,000	<24,000	<117	<1,400	<33.3	1,700,000	12,100	591,000	131,000	131,000	<8,450	<8,450	<56.1	<5.15	21.2	65.5	<0.330	<0.750	383,000
U4-E-03D	4/19/2023	N	EM08	UMCf	95.1 - 110.1	948,000	6,990,000	<24,000	----	----	----	1,750,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	5/11/2023	N	EM09	UMCf	95.1 - 110.1	797,000	5,450,000	27,000 J	----	----	----	1,530,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	6/12/2023	N	EM10	UMCf	95.1 - 110.1	835,000	5,650,000	<240000 UJ	----	----	----	1,870,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	7/11/2023	N	EM11	UMCf	95.1 - 110.1	963,000	6,280,000	<240,000	----	----	----	2,180,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-04D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	1,270,000	12,100,000	<24,000	----	----	----	2,640,000	27,800	508,000	----	----	----	----	----	----	----	----	----	----	----
U4-E-04D	3/14/2023	N	EM07	UMCf	95.0 - 110.0	29.6 J+	1,200	<24.0	<117	345	35.3 J	106,000	328	235,000	142,000	142,000	<8,450	<8,450	<56.1	<1.03	1.61 J	138	<0.330	<0.150	82,200
U4-E-04I	4/18/2022	N	BL02	UMCf	75.0 - 90.0	47,900	793,000	<2,400	----	----	----	321,000	3,940	1,090,000	----	----	----	----	----	----	----	----	----	----	----
U4-E-04I	3/14/2023	N	EM07	UMCf	75.0 - 90.0	1,020,000 J+	11,600,000	<240,000	<117	<1,400	<33.3	2,810,000	<480	709,000	128,000	128,000	<8,450	<8,450	<56.1	<5.15	18.6	82.7	<0.330	<0.750	872,000
U4-E-05D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	1,900,000	11,600,000	<240,000	----	----	----	2,770,000	4,770	758,000	----	----	----	----	----	----	----	----	----	----	----
U4-E-05D	3/16/2023	N	EM07	UMCf	95.0 - 110.0	269	1,560	<24.0	304	636	49.9 J	110,000	<48.0	237,000	151,000	151,000	<8,450	<8,450	<56.1	<1.03	4.08	156	<0.330	<0.150	80,300
U4-E-05I	4/19/2022	N	BL02	UMCf	75.0 - 90.0	164,000	993,000	<24,000	----	----	----	400,000	3,290	1,100,000	----	----	----	----	----	----	----	----	----	----	----
U4-E-05I	3/15/2023	N	EM07	UMCf	75.0 - 90.0	181,000	1,030,000	<24,000	<117	<140	92.3 J	368,000	4,630	363,000	142,000	142,000	<8,450	<8,450	<56.1	<1.03	32.9	30.3	<0.330	<0.150	59,400
U4-E-06D	4/11/2022	N	BL02	UMCf	95.1 - 110.1	320,000	4,550,000	<24000 R	<117	<1,400	33.3 R	1,150,000	12,200	214,000	68,700	68,700	<8,450	<8,450	81.0 J	<1.03	5.21	187 J	<0.330	<0.150	515,000 J
U4-E-06I	4/11/2022	N	BL02	UMCf	73.2 - 88.2	36,400	660,000	<2,400	<117	<700	33.3 R	355,000	3,550	1,220,000	96,800	96,800	<8,450	<8,450	87.1 J	<1.03	32.9	34.2	<0.330	<0.150	223,000
U4-E-06I	4/11/2022	FD	BL02	UMCf	73.2 - 88.2	35,900	553,000	<12,000	<117	<700	33.3 R	345,000	3,660	1,300,000	96,100	96,100	<8,450	<8,450	68.8 J	<1.03	32.6	33.8	<0.330	<0.150	222,000
U4-E-06I	10/12/2022	N	EM02	UMCf	73.2 - 88.2	367,000	4,900,000	<240,000	----	----	----	1,140,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-06I	11/3/2022	N	EM03	UMCf	73.2 - 88.2	243,000	3,180,000	<240,000	----	----	----	895,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-06I	12/6/2022	N	EM04	UMCf	73.2 - 88.2	133,000 J+	1,860,000	25,700 J	----	----	----	572,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-06I	1/9/2023	N	EM05	UMCf	73.2 - 88.2	346,000	5,170,000 J-	<240,000	----	----	----	1,340,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-06I	2/13/2023	N	EM06	UMCf	73.2 - 88.2	313,000	4,250,000	<24,000	----	----	----	1,200,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-06I	3/13/2023	N	EM07	UMCf	73.2 - 88.2	145,000	1,550,000	63,600	----	----	----	753,000	<960 R	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-06I	4/17/2023	N	EM08	UMCf	73.2 - 88.2	163,000	2,300,000	<24,000	----	----	----	905,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-06I	5/15/2023	N	EM09	UMCf	73.2 - 88.2	490,000	7,840,000	<24,000	----	----	----	1,920,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-06I	6/12/2023	N	EM10	UMCf	73.2 - 88.2	431,000	5,570,000	<240000 UJ	----	----	----	1,670,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-06I	7/11/2023	N	EM11	UMCf	73.2 - 88.2	440,000	6,040,000	<240,000	----	----	----	1,680,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-07D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	1,700,000	18,500,000	<240,000	<117	<7,000	<33.3	3,780,000	56,100	965,000	120,000	----	----	----	<280	<10.3	12.2 J	135	<1.65	<1.50	1,450,000
U4-E-07I	4/12/2022	N	BL02	UMCf	74.7 - 89.7	301,000	4,470,000	<24,000	<117	<7,000	194 J+	723,000	10,200	1,120,000	179,000	----	----	----	117 J	1.17 J	72.5	29.6 J+	<0.330	<0.150	157,000
U4-E-07I	10/11/2022	N	EM02	UMCf	74.7 - 89.7	948,000	7,420,000	<240,000	----	----	----	1,810,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-07I	11/3/2022	N	EM03	UMCf	74.7 - 89.7	877,000	6,410,000	<240,000	----	----	----	1,580,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-07I	12/6/2022	N	EM04	UMCf	74.7 - 89.7	891,000	6,320,000	<240000 UJ	----	----	----	1,490,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-07I	1/9/2023	N	EM05	UMCf	74.7 - 89.7	855,000	7,100,000	531,000	----	----	----	1,720,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-07I	2/13/2023	N	EM06	UMCf	74.7 - 89.7	858,000	7,680,000	<24,000	----	----	----	1,690,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-07I	3/13/2023	N	EM07	UMCf	74.7 - 89.7	768,000 J-	7,090,000	<24,000	----	----	----	1,770,000	14,200	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-07I	4/19/2023	N	EM08	UMCf	74.7 - 89.7	738,000	6,690,000	<24,000	----	----	----	1,630,000	----	----	----	----	----	----	----	----	----	----	----	----	----

DRAFT

Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	E314.0	E300.1		E350.1	E351.2	E365.1	Anions by E300.0/SW9065A			Alkalinity by SM2320B		Alkalinity by SM2320B		Dissolved Metals by SW6010B/SW6020						
						Perchlorate	Chlorate	Chlorite	Ammonia (as N)	Total Kjeldahl Nitrogen (TKN)	Phosphorus	Chloride	Nitrate (as N)	Sulfate	Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-E-07I	5/15/2023	N	EM09	UMCf	74.7 - 89.7	561,000	5,320,000	<24,000	----	----	----	1,600,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-07I	6/12/2023	N	EM10	UMCf	74.7 - 89.7	618,000	5,540,000	<24000 UJ	----	----	----	1,530,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-07I	7/11/2023	N	EM11	UMCf	74.7 - 89.7	667,000	6,050,000	<24,000	----	----	----	1,750,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-08D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	1,570,000	20,600,000	<240,000	<117	<7,000	<33.3	4,180,000	63,500	948,000	131,000	----	----	----	<280	<10.3	5.36 J	143	<1.65	<1.50	1,670,000
U4-E-08D	10/11/2022	N	EM02	UMCf	94.6 - 109.6	1,330,000	12,000,000	<240,000	----	----	----	2,780,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-08D	11/3/2022	N	EM03	UMCf	94.6 - 109.6	1,200,000	15,000,000	<240,000	----	----	----	2,490,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-08D	12/6/2022	N	EM04	UMCf	94.6 - 109.6	1,110,000 J+	9,590,000	<240000 UJ	----	----	----	2,210,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-08D	1/9/2023	N	EM05	UMCf	94.6 - 109.6	1,140,000	10,900,000	<240,000	----	----	----	2,400,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-08D	2/13/2023	N	EM06	UMCf	94.6 - 109.6	1,070,000	9,600,000	<240,000	----	----	----	2,140,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-08D	3/13/2023	N	EM07	UMCf	94.6 - 109.6	1,130,000	8,690,000	<240,000	----	----	----	2,370,000	14,600	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-08D	4/19/2023	N	EM08	UMCf	94.6 - 109.6	930,000	779,000	<24,000	----	----	----	2,140,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-08D	5/17/2023	N	EM09	UMCf	94.6 - 109.6	910,000	8,830,000	<24,000	----	----	----	2,060,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-08D	6/12/2023	N	EM10	UMCf	94.6 - 109.6	859,000	7,060,000	<240000 UJ	----	----	----	1,930,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-08D	7/11/2023	N	EM11	UMCf	94.6 - 109.6	921,000	8,980,000	<24,000	----	----	----	2,010,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-09D	4/15/2022	N	BL02	UMCf	94.5 - 109.5	464,000	7,850,000	<24,000	<117	<3,500	<33.3	1,710,000	19,200	475,000	76,100	76,100	<8,450	<8,450	106 J	<10.3	9.35 J	106	<0.330	<1.50	832,000
U4-E-09I	4/14/2022	N	BL02	UMCf	74.9 - 89.9	130,000	2,210,000	<24,000	<117	<1,400	52.3 J	638,000	9,440	1,100,000	105,000	105,000	<8,450	<8,450	<56.1	1.07 J	30.8	27.1	<0.330	<0.150	215,000
U4-E-10D	4/13/2022	N	BL02	UMCf	94.5 - 109.5	412,000	3,430,000	<24,000	<117	<1,400	33.3 R	895,000	11,200	550,000	59,100	51,600	<8,450	<8,450	102 J	<1.03	6.71	112	<0.330	<0.150	436,000
U4-E-10I	4/13/2022	N	BL02	UMCf	74.2 - 89.2	407,000	3,550,000	<24,000	<117	<1,400	33.3 R	911,000	10,400	711,000	114,000	114,000	<8,450	<8,450	115 J	<1.03	19.6	34.7	<0.330	<0.150	307,000
U4-MW-01D	4/19/2022	N	BL02	UMCf	96.7 - 106.7	708,000	5,180,000	<24,000	----	----	----	1,040,000	5,360	437,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-01D	2/16/2023	N	EM06	UMCf	96.7 - 106.7	647,000	6,010,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-01D	3/20/2023	N	EM07	UMCf	96.7 - 106.7	1,140,000	4,300,000	<24,000	<117	<560	<33.3	955,000	8,720	429,000	126,000	126,000	<8,450	<8,450	<56.1	<1.03	7.27	40.6	<0.330	<0.150	110,000
U4-MW-01D	6/13/2023	N	EM10	UMCf	96.7 - 106.7	469,000	3,100,000	<24000 UJ	<117	<280	40.0 J	723,000	2,400	385,000	78,100	78,100	<8,450	<8,450	<56.1	<10.3	7.99 J	158	0.722 J	<1.50	421,000
U4-MW-01DD	4/19/2022	N	BL02	UMCf	119.9 - 129.9	29,800	217,000	<2,400	----	----	----	191,000	230	214,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-01DD	4/19/2022	FD	BL02	UMCf	119.9 - 129.9	28,500	202,000	<2,400	----	----	----	191,000	259	214,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-01DD	3/15/2023	N	EM07	UMCf	119.9 - 129.9	307,000	2,140,000	<24,000	<117	<140	108	539,000	4,730	249,000	62,600	62,600	<8,450	<8,450	<56.1	<1.03	9.69	117	<0.330	<0.150	276,000
U4-MW-01DD	6/13/2023	N	EM10	UMCf	119.9 - 129.9	239,000	1,480,000	<24000 UJ	<117	<140	87.1 J	430,000	3,700	279,000	36,300	36,300	<8,450	<8,450	<56.1	<10.3	4.73 J	109	<0.330	<1.50	246,000
U4-MW-01I	4/19/2022	N	BL02	UMCf	76.7 - 86.7	410,000	3,510,000	<24,000	----	----	----	920,000	5,610	590,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-01I	3/20/2023	N	EM07	UMCf	76.7 - 86.7	679,000	5,140,000	<24,000	<117	<280	<33.3	1,420,000	13,400	458,000 J	339,000	339,000	<8,450	<8,450	61.0 J	1.22 J	8.10	48.9	<0.330	<0.150	156,000
U4-MW-01I	6/12/2023	N	EM10	UMCf	76.7 - 86.7	485,000	3,060,000	<24000 UJ	<117	<560	51.7 J	772,000	6,470	383,000	75,300	75,300	<8,450	<8,450	270 J+	<1.03	6.24	124	<0.330	<0.150	444,000
U4-MW-01S	4/18/2022	N	BL02	UMCf	54.7 - 64.7	37,300	312,000	<2,400	----	----	----	289,000	2,730	1,290,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-01S	3/15/2023	N	EM07	UMCf	54.7 - 64.7	22,600	241,000	3,630 J	<117	<140 UJ	39.4 J	261,000	5,680	1,190,000	142,000	131,000	10,300 J	<8,450	56.8 J	<1.03	57.0	12.1	<0.330	<0.150	15,200
U4-MW-01S	6/13/2023	N	EM10	UMCf	54.7 - 64.7	28,100	288,000	<2,400	<117	<140 UJ	37.6 J	270,000	1,190 J-	1,170,000	129,000	119,000	9,840 J	<8,450	<56.1	<1.03	52.7	13.3 J+	<0.330	<0.150	17,100
U4-MW-02D	4/14/2022	N	BL02	UMCf	95.0 - 110.0	2,850,000	24,800,000	<240,000	----	----	----	6,150,000	72,300	993,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	10/11/2022	N	EM02	UMCf	95.0 - 110.0	3,530,000	28,400,000	----	----	----	----	----	84,600	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	11/1/2022	N	EM03	UMCf	95.0 - 110.0	3,790,000	27,900,000	----	----	----	----	----	81,900	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	12/7/2022	N	EM04	UMCf	95.0 - 110.0	3,590,000	23,500,000	----	----	----	----	----	73,900	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	1/10/2023	N	EM05	UMCf	95.0 - 110.0	3,140,000	23,800,000	----	----	----	----	----	63,000	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	2/13/2023	N	EM06	UMCf	95.0 - 110.0	3,220,000	21,700,000	----	----	----	----	----	70,200	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	3/17/2023	N	EM07	UMCf	95.0 - 110.0	2,190,000	19,700,000	<240,000	<117	<1,400	<33.3	4,810,000	53,100 J-	943,000	126,000	126,000	<8,450	<8,450	<56.1	<10.3	6.71 J	142	<0.330	<1.50	1,230,000
U4-MW-02D	4/19/2023	N	EM08	UMCf	95.0 - 110.0	3,080,000	21,900,000	<240,000	<117	<5,600	64.6 J	5,540,000	68,100	1,210,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	5/9/2023	N	EM09	UMCf	95.0 - 110.0	2,720,000	25,300,000	<240,000	<117	<2800 R	55.1 J	5,200,000	64,000	1,140,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	6/13/2023	N	EM10	UMCf	95.0 - 110.0	2,820,000	17,800,000	<240,000	<117	<2,800	98.1 J	4,360,000	55,000	906,000	129,000	129,000	<8,450	<8,450	<280	<10.3	8.58 J	115	<1.65	<1.50	1,130,000
U4-MW-02D	7/18/2023	N	EM11	UMCf	95.0 - 110.0	2,780,000	21,200,000	<240,000	<117	<2800 UJ	<33.3	5,070,000	<480	1,140,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	4/14/2022	N	BL02	UMCf	75.0 - 90.0	291,000	2,420,000	<24,000	----	----	----	808,000	9,670	1,200,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	10/11/2022	N	EM02	UMCf	75.0 - 90.0	891,000	5,380,000	----	----	----	----	----	15,300	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	11/2/2022	N	EM03	UMCf	75.0 - 90.0	1,190,000	7,270,000	----	----	----	----	----	23,800	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	11/2/2022	FD	EM03	UMCf	75.0 - 90.0	1,200,000	6,610,000	----	----	----	----	----	20,600	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	12/8/2022	N	EM04	UMCf	75.0 - 90.0	103,000	707,000	----	----	----	----	----	<4800 R	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	12/8/2022	FD	EM04	UMCf	75.0 - 90.0	105,000	737,000	----	----	----	----	----	<4800 R	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	1/13/2023	N	EM05	UMCf	75.0 - 90.0	619,000	4,490,000	----	----	----	----	----	13,300	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	1/13/2023	FD	EM05	UMCf	75.0 - 90.0	620,000	4,410,000	----	----	----	----	----	13,100	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	2/15/2023	N	EM06	UMCf	75.0 - 90.0	1,490,000 J+	12,600,000	----	----	----	----	----	35,000	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	2/15/2023	FD	EM06	UMCf	75.0 - 90.0	1,410,000 J+	12,000,000	----	----	----	----	----	37,500	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	3/17/2023	N	EM07	UMCf	75.0 - 90.0	1,300,000	12,000,000	<240,000	<117	<1,400	<33.3	3,130,000	33,700 J-	981,000	311,000	311,000	<8,450	<8,450	<56.1	<5.15	23.8	96.6	<0.330	<0.750	581,000
U4-MW-02I	3/17/2023	FD	EM07	UMCf	75.0 - 90.0	133,000 J	12,300,000	<240,000	<117	<1,400	<33.3	3,120,000	32,300 J-	935,000	306,000	306,000	<8,450	<8,450	<56.1	<5.15	23.3	97.1	<0.330	<0.750	555,000
U4-MW-02I	4/20/2023	N	EM08	UMCf	75.0 - 90.0	33,000	211,000	<2,400	<117	1,780	34.1 J	237,000	208 J+	74,700	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	4/20/2023	FD	EM08	UMCf	75.0 - 90.0	32,200	212,000	<2,400	<117	1,560	<33.3	240,000	222 J+	74,900	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	5/9/2023	N	EM09	UMCf	75.0 - 90.0	35,000	187,000	37,600	<117	894	38.4 J	521,000	<48.0	374,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	5/9/2023	FD	EM09	UMCf	75.0 - 90.0	35,800	190,000	32,800	<117	1,030	43.2 J	510,000	<48.0	372,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	6/12/2023	N	EM10	UMCf	75.0 - 90.0	56,200	174,000	8,820 J-	<117	<140	60.1 J	611,000	1,790	267,000	1,130,000	1,130,000	<8,450	<8,450	<56.1	<1.03	60.7	72.6	<0.330	<0.150	129,000
U4-MW-02I	6/12/2023	FD	EM10	UMCf	75.0 - 90.0	57,500	170,000	9,030 J-	<117	<140	43.8 J	611,000	1,340	265,000	1,160,000	1,160,000	<8,450	<8,450	<56.1	<1.03	60.1	69.8	<0.330	<0.150	124,000
U4-MW-02I	7/18/2023	N	EM11	UMCf	75.0 - 90.0	158	<120	33,900 J-	<117	1,400	<33.3 UJ	452,000	56.3 J	736 J	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	7/18/2023	FD	EM11	UMCf	75.0 - 90.0	159	<240	37,300 J-	<117	1,400	35.4 J	457,000	56.0 J	761 J	----	----	----	----	----	----	----	----	----	----	----
U4-MW-03D	4/20/2022	N	BL02	UMCf	96.6 - 106.6	1,430,000	9,200,000	<240,000	----	----	----	2,110,000	22,400	534,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-03D	2/16/2023	N	EM06	UMCf	96.6 - 106.6	997,000	7,490,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-03D	3/16/2023	N	EM07	UMCf	96.6 - 106.6	1,070,000	6,830,000	<24,000	<117	<1,400	<33.3	1,550,000	16,100	363,000	62,000	62,000	<8,450	<8,450	76.8 J	<5.15	7.03 J	138	<0.330	<0.750	692,000
U4-MW-03D	3/16/2023	FD	EM07	UMCf	96.6 - 106.6	985,000	7,070,000	<24,000	<117	<1,400	<33.3	1,520,000	15,800	358,000	62,100	62,100	<8,450	<8,450	76.7 J	<5.15	7.05 J	137	<0.330	<0.750	684,000
U4-MW-03D	6/15/2023	N	EM10	UMCf	96.6 - 106.6	1,050,000	5,910,000	<24,000	<117	<700	<33.3	1,330,000	11,000	337,000 J	62,800	62,800	<8,450	<8,450	<56.1	<5.15	7.58 J	118	<0.330	<0.750	634,000
U4-MW-03DD	4/20/2022	N	BL02	UMCf	119.7 - 129.7	152,000	735,000	<2,400	----	----	----	319,000	1,180	255,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-03DD	3/15/2023	N	EM07	UMCf	119.7 - 129.7	5,060	24,200	<240	<117	<140	128	140,000	1,290	159,000	88,000	88,000	<8,450	<8,450	<56.1	<1.03	12.6	24.1	<0.330	<0.150	30,700
U4-MW-03DD	6/15/2023	N	EM10	UMCf	119.7 - 129.7	229	7,040	<120	<117	<140	121	134,000	447	163,000	81,800	81,800	<8,450	<8,450	<56.1	<1.03	12.7	25.8	<0.330	<0.150	30,700
U4-MW-03I	4/19/2022	N	BL02	UMCf	76.6 - 86.6	207,000	1,200,000	<24,000	----	----	----	391,000	3,990 J	1,080,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-03I	3/15/2023	N	EM07	UMCf	76.6 - 86.6	930,000	5,940,000	<24,000	<117	<700	<33.3	1,340,000	9,430	335,000	96,300	96,300	<8,450	<8,450	<56.1	<1.03	7.08	121	<0.330	<0.150	600,000
U4-MW-03I	6/14/2023	N	EM10	UMCf	76.6 - 86.6	954,000	5,330,000	<24,000	<117	<1,400	46.2 J	1,290,000	13,400	373,000	73,900	73,900	<8,450	<8,450	144 J	<5.15	10.3	93.6	<0.330	<0.750	514,000
U4-MW-03I	6/14/2023	FD	EM10	UMCf	76.6 - 86.6	983,000	5,480,000	<24,000	<117	<1,400	<33.3	1,290,000	13,300	373,000	73,700	73,700	<8,450	<8,450	125 J	<5.15	11.3	95.9	<0.330	<0.750	529,000
U4-MW-03S	4/18/2022	N	BL02	UMCf	54.5 - 64.5	26,500	262,000	<2,400	----	----	----	222,000	1,750	1,160,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-03S	4/18/2022	FD	BL02	UMCf	54.5 - 64.5	26,200	264,000	<2,400	----	----	----	215,000	1,680	1,180,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-03S	3/15/2023	N	EM07	UMCf	54.5 - 64.5	54,600	389,000	<2,400	<117	<140	72.7 J	241,000	4,110	1,040,000	260,000	152,000	109,000	<8,450	<56.1	<1.03	122	10.8	<0.330	<0.150	4,160
U4-MW-03S	6/15/2023	N	EM10	UMCf	54.5 - 64.5	57,800	431,000	<2,400	<117	<140	71.7 J	259,000	3,030	1,010,000	226,000	191,000	35,000	<8,450	<56.1	<1.03	99.2	13.6	<0.330	<0.150	7,570

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	E314.0	E300.1		E350.1	E351.2	E365.1	Anions by E300.0/SW9065A			Alkalinity by SM2320B		Alkalinity by SM2320B		Dissolved Metals by SW6010B/SW6020						
						Perchlorate	Chlorate	Chlorite	Ammonia (as N)	Total Kjeldahl Nitrogen (TKN)	Phosphorus	Chloride	Nitrate (as N)	Sulfate	Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-04D	4/19/2022	N	BL02	UMCf	97.0 - 107.0	3,270,000	26,400,000	<240,000	----	----	----	5,690,000	53,500	1,160,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-04D	2/16/2023	N	EM06	UMCf	97.0 - 107.0	427,000	3,370,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-04D	3/21/2023	N	EM07	UMCf	97.0 - 107.0	42,200	2,770,000	<24,000	<117	<280	<33.3	680,000 J+	10,400	326,000 J	169,000	169,000	<8,450	<8,450	<56.1	<1.03	23.4	10.5	<0.330	<0.150	43,100
U4-MW-04D	6/14/2023	N	EM10	UMCf	97.0 - 107.0	306,000	1,970,000	<24,000	<117	<560	<33.3	612,000	3,710 J	291,000	280,000	280,000	<8,450	<8,450	<56.1	<5.15	23.9	50.3	<0.330	<0.750	166,000
U4-MW-04I	4/19/2022	N	BL02	UMCf	76.8 - 86.8	1,100,000	10,700,000	<24,000	----	----	----	2,460,000	23,300	1,150,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-04I	3/20/2023	N	EM07	UMCf	76.8 - 86.8	1,880,000	7,880,000	<240,000	<117	<1,400	<33.3	2,080,000	25,300	591,000	111,000	111,000	<8,450	<8,450	<56.1	<5.15	15.1	17.4	<0.330	<0.750	141,000
U4-MW-04I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	735,000	6,020,000	<24,000	<117	<1,400	37.2 J	1,470,000	15,000 J-	411,000 J	307,000	307,000	<8,450	<8,450	<56.1	<5.15	18.1	84.5	<0.330	<0.750	483,000
U4-MW-05D	4/15/2022	N	BL02	UMCf	98.2 - 108.2	2,240,000	13,600,000	<240,000	----	----	----	4,020,000	46,500	1,400,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	10/13/2022	N	EM02	UMCf	98.2 - 108.2	2,930,000	12,500,000	----	----	----	----	----	42,000	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	1,780,000	8,150,000	----	----	----	----	----	24,900	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	2,000,000 J+	7,730,000	----	----	----	----	----	27,600	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	1/11/2023	N	EM05	UMCf	98.2 - 108.2	1,720,000	6,020,000	----	----	----	----	----	27,200 J+	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	2/14/2023	N	EM06	UMCf	98.2 - 108.2	1,210,000	5,810,000	----	----	----	----	----	22,100	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	3/16/2023	N	EM07	UMCf	98.2 - 108.2	1,070,000	5,680,000	<24,000	<117	<1,400	73.2 J	1,630,000	17,200	558,000	132,000	132,000	<8,450	<8,450	<56.1	<5.15	34.2	60.8	<0.330	<0.750	258,000
U4-MW-05D	4/20/2023	N	EM08	UMCf	98.2 - 108.2	757,000	3,130,000	<24,000	<117	<1,400	<33.3	1,160,000	14,200 J+	441,000 J	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	5/10/2023	N	EM09	UMCf	98.2 - 108.2	581,000	2,040,000	<24,000	<117	<140	66.8 J	1,230,000	2,620	439,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	379,000	1,170,000	<24,000	<117	<140	38.7 J	1,250,000	<240	305,000	1,130,000	1,130,000	<8,450	<8,450	<56.1	7.74 J	78.5	110	<0.330	<0.750	156,000
U4-MW-05D	7/18/2023	N	EM11	UMCf	98.2 - 108.2	683,000	2,170,000	<24,000	<117	<140	<33.3	1,750,000	3,090	388,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	4/15/2022	N	BL02	UMCf	76.6 - 86.6	1,220,000	8,940,000	<24,000	----	----	----	2,380,000	26,000	1,300,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	10/13/2022	N	EM02	UMCf	76.6 - 86.6	2,760,000	12,200,000	----	----	----	----	----	40,500	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	11/3/2022	N	EM03	UMCf	76.6 - 86.6	2,180,000	10,700,000	----	----	----	----	----	37,200 J-	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	12/8/2022	N	EM04	UMCf	76.6 - 86.6	1,810,000	8,360,000	----	----	----	----	----	33,100	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	1/11/2023	N	EM05	UMCf	76.6 - 86.6	1,590,000	6,270,000	----	----	----	----	----	25,600 J+	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	2/14/2023	N	EM06	UMCf	76.6 - 86.6	1,240,000	6,080,000	----	----	----	----	----	21,000	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	3/14/2023	N	EM07	UMCf	76.6 - 86.6	1,020,000 J+	4,840,000	<24,000	<117	<1,400	60.9 J	1,500,000	11,600	641,000	216,000	216,000	<8,450	<8,450	107 J	<5.15	41.1	57.4	<0.330	<0.750	234,000
U4-MW-05I	4/21/2023	N	EM08	UMCf	76.6 - 86.6	174,000	434,000	41,400	<117	<140	<33.3	631,000	<480	386,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	5/10/2023	N	EM09	UMCf	76.6 - 86.6	73,900	104,000	204,000	<117	<140	54.4 J	598,000	<480	283,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	6/15/2023	N	EM10	UMCf	76.6 - 86.6	4,030	19,700	80,600 J-	<117	2,000	46.2 J	710,000	<48.0	83,700	1,820,000	1,820,000	<8,450	<8,450	<56.1	12.9	200	367	<0.330	<0.150	116,000
U4-MW-05I	7/17/2023	N	EM11	UMCf	76.6 - 86.6	563,000	1,510,000	38,000 J	<117	<140	<33.3	1,740,000	2,320	420,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-06D	4/19/2022	N	BL02	UMCf	97.1 - 107.1	4,270,000	17,900,000	<240,000	----	----	----	4,670,000	48,100	1,160,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-06D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	1,130,000 J+	7,290,000	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-06D	3/21/2023	N	EM07	UMCf	97.1 - 107.1	405,000	7,000,000	<240,000	<117	<1,400	<33.3	1,890,000	20,800	501,000	101,000	101,000	<8,450	<8,450	<56.1	<1.03	9.68	19.8	<0.330	<0.150	121,000
U4-MW-06D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	1,350,000	5,310,000	<240,000	<117	<560	45.7 J	1,830,000	16,600 J-	467,000 J	87,100	87,100	<8,450	<8,450	89.9 J	<5.15	9.97 J	97.1	<0.330	<0.750	686,000
U4-MW-06I	4/19/2022	N	BL02	UMCf	76.5 - 86.5	201,000	801,000	<24,000	----	----	----	353,000	146 J+	967,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-06I	3/14/2023	N	EM07	UMCf	76.5 - 86.5	1,810,000 J+	7,820,000	<240,000	<117	<1,400	<33.3	2,130,000	15,200	655,000	138,000	138,000	<8,450	<8,450	<56.1	<5.15	17.0	78.4	<0.330	<0.750	642,000
U4-MW-06I	6/16/2023	N	EM10	UMCf	76.5 - 86.5	1,380,000	5,070,000	<240,000	<117	<1,400	50.1 J	2,100,000	14,800 J-	556,000	237,000	237,000	<8,450	<8,450	<56.1	<5.15	28.4	94.6	<0.330	<0.750	612,000
U4-MW-07D	4/15/2022	N	BL02	UMCf	96.8 - 106.5	471,000	5,210,000	<24,000	----	----	----	1,260,000	13,500	568,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	10/12/2022	N	EM02	UMCf	96.8 - 106.5	76,400	413,000	----	----	----	----	----	1,240	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	10/12/2022	FD	EM02	UMCf	96.8 - 106.5	61,100	383,000	----	----	----	----	----	1,230	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	11/3/2022	N	EM03	UMCf	96.8 - 106.5	53,800	391,000	----	----	----	----	----	1,220	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	12/7/2022	N	EM04	UMCf	96.8 - 106.5	53,300	283,000	----	----	----	----	----	1,050	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	1/11/2023	N	EM05	UMCf	96.8 - 106.5	66,700	336,000	----	----	----	----	----	1,140 J+	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	2/14/2023	N	EM06	UMCf	96.8 - 106.5	43,000	263,000	----	----	----	----	----	1,030	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	3/16/2023	N	EM07	UMCf	96.8 - 106.5	400,000	278,000	<2,400	<117	<140	39.5 J	167,000	756	230,000	119,000	119,000	<8,450	<8,450	<56.1	<1.03	6.14	26.5	<0.330	<0.150	84,500
U4-MW-07D	4/21/2023	N	EM08	UMCf	96.8 - 106.5	120,000	888,000	49,500 J	<117	<140	37.0 J	426,000	1,300	237,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	5/11/2023	N	EM09	UMCf	96.8 - 106.5	41,700	111,000	179,000	<117	1,570	<33.3	318,000	<48.0	67,300	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	6/13/2023	N	EM10	UMCf	96.8 - 106.5	76,400	305,000	74,400 J-	<117	777	38.2 J	620,000	500	71,600	1,480,000	1,480,000	<8,450	<8,450	<56.1	<1.03	26.3	529	<0.330	<0.150	342,000
U4-MW-07D	7/17/2023	N	EM11	UMCf	96.8 - 106.5	656,000	5,770,000	<24,000	<117	<1,400	<33.3	1,950,000	8,830	596,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	4/15/2022	N	BL02	UMCf	76.8 - 86.8	140,000	1,150,000	<24,000	----	----	----	463,000	4,200	1,190,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	69,100 J-	426,000	----	----	----	----	----	1,290	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	11/3/2022	N	EM03	UMCf	76.8 - 86.8	63,700	445,000	----	----	----	----	----	1,280	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	66,800	346,000	----	----	----	----	----	1,180	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	1/11/2023	N	EM05	UMCf	76.8 - 86.8	86,700	428,000	----	----	----	----	----	1,140 J+	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	51,000 J+	515,000	----	----	----	----	----	1,440	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	325,000	637,000	<2,400	<117	<140	<33.3	249,000	2,010	253,000	130,000	130,000	<8,450	<8,450	<56.1	<1.03	7.70	32.6	<0.330	<0.150	93,500
U4-MW-07I	4/21/2023	N	EM08	UMCf	76.8 - 86.8	135,000	746,000	3,190 J	<117	<140	35.3 J	662,000	<480	379,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	5/11/2023	N	EM09	UMCf	76.8 - 86.8	1,810	1,130	80,000	<117	831	48.0 J	591,000	74.4 J	302,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	48.3	2,620	<120	<117	820	118 J+	788,000	<48.0 UJ	212,000	1,450,000	1,450,000	<8,450	<8,450	<56.1	<1.03	76.2	256	<0.330	<0.150	159,000
U4-MW-07I	7/17/2023	N	EM11	UMCf	76.8 - 86.8	391,000	2,940,000	<24,000	<117	<140	<33.3	1,570,000	<240	537,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-08D	4/13/2022	N	BL02	UMCf	98.6 - 108.6	1,640,000	2,450,000	<24,000	<117	<2,800	68.2 J	4,960,000	71,400	1,130,000	184,000	184,000	<8,450	<8,450	<280	<10.3	10.8 J	144	<1.65	<1.50	1,610,000
U4-MW-08D	12/7/2022	N	EM04	UMCf	98.6 - 108.6	889,000	10,400,000	<240,000	<117	<1,400	63.8 J	2,730,000	26,500	603,000	219,000	219,000	<8,450	<8,450	<92.5	<5.15	8.66 J	81.9 J+	<0.950	<0.750	665,000
U4-MW-08D	3/17/2023	N	EM07	UMCf	98.6 - 108.6	821,000	9,450,000	<240,000	<117	<1,400	<33.3	2,780,000	27,700 J-	421,000 J	919,000	919,000	<8,450	<8,450	<56.1	<5.15	17.0	131	<0.330	<0.750	532,000
U4-MW-08D	6/13/2023	N	EM10	UMCf	98.6 - 108.6	1,210,000	11,100,000	<240,000	<117	<2,800	66.6 J	3,330,000	21,700	486,000 J	545,000	545,000	<8,450	<8,450	102 J	<10.3	15.1 J	147	<0.330	<1.50	719,000
U4-MW-08DD	4/20/2022	N	BL02	UMCf	119.8 - 129.8	25,700	281,000	<2,400	<117	<140	146 J+	213,000	1,520	210,000	89,800	89,800	<8,450	<8,450	<56.1	<1.03	10.9	19.0	<0.330	<0.150	58,200
U4-MW-08DD	4/20/2022	FD	BL02	UMCf	119.8 - 129.8	23,800	294,000	<2,400	<117	<140	133 J	227,000	1,610	230,000	84,300	84,300	<8,450	<8,450	<56.1	<1.03	11.1	19.2	<0.330	<0.150	58,000
U4-MW-08DD	12/8/2022	N	EM04	UMCf	119.8 - 129.8	8,820	55,300	<12,000	<117	<140	191 J-	175,000	282	179,000	111,000	111,000	<8,450	<8,450	<18.5	1.33 J	10.8	21.3	<0.190	<0.150	45,600
U4-MW-08DD	3/15/2023	N	EM07	UMCf	119.8 - 129.8	170,000	966,000	<24,000	<117	<140	162	406,000	1,360	163,000	57,900	57,900	<8,450	<8,450	<56.1	<1.03	6.32	90.8	<0.330	<0.150	167,000
U4-MW-08DD	6/14/2023	N	EM10	UMCf	119.8 - 129.8	146,000	806,000	<24,000	<117	<140	102 J+	368,000	691 J-	163,000	55,200	55,200	<8,450	<8,450	<56.1	<1.03	6.79	78.6	1.14 J	<0.150	139,000
U4-MW-08I	4/13/2022	N	BL02	UMCf	78.0 - 88.0	152,000	2,550,000	<24,000	<117	<700	55.5 J	768,000	7,610	1,160,000	175,000	166,000	9,060 J	<8,450	92.7 J	<1.03	43.1	20.6	<0.330	<0.150	107,000
U4-MW-08I	12/7/2022	N	EM04	UMCf	78.0 - 88.0	609,000	5,800,000	<240,000	<117	<700	46.0 J	1,660,000	19,200	941,000	164,000	164,000	<8,450	<8,450	<92.5	<5.15	37.2	51.8 J+	<0.950	<0.750	355,000
U4-MW-08I	12/7/2022	FD	EM04	UMCf	78.0 - 88.0	566,000	4,980,000	<240,000	<117	<700	<33.3 UJ	1,530,000	17,000	948,000	----	----	----	----	<92.5	<5.15	37.3	49.4 J+	<0.950	<0.750	349,000
U4-MW-08I	3/17/2023	N	EM07	UMCf	78.0 - 88.0	872,000	9,870,000	<240,000	<117	<1400 R	<33.3	2,290,000	26,700 J-	796,000	243,000	243,000	<8,450	<8,450	<56.1	<5.15	28.5	87.0	<0.330	<0.750	538,000
U4-MW-08I	6/13/2023	N	EM10	UMCf	78.0 - 88.0	243,000	2,360,000	<24,000	<117	<140 R	41.4 J	968,000	946 J	702,000	631,000	631,000	<8,450	<8,450	<56.1	<10.3	39.7	26.7	<0.330	<1.50	129,000
U4-MW-08S	4/15/2022	N	BL02	UMCf	54.9 - 64.9	11,600	154,000	<2,400	<117	<140	<33.3	227,000	3,430	1,280,000	57,500	15,500 J	42,000	<8,450	<56.1	<1.03	14.5	25.0	<0.330	<0.150	165,000
U4-MW-08S	12/7/2022	N	EM04	UMCf	54.9 - 64.9	5,150	52,300	<480	<117	755 J	77.4 J	222,000	1,410	1,050,000	417,000 J	417,000 J	<8,450	<8,450	<18.5	<1.03	77.3	20.0	<0.190	<0.150	68,400
U4-MW-08S	12/7/2022	FD	EM04	UMCf	54.9 - 64.9	5,740	55,200	<480	<117	226 J	74.1 J	217,000	1,460	1,070,000	299,000 J	299,000 J	<8,450	<8,450	<18.5	<1.03	76.3	19.4	<0.190	<0.150	67,600
U4-MW-08S	3/13/2023	N	EM07	UMCf	54.9 - 64.9	98.0 J	2,860 J	<24.0	<117	639	243	192,000	<48.0	297,000	1,150,000	1,150,000	<8,450	<8,450	63.0 J	<1.03	43.0	184	<0.330	<0.150	73,900
U4-MW-08S	3/13/2023	FD	EM07	UMCf	54.9 - 64.9	<0.300 UJ	<240 UJ	<240	<117	723	246	187,000	<48.0	250,000	1,370,000	1,370,000	<8,450	<8,450	<56.1	<1.03	42.3	174	<0.330	<0.150	68,900
U4-MW-08S	6/13/2023	N	EM10	UMCf	54.9 - 64.9	<0.300	<120	<120	<117	1,850 J	105 J+	189,000	<480	18,800 J	1,460,000	1,460,000	<8,450	<8,450	<56.1	<1.03	68.1 J	324	<0.330	<0.150	91,400

DRAFT

Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	E314.0	E300.1		E350.1	E351.2	E365.1	Anions by E300.0/SW9065A			Alkalinity by SM2320B		Alkalinity by SM2320B		Dissolved Metals by SW6010B/SW6020						
						Perchlorate	Chlorate	Chlorite	Ammonia (as N)	Total Kjeldahl Nitrogen (TKN)	Phosphorus	Chloride	Nitrate (as N)	Sulfate	Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-08S	6/13/2023	FD	EM10	UMCf	54.9 - 64.9	<0.300	276	<120	<117	1,200 J	98.0 J	187,000	<480	2,640 J	1,460,000	1,460,000	<8,450	<8,450	<56.1	<1.03	35.7 J	323	<0.330	<0.150	91,700
U4-MW-09D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	1,770,000	14,600,000	<240,000	<117	<1,400	58.0 J	3,270,000	43,200	877,000	179,000	179,000	<8,450	<8,450	<56.1	<10.3	7.44 J	14.2	<0.330	<1.50	123,000
U4-MW-09D	12/6/2022	N	EM04	UMCf	96.9 - 106.9	209,000 J+	1,480,000	<24000 UJ	<117 UJ	<280 UJ	<33.3 UJ	439,000	<4800 UJ	274,000 J	136,000	136,000	<8450 UJ	<8450 UJ	<18.5 UJ	<1.03 UJ	33.5	50.7	<0.190 UJ	<0.150 UJ	145,000
U4-MW-09D	3/16/2023	N	EM07	UMCf	96.9 - 106.9	189,000	1,240,000	24,900	<117	<140 R	<33.3	909,000	756 J	200,000	905,000	905,000	<8,450	<8,450	59.0 J	<1.03	25.6	152	<0.330	<0.150	235,000
U4-MW-09D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	114,000	698,000	4,790 J	<117	<140	<33.3	865,000	2,090 J-	123,000	955,000	955,000	<8,450	<8,450	<56.1	<1.03	69.6	151	<0.330	<0.150	204,000
U4-MW-09DD	4/14/2022	N	BL02	UMCf	119.8 - 129.8	25,200	110,000	<2,400	<117	<140	84.5 J	172,000	1,060	178,000	98,100	91,300	<8,450	<8,450	<56.1	<1.03	10.2	27.6	<0.330	<0.150	41,300
U4-MW-09DD	12/6/2022	N	EM04	UMCf	119.8 - 129.8	12,200 J+	48,600	<2400 UJ	<117 UJ	<140 UJ	46.8 J	159,000	963	179,000	83,000	83,000	<8450 UJ	<8450 UJ	<18.5 UJ	<1.03 UJ	11.7	28.5	<0.190 UJ	<0.150 UJ	39,300
U4-MW-09DD	3/21/2023	N	EM07	UMCf	119.8 - 129.8	88,700	387,000	<2,400	<117	<140	37.1 J	257,000	1,770	151,000	61,000	61,000	<8,450	<8,450	<56.1	<1.03	9.50	65.3	<0.330	<0.150	76,600
U4-MW-09DD	6/15/2023	N	EM10	UMCf	119.8 - 129.8	89,700	329,000	<2,400	<117	<140	50.2 J	245,000	1,520	148,000	66,300	66,300	<8,450	<8,450	<56.1	<1.03	7.53	64.8	<0.330	<0.150	81,500
U4-MW-09I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	78,700	439,000	<2,400	<117	<140	120 J+	242,000	3,120	1,100,000	109,000	109,000	<8,450	<8,450	<56.1	<1.03	24.8	16.6	<0.330	<0.150	114,000
U4-MW-09I	12/6/2022	N	EM04	UMCf	76.8 - 86.8	448,000 J+	2,560,000	<240000 UJ	<117 UJ	<140 UJ	<33.3 UJ	715,000	7,720 J	431,000 J	133,000	133,000	<8450 UJ	<8450 UJ	<92.5 UJ	<5.15 UJ	20.0	44.2	<0.950 UJ	<0.750 UJ	218,000
U4-MW-09I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	340,000	2,090,000	<24,000	<117	<140	<33.3	946,000	2,140	292,000	723,000	723,000	<8,450	<8,450	<56.1	<1.03	25.5	89.2	<0.330	<0.150	266,000
U4-MW-09I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	198,000	519,000	<2,400	<117	<140	<33.3	1,100,000	1,280 J-	202,000	1,040,000	1,040,000	<8,450	<8,450	<56.1	1.05 J	33.0	107	<0.330	<0.150	224,000
U4-MW-09S	4/14/2022	N	BL02	UMCf	55.3 - 65.3	14,800	91,400	<2,400	<117	<140	76.5 J	182,000	2,260	964,000	141,000	123,000	17,900 J	<8,450	<56.1	<1.03	46.2	17.5	<0.330	<0.150	72,400
U4-MW-09S	12/6/2022	N	EM04	UMCf	55.3 - 65.3	91,500	503,000	<24000 UJ	<117 UJ	<140 UJ	<33.3 UJ	256,000	3,360	1,020,000	258,000	238,000	20,400	<8450 UJ	<18.5 UJ	<1.03 UJ	56.2	10.2	<0.190 UJ	<0.150 UJ	17,700
U4-MW-09S	3/17/2023	N	EM07	UMCf	55.3 - 65.3	84,500	474,000	<2,400	<117	<140	44.7 J	373,000	1,820	822,000	265,000	249,000	15,300 J	<8,450	<56.1	<1.03	46.3	17.1	<0.330	<0.150	15,100
U4-MW-09S	6/15/2023	N	EM10	UMCf	55.3 - 65.3	<0.300	199 J	150,000 J-	<117	1,790	129 J+	161,000	<48.0	26,900	2,290,000	2,280,000	<8,450	<8,450	<56.1	<1.03	113	88.3	<0.330	<0.150	18,200
U4-MW-10D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	118,000	2,180,000	<24,000	<117	<700	<33.3	706,000	4,090	340,000	93,000	93,000	<8,450	<8,450	<56.1	<1.03	8.78	58.7	<0.330	<0.150	275,000
U4-MW-10D	12/5/2022	N	EM04	UMCf	96.9 - 106.9	82,300	956,000	<24,000	<117	<140	<33.3 UJ	383,000	1,720	180,000	60,800	60,800	<8,450	<8,450	<56.1	<1.03	7.91	106	<0.330	<0.150	165,000
U4-MW-10D	3/17/2023	N	EM07	UMCf	96.9 - 106.9	10,600	74,700	101,000	<117 UJ	966 J+	<33.3	478,000	<48.0	74,500	1,200,000	1,200,000	<8,450	<8,450	<56.1	<1.03	33.0	413	<0.330	<0.150	230,000
U4-MW-10D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	789	4,000	<120	<117	776	<33.3	453,000	<48.0 UJ	2,780 J	1,010,000	1,010,000	<8,450	<8,450	<56.1	<1.03	49.8	1,010	<0.330	<0.150	187,000
U4-MW-10I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	141,000	2,330,000	<24,000	<117	<1,400	65.7 J	936,000	8,520	1,300,000	187,000	187,000	<8,450	<8,450	<56.1	<1.03	12.6	35.2	<0.330	0.369 J	278,000
U4-MW-10I	12/5/2022	N	EM04	UMCf	77.1 - 87.1	8,680	96,300	<2,400	<117	<140	<33.3 UJ	219,000	1,200	1,180,000	144,000	144,000	<8,450	<8,450	<56.1	<1.03	42.8	13.3	<0.330	<0.150	180,000
U4-MW-10I	3/17/2023	N	EM07	UMCf	77.1 - 87.1	14,700 J-	138,000	<2,400	<117	1,220 J+	<33.3	897,000	94.2 J	295,000	1,010,000	1,010,000	<8,450	<8,450	<56.1	<1.03	37.7	187	<0.330	<0.150	208,000
U4-MW-10I	6/14/2023	N	EM10	UMCf	77.1 - 87.1	1,440	14,200	<240	<117	1,260	39.0 J	262,000	352 J	5,490	1,410,000	1,410,000	<8,450	<8,450	<56.1	<1.03	19.4	697	<0.330	<0.150	159,000
U4-MW-11D	4/15/2022	N	BL02	UMCf	97.4 - 107.4	1,290,000	20,100,000	<240,000	<117	<3,500	71.7 J	4,040,000	62,300	880,000	201,000	201,000	<8,450	<8,450	<280	<10.3	6.16 J	151	<1.65	<1.50	1,530,000
U4-MW-11D	9/26/2022	N	EM01	UMCf	97.4 - 107.4	1,350,000	20,700,000	<120,000	<117	<700	118 J-	3,720,000	47,900	751,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	10/11/2022	N	EM02	UMCf	97.4 - 107.4	1,410,000	19,000,000	<240,000	<117	<2,800	42.1 J	4,260,000	55,600	886,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	11/1/2022	N	EM03	UMCf	97.4 - 107.4	1,380,000	18,400,000	<240,000	153 J	<2,800	<33.3	3,850,000	51,800	768,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	12/6/2022	N	EM04	UMCf	97.4 - 107.4	561,000	8,610,000	<240000 UJ	<117 UJ	<2800 UJ	97.7 J	1,750,000	14,700	482,000 J	279,000	279,000	<8450 UJ	<8450 UJ	<1850 UJ	<103 UJ	<18.0 UJ	107 J	<19.0 UJ	<15.0 UJ	1,200,000
U4-MW-11D	1/12/2023	N	EM05	UMCf	97.4 - 107.4	1,190,000	17,600,000	<240,000	<117	<2,800	<33.3	3,940,000	41,000	740,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	2/14/2023	N	EM06	UMCf	97.4 - 107.4	1,130,000	14,300,000	<240,000	<117	<1400 UJ	<33.3	3,660,000	47,200	746,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	3/16/2023	N	EM07	UMCf	97.4 - 107.4	996,000 J-	13,600,000	<240,000	<117	<1,400	<33.3	3,030,000	29,700	603,000	406,000	406,000	<8,450	<8,450	94.7 J	<5.15	14.6	133	<0.330	<0.750	925,000
U4-MW-11D	4/18/2023	N	EM08	UMCf	97.4 - 107.4	64,300	9,540,000	<240,000	<117	<1400 R	64.3 J	2,330,000	27,400	448,000 J	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	5/17/2023	N	EM09	UMCf	97.4 - 107.4	617,000 J	9,600,000	<240,000	<117	<700 R	50.8 J	2,610,000	27,200	664,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	6/16/2023	N	EM10	UMCf	97.4 - 107.4	1,080,000	14,200,000	<240,000	<117	<1,400	46.9 J	3,420,000	27,700 J-	657,000	286,000	286,000	<8,450	<8,450	<56.1	<5.15	11.2 J+	131	0.381 J	<0.750	1,140,000
U4-MW-11D	7/14/2023	N	EM11	UMCf	97.4 - 107.4	997,000	12,800,000	<240,000	<117	<2800 R	36.9 J	2,850,000 J+	24,600 J-	524,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	4/14/2022	N	BL02	UMCf	77.0 - 87.0	98,700	1,550,000	<24000 R	<117	<1,400	210 J+	512,000	7,100	1,080,000	96,300	92,500	<8,450	<8,450	<56.1	<1.03	17.5	24.6	<0.330	<0.150	161,000
U4-MW-11I	9/26/2022	N	EM01	UMCf	77.0 - 87.0	33,000	266,000	54,400	<117	968	739 J	328,000	<48.0	694,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	9/26/2022	FD	EM01	UMCf	77.0 - 87.0	34,400	265,000	53,300	<117	792	35.9 J	328,000	<48.0	694,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	10/10/2022	N	EM02	UMCf	77.0 - 87.0	530	<2,400	66,800	<117	970 J	<33.3 UJ	363,000	<48.0	508,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	10/10/2022	FD	EM02	UMCf	77.0 - 87.0	476	2,400 J	66,100	<117	1,230 J	102 J	362,000	<48.0	509,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	10/31/2022	N	EM03	UMCf	77.0 - 87.0	2,900 J	7,470 J	66,500	<117	1,100 J	<33.3	321,000	<48.0	273,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	10/31/2022	FD	EM03	UMCf	77.0 - 87.0	1,800 J	3,470 J	84,800	<117	1,560 J	<33.3	316,000	<48.0	244,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	12/6/2022	N	EM04	UMCf	77.0 - 87.0	<0.300 UJ	<2400 UJ	<2400 UJ	191 J	1,030 J	59.1 J	386,000	<48.0 UJ	27,000 J	1,320,000	1,320,000	<8450 UJ	<8450 UJ	<18.5 UJ	5.80	112	459	<0.190 UJ	<0.150 UJ	140,000
U4-MW-11I	12/6/2022	FD	EM04	UMCf	77.0 - 87.0	198 J	<2400 UJ	<2400 UJ	178 J	1,340 J	41.8 J	371,000	<48.0 UJ	42,600 J	1,320,000	1,320,000	<8450 UJ	<8450 UJ	<18.5 UJ	3.56 J	96.5	463	<0.190 UJ	<0.150 UJ	140,000
U4-MW-11I	1/12/2023	N	EM05	UMCf	77.0 - 87.0	381	2,380	81.2 J+	124 J	1,160	<33.3	346,000	50.1 J	74,100	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	1/12/2023	FD	EM05	UMCf	77.0 - 87.0	389	2,220	<24.0	120 J	1,050	<33.3	338,000	54.5 J	72,600	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	2/14/2023	N	EM06	UMCf	77.0 - 87.0	213,000	3,030,000	<24,000	572	<140	<33.3	1,000,000	7,230	160,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	2/14/2023	FD	EM06	UMCf	77.0 - 87.0	264,000	3,530,000	<24,000	535	<140	33.4 J	1,090,000	8,170	185,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	3/16/2023	N	EM07	UMCf	77.0 - 87.0	70.0	<2,400	<2,400	<117 UJ	1,170	50.0 J	298,000	<48.0	979 J	1,720,000	1,720,000	<8,450	<8,450	<56.1	2.20 J	63.1	554 J	<0.330	<0.150	158,000 J
U4-MW-11I	3/16/2023	FD	EM07	UMCf	77.0 - 87.0	87.0	<2,400	<2,400	<117 UJ	1,270	63.6 J	292,000	<48.0	1,060 J	1,750,000	1,750,000	<8,450	<8,450	91.7 J	1.97 J	59.2	375 J	<0.330	<0.150	105,000 J
U4-MW-11I	4/18/2023	N	EM08	UMCf	77.0 - 87.0	1,390	10,400 J	<120	<117	1,850 J	43.3 J	267,000	<48.0	17,300	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	4/18/2023	FD	EM08	UMCf	77.0 - 87.0	1,590	17,100 J	<120	<117	1,130 J	36.6 J	282,000	<48.0	19,700	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	5/19/2023	N	EM09	UMCf	77.0 - 87.0	423	4,830 J	<240 UJ	<117	1,120	44.9 J	262,000	<48.0	7,200	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	5/19/2023	FD	EM09	UMCf	77.0 - 87.0	478	3,070 J	<24.0	<117	1,150	<33.3	263,000	<48.0	7,860	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	6/15/2023	N	EM10	UMCf	77.0 - 87.0	23.4	<120	<120	<117	1,050 J	83.8 J	190,000	<48.0	53,500	1,280,000	1,280,000	<8,450	<8,450	<56.1	<1.03	53.5	449	<0.330	<0.150	133,000
U4-MW-11I	6/15/2023	FD	EM10	UMCf	77.0 - 87.0	28.6	<120	<120	<117	1,460 J	118	190,000	<48.0	52,200	1,290,000	1,290,000	<8,450	<8,450	<56.1	<1.03	51.0	445	<0.330	<0.150	134,000
U4-MW-11I	7/13/2023	N	EM11	UMCf	77.0 - 87.0	1,340	9,920	<240	<117	1,530	96.7 J	227,000	<48.0	22,600	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	7/13/2023	FD	EM11	UMCf	77.0 - 87.0	1,310	10,700	<240	<117	1,520	133	225,000	<48.0	22,500	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	4/15/2022	N	BL02	UMCf	97.1 - 107.1	1,280,000	14,400,000	<24,000	<117	<3,500	67.4 J	3,380,000	61,000	1,130,000	138,000	138,000	<8,450	<8,450	115 J	<10.3	6.66 J	115	<0.330	<1.50	1,230,000
U4-MW-12D	9/27/2022	N	EM01	UMCf	97.1 - 107.1	793,000	8,490,000	<120,000	<117	<1,400	161 J-	2,080,000	29,800	696,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	10/12/2022	N	EM02	UMCf	97.1 - 107.1	1,070,000	9,510,000	<240,000	<117	<700	48.9 J	2,150,000	32,400	846,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	11/2/2022	N	EM03	UMCf	97.1 - 107.1	1,030,000	9,430,000	<240,000	<117	<7,000	<33.3	2,060,000	28,700	842,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	12/7/2022	N	EM04	UMCf	97.1 - 107.1	1,060,000	6,990,000	<240,000	<117	<700	45.3 J	2,010,000	22,700	818,000	218,000	218,000	<8,450	<8,450	<92.5	<5.15	14.8	64.9 J+	<0.950	<0.750	662,000
U4-MW-12D	1/12/2023	N	EM05	UMCf	97.1 - 107.1	918,000	8,540,000	<240,000	<117	<2,800	<33.3	1,900,000	21,600	624,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	617,000 J+	8,230,000	<24,000	<117	<1,400	<33.3	1,840,000	21,700	537,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	3/14/2023	N	EM07	UMCf	97.1 - 107.1	567,000 J+	6,130,000	<24,000	<117	<700	<33.3	1,610,000	10,100	468,000	302,000	302,000	<8,450	<8,450	<56.1	<5.15	15.0	98.4	<0.330	<0.750	596,000
U4-MW-12D	4/17/2023	N	EM08	UMCf	97.1 - 107.1	1,080,000	8,070,000	<240,000	<117	<1,400	<33.3	1,970,000	19,500	714,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	5/17/2023	N	EM09	UMCf	97.1 - 107.1	1,070,000	8,420,000	<240,000	118 J	<700	<33.3	2,110,000	30,700	907,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	814,000	6,910,000	<240,000	<117	<700	62.1 J	1,840,000	16,500 J-	506,000	148,000	148,000	<8,450	<8,450	93.0 J	<5.15	9.72 J	97.4	<0.330	<0.750	646,000
U4-MW-12D	7/13/2023	N	EM11	UMCf	97.1 - 107.1	366,000	4,230,000	<24,000	<117	<560	36.7 J	1,170,000	8,640	276,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	424,000	4,000,000	<24,000	<117	<1,400	68.0 J	967,000	7,700	1,230,000	147,000	147,000	<8,450	<8,450	<56.1	3.92 J	14.6	48.2	<0.330	2.51 J	317,000
U4-MW-12I	4/14/2022	FD	BL02	UMCf	76.8 - 86.8	420,000	3,920,000	<24,000	<117	<1,400	104 J+	968,000	8,310	1,220,000	139,000	139,000	<8,450	<8,450	61.1 J	1.29 J	12.6	47.3	<0.330	<0.150 UJ	314,000
U4-MW-12I	9/27/2022	N	EM01	UMCf	76.8 - 86.8	51,500	535,000	<2,400	<117	<140	271 J-	278,000	2,190	1,080,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	35,100	475,000 J	<240000 R	<117 UJ	<140 UJ	42.6 J	280,000	535	1,030,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	11/2/2022	N	EM03	UMCf	76.8 - 86.8	28,800	170,000	<2400 UJ	<117	<140 UJ	<33.3	283,000	383	989,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	6,800	26,800	<12,000	<117	629 J+	<33.3	----	----	----	592,000	592,000	<8,450	<8,450	<18.5	1.36 J	108	20.7	<0.190	<0.150	86,600
U4-MW-12I	12/7/2022	FD	EM04	UMCf	76.8 - 86.8	6,630	28,700	<12,000	<117	739 J+	<33.3	----	----	----	----	----	----	----	21.6 J	1.26 J	108	20.7	<0.190	<0.150	86,400

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	E314.0	E300.1		E350.1	E351.2	E365.1	Anions by E300.0/SW9065A			Alkalinity by SM2320B		Alkalinity by SM2320B		Dissolved Metals by SW6010B/SW6020						
						Perchlorate	Chlorate	Chlorite	Ammonia (as N)	Total Kjeldahl Nitrogen (TKN)	Phosphorus	Chloride	Nitrate (as N)	Sulfate	Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-12I	1/13/2023	N	EM05	UMCf	76.8 - 86.8	2,450	24,100	<2,400	<117	579	<33.3	197,000	83.5 J	44,500	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	1,720 J+	16,900	46,000	<117	878	<33.3	169,000	99.2 J	24,700	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	3/13/2023	N	EM07	UMCf	76.8 - 86.8	269	1,800	31,200	<117	1,220	<33.3	151,000	<48.0	3,350 J	1,560,000	1,560,000	<8,450	<8,450	<56.1	<1.03	47.2	439	<0.330	<0.150	127,000
U4-MW-12I	4/17/2023	N	EM08	UMCf	76.8 - 86.8	2.13 J	<24.0	<24.0	<117	1,270	53.9 J	152,000	48.0 J	1,600 J	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	5/17/2023	N	EM09	UMCf	76.8 - 86.8	36,700	<240	<240 UJ	<117	1,050	98.7 J	143,000	<48.0	894 J	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	6/16/2023	N	EM10	UMCf	76.8 - 86.8	9.08 J-	202 J	<120	<117	1,610	86.9 J	144,000 J-	<48.0 UJ	1,770 J	1,810,000	1,810,000	<8,450	<8,450	<56.1	<1.03	46.5	564	<0.330	<0.150	141,000
U4-MW-12I	7/11/2023	N	EM11	UMCf	76.8 - 86.8	469	3,660	<240	<117	1,470 J-	50.4 J	157,000	56.8 J	9,270	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	4/14/2022	N	BL02	UMCf	98.2 - 108.2	1,330,000	14,700,000	<240,000	<117	<1,400	115 J+	3,130,000	60,700	662,000	128,000	128,000	<8,450	<8,450	375 J	<10.3	5.43 J	173	<1.65	<1.50	1,520,000
U4-MW-13D	9/28/2022	N	EM01	UMCf	98.2 - 108.2	401,000	5,370,000	<24,000	<117	<280	<33.3 UJ	1,330,000	10,900	336,000 J	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	10/11/2022	N	EM02	UMCf	98.2 - 108.2	413,000	4,100,000	<120,000	<117	<560	<33.3	1,400,000	6,780 J	379,000 J	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	433,000	4,080,000	<240,000	<117	<280	<33.3	1,300,000	6,960	295,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	411,000	3,380,000	<240,000	257	<700	<33.3	1,190,000	9,910 J	288,000 J	190,000	190,000	<8,450	<8,450	<92.5	<5.15	7.37 J	100	<0.950	<0.750	494,000
U4-MW-13D	1/12/2023	N	EM05	UMCf	98.2 - 108.2	383,000	3,950,000	<240,000	<117	<280	<33.3	984,000	10,300	289,000 J	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	2/15/2023	N	EM06	UMCf	98.2 - 108.2	374,000 J+	3,490,000	<24,000	<117	<560	<33.3	820,000	12,000	296,000 J	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	3/17/2023	N	EM07	UMCf	98.2 - 108.2	337,000	3,160,000	<24,000	<117	<280	193	699,000 J+	8,410 J	280,000 J	107,000	107,000	<8,450	<8,450	<56.1	<1.03	5.75	76.8	<0.330	<0.150	303,000
U4-MW-13D	4/18/2023	N	EM08	UMCf	98.2 - 108.2	224,000	1,910,000	<24,000	<117	<140	<33.3	567,000	<4,800	241,000 J	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	5/17/2023	N	EM09	UMCf	98.2 - 108.2	207,000	1,660,000	<24,000	<117	<140	<33.3	595,000	15,200 J-	259,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	241,000	1,840,000	<24,000	<117	<140	33.7 J	747,000	3,030	252,000	202,000	202,000	<8,450	<8,450	<56.1	<1.03	6.27	69.5	<0.330	<0.150	261,000
U4-MW-13D	7/12/2023	N	EM11	UMCf	98.2 - 108.2	224,000	1,770,000	<24,000	<117	<140	<33.3	855,000	2,840	244,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	418,000	4,180,000	<24,000	<117	<1,400	109 J+	943,000	7,030	1,090,000	116,000	116,000	<8,450	<8,450	<56.1	<1.03	12.6	43.5	<0.330	<0.150	395,000
U4-MW-13I	9/28/2022	N	EM01	UMCf	77.1 - 87.1	233,000	1,720,000	<12,000	<117	<280	79.5 J	487,000	9,130 J	1,040,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	10/10/2022	N	EM02	UMCf	77.1 - 87.1	212,000	1,410,000	<24,000	<117	<140	50.5 J	441,000	5,560	1,060,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	11/3/2022	N	EM03	UMCf	77.1 - 87.1	149,000	830,000	<24,000	<117	<140	<33.3	402,000	3,730	932,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	12/6/2022	N	EM04	UMCf	77.1 - 87.1	69,200	337,000	<24000 UJ	122 J	<140 UJ	<33.3 UJ	467,000	<48.0 UJ	545,000	599,000	599,000	<8450 UJ	<8450 UJ	<18.5 UJ	2.00 J	79.2	19.6	<0.190 UJ	<0.150 UJ	100,000
U4-MW-13I	1/12/2023	N	EM05	UMCf	77.1 - 87.1	59,400	261,000	<24,000	<117	<140	75.6 J	447,000	360	433,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	2/14/2023	N	EM06	UMCf	77.1 - 87.1	117,000	790,000	<24,000	183 J	<140	<33.3	521,000	1,780	399,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	3/16/2023	N	EM07	UMCf	77.1 - 87.1	2,680 J+	12,500	<240	<117	959 J	66.8 J	341,000	<48.0	55,400	1,100,000	1,100,000	<8,450	<8,450	<56.1	1.14 J	74.9	239	<0.330	0.223 J	66,300
U4-MW-13I	4/19/2023	N	EM08	UMCf	77.1 - 87.1	1,350	4,660	<240	<117	848	54.7 J	287,000	<48.0	115,000	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	5/17/2023	N	EM09	UMCf	77.1 - 87.1	5,630	52,900	<240	582	1,360	122 J+	234,000	<48.0	77,800	----	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	6/15/2023	N	EM10	UMCf	77.1 - 87.1	9,360 J-	53,200	<2400 UJ	138 J	859	47.6 J	225,000	<48.0	97,300	1,160,000	1,160,000	<8,450	<8,450	<56.1	6.01	73.1	395	<0.330	<0.150	61,700
U4-MW-13I	7/12/2023	N	EM11	UMCf	77.1 - 87.1	13,600	94,400	<240	122 J	1,090	50.5 J	229,000	135	90,200	----	----	----	----	----	----	----	----	----	----	----
U4-MW-14D	4/13/2022	N	BL02	UMCf	97.3 - 107.3	140,000	462,000	<12,000	<117	<140	33.3 R	349,000	729 J	2,560,000	101,000	101,000	<8,450	<8,450	<56.1	<1.03	21.3	33.5	<0.330	<0.150	561,000
U4-MW-14D	12/6/2022	N	EM04	UMCf	97.3 - 107.3	207,000 J+	1,300,000	<24000 UJ	<117 UJ	<140 UJ	<33.3 UJ	432,000	3,700	946,000	71,300	71,300	<8450 UJ	<8450 UJ	20.6 J	<1.03 UJ	14.6	56.2	<0.190 UJ	<0.150 UJ	395,000
U4-MW-14D	3/16/2023	N	EM07	UMCf	97.3 - 107.3	159,000	1,260,000	<24,000	<117	<140	38.2 J	316,000	2,420	387,000	85,900	85,900	<8,450	<8,450	<56.1	<1.03	13.2	52.1	<0.330	<0.150	181,000
U4-MW-14D	6/15/2023	N	EM10	UMCf	97.3 - 107.3	119,000	57,700	<24,000	<117	<140	<33.3	379,000	1,230	453,000	175,000	175,000	<8,450	<8,450	<56.1	<1.03	14.4	49.1	<0.330	<0.150	224,000
U4-MW-14I	4/14/2022	N	BL02	UMCf	77.3 - 87.3	181,000	506,000	<2,400	<117	<140	173 J+	274,000	2,490	1,410,000	77,600	70,500	<8,450	<8,450	<56.1	<1.03	16.6	23.1	<0.330	<0.150	237,000
U4-MW-14I	12/6/2022	N	EM04	UMCf	77.3 - 87.3	249,000	1,060,000	<24000 UJ	<117 UJ	<140 UJ	<33.3 UJ	401,000	2,700	1,490,000	87,400	87,400	<8450 UJ	<8450 UJ	<18.5 UJ	<1.03 UJ	17.1	49.4	<0.190 UJ	<0.150 UJ	524,000
U4-MW-14I	3/16/2023	N	EM07	UMCf	77.3 - 87.3	427,000	1,200,000	<24,000	<117	<140	56.8 J	346,000	2,510	597,000	87,300	87,300	<8,450	<8,450	<56.1	<1.03	14.1	49.1	<0.330	<0.150	250,000
U4-MW-14I	6/15/2023	N	EM10	UMCf	77.3 - 87.3	243,000	752,000	<24,000	<117	<140	69.3 J	404,000	970	733,000	258,000	258,000	<8,450	<8,450	<56.1	<1.03	17.7	129	<0.330	<0.150	263,000
U4-MW-15D	4/13/2022	N	BL02	UMCf	96.0 - 106.0	141,000	2,400,000	<24,000	<117	<700	63.7 J	749,000	3,170	410,000	112,000	112,000	<8,450	<8,450	149 J	<1.03	9.66	56.0	<0.330	<0.150	338,000
U4-MW-15D	12/5/2022	N	EM04	UMCf	96.0 - 106.0	75,300	1,220,000	<24,000	<117	<140	<33.3 UJ	458,000	1,220	225,000	108,000	108,000	<8,450	<8,450	<56.1	<1.03	10.6	49.7	<0.330	<0.150	208,000
U4-MW-15D	3/20/2023	N	EM07	UMCf	96.0 - 106.0	61,600	1,070,000	<24,000	<117	<140	68.9 J	403,000	2,030	196,000	77,100	77,100	<8,450	<8,450	<56.1	<1.03	8.49	56.3	<0.330	<0.150	156,000
U4-MW-15D	6/14/2023	N	EM10	UMCf	96.0 - 106.0	80,000	1,500,000	<24,000	<117	<140	37.7 J	489,000	2,020 J	193,000	95,600	95,600	<8,450	<8,450	<56.1	<1.03	9.43	61.7	<0.330	<0.150	197,000
U4-MW-15DD	4/13/2022	N	BL02	UMCf	120.3 - 130.3	1,380	19,700	<2,400	<117	<140	<33.3	152,000	878	214,000	108,000	100,000	<8,450	<8,450	<56.1	<1.03	18.8	21.3	<0.330	<0.150	34,000
U4-MW-15DD	12/5/2022	N	EM04	UMCf	120.3 - 130.3	20.1	1,580	<240	142 J	<140	36.9 J	144,000	1,260	177,000	82,600	77,800	<8,450	<8,450	<56.1	<1.03	16.8	25.2	<0.330	<0.150	32,300
U4-MW-15DD	3/15/2023	N	EM07	UMCf	120.3 - 130.3	14.5	<240	<240	<117	<140	52.3 J	141,000	1,470	165,000	81,600	79,300	<8,450	<8,450	62.9 J	<1.03	13.4	25.3	<0.330	<0.150	30,600
U4-MW-15DD	6/13/2023	N	EM10	UMCf	120.3 - 130.3	22.0	<120	<120	<117	<140	45.5 J	138,000	1,340	169,000	85,500	85,500	<8,450	<8,450	<56.1	<1.03	8.61	24.1	<0.330	<0.150	32,300
U4-MW-15I	4/12/2022	N	BL02	UMCf	76.8 - 86.8	86,400	1,190,000	<24,000	<117	<140	85.9 J	420,000	5,590	1,070,000	233,000	----	----	----	<56.1	<1.03	31.1	20.5 J+	<0.330	<0.150	127,000
U4-MW-15I	12/5/2022	N	EM04	UMCf	76.8 - 86.8	84,200	862,000	<24,000	<117	<140	45.5 J	500,000	827	875,000	486,000	486,000	<8,450	<8,450	<56.1	1.24 J	44.9	24.9	<0.330	<0.150	163,000
U4-MW-15I	3/17/2023	N	EM07	UMCf	76.8 - 86.8	376 J	<240	179,000	<117	2,510 J+	45.7 J	189,000	<48.0	1,640 J	1,440,000	1,440,000	<8,450	<8,450	<56.1	<1.03	39.0	874	<0.330	<0.150	194,000
U4-MW-15I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	13.4	<120	<120	131 J	2,050	81.8 J	226,000	<48.0 UJ	<594	1,460,000	1,460,000	<8,450	<8,450	<56.1	<1.03	83.2	629	<0.330	<0.150	178,000
U4-MW-15S	4/13/2022	N	BL02	UMCf	54.8 - 64.8	3,800	36,100	<24.0	<117	<140	74.6 J	178,000	2,750	1,190,000	100,000	100,000	<8,450	<8,450	112 J	<1.03	35.0	21.0	<0.330	<0.150	166,000 J
U4-MW-15S	12/5/2022	N	EM04	UMCf	54.8 - 64.8	663	<24,000	70,700	<117	2,030	143 J-	137,000	132	212,000	650,000	650,000	<8,450	<8,450	186 J	<1.03	49.4	419	<0.330	<0.150	197,000
U4-MW-15S	3/13/2023	N	EM07	UMCf	54.8 - 64.8	21.6 J-	<240	<2,400	<117	810	185	155,000	<480	14,700 J	1,500,000	1,500,000	<8,450	<8,450	<56.1	<1.03	44.0	217	<0.330	<0.150	94,100
U4-MW-15S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	<0.300	<120	<120	<117	7,440	257 J+	121,000	<48.0	12,200	2,360,000	2,360,000	<8,450	<8,450	<56.1	<1.03	40.4	360	<0.330	0.278 J	96,700
U4-MW-16D	4/11/2022	N	BL02	UMCf	96.8 - 106.8	1,670,000	15,000,000	<240,000	<117	<2,800	33.3 R	3,030,000	39,300	722,000	119,000	119,000	<8,450	<8,450	<56.1	<10.3	7.23 J	191	<0.330	<1.50	474,000
U4-MW-16D	12/5/2022	N	EM04	UMCf	96.8 - 106.8	974,000	5,970,000	<240,000	<117 UJ	<700	<33.3 UJ	1,740,000	17,100	573,000	259,000	259,000	<8,450	<8,450	<56.1	<1.03	1.92 J	94.1	<0.330	<0.150	149,000
U4-MW-16D	3/14/2023	N	EM07	UMCf	96.8 - 106.8	476,000 J+	4,140,000	<24,000	<117	<700	37.5 J	1,490,000	10,500	205,000	657,000	657,000	<8,450	<8,450	<56.1	<5.15	10.3	137	<0.330	<0.750	601,000
U4-MW-16D	6/13/2023	N	EM10	UMCf	96.8 - 106.8	1,170,000	8,530,000	<240,000	208 J	<1,400	88.1 J	2,180,000	25,200	377,000 J	554,000	554,000	<8,450	<8,450	378	<10.3	17.5 J	227	<0.330	<1.50	816,000
U4-MW-16DD	4/12/2022	N	BL02	UMCf	120.8 - 130.8	77,900	396,000	<240	<117	<140	87.1 J	229,000	569	623,000	94,500	----	----	----	<56.1	<1.03	20.0	24.7 J+	<0.330	<0.150	114,000
U4-MW-16DD	12/5/2022	N	EM04	UMCf	120.8 - 130.8	49,600	146,000	<24,000	<117	<140	<33.3 UJ	188,000	260	444,000	99,100	99,100	<8,450	<8,450	<56.1	<1.03	21.7	23.1	<0.330	<0.150	77,200
U4-MW-16DD	3/15/2023	N	EM07	UMCf	120.8 - 130.8	35,700	163,000	<2,400	<117	<140	<33.3	171,000	512	369,000	98,200	98,200	<8,450	<8,450	<56.1	<1.03	23.8	23.5	<0.330	<0.150	67,600
U4-MW-16DD	6/13/2023	N	EM10	UMCf	120.8 - 130.8	28,800	110,000	<2,400	<117	<140 UJ	<33.3	162,000	<48.0	361,000	93,500	93,500	<8,450	<8,450	<56.1	<1.03	24.5	22.7	<0.330	<0.150	60,000
U4-MW-16I	4/11/2022	N	BL02	UMCf	77.0 - 87.0	366,000	1,820,000	<24,000	<117	<700	33.3 R	546,000	6,600	979,000	60,000	42,800	17,200 J	<8,450	<56.1	<1.03	11.2	38.6	<0.330	<0.150	231,000
U4-MW-16I	12/5/2022	N	EM04	UMCf	77.0 - 87.0	205	<2,400	<24,000	<117	943	<33.3 UJ	147,000	72.8 J	195,000	1,030,000	1,030,000	<8,450	<8,450	<56.1	<1.03	69.5	182	<0.330	<0.150	153,000
U4-MW-16I	12/5/2022	FD	EM04	UMCf	77.0 - 87.0	263	<24,000	82,400	<117 UJ	956	<33.3 UJ	144,000	73.1 J	179,000	1,060,000	1,060,000	<8,450	<8,450	<56.1	<1.03	52.5	184	<0.330	<0.150	147,000
U4-MW-16I	3/13/2023	N	EM07	UMCf	77.0 - 87.0	<0.300	<24.0	109,000	<117	1,760 J-	35.3 J	120,000	<48.0	2,340 J	1,770,000	1,770,000	<8,450	<8,450	<56.1	<1.03	59.2	652	<0.330	<0.150	264,000
U4-MW-16I	3/13/2023	FD	EM07	UMCf	77.0 - 87.0	<0.300	<24.0	107,000	<117 UJ	1,910 J-	37.5 J	120,000	<48.0	1,760 J	1,770,000	1,770,000	<8,450	<8,450	<56.1	<1.03	58.9	650	<0.330	<0.150	264,000
U4-MW-16I	6/12/2023	N	EM10	UMCf	77.0 - 87.0	<0.300	<120	<120 UJ	<117	1,530	48.2 J	133,000	49.8 J	<594	1,670,000	1,670,000	<8,450	<8,450	61.2 J	<1.03	83.7	459	<0.330	<0.150	215,000
U4-MW-16I	6/12/2023	FD	EM10	UMCf	77.0 - 87.0	<0.300	<120	<120 UJ	<117	1,470	47.4 J	132,000	49.6 J	<594	1,640,000	1,640,000	<8,450	<8,450	<56.1	3.28 J	83.0	459	<0.330	<0.150	217,000
U4-MW-16S	4/12/2022	N	BL02	UMCf	54.8 - 64.8	9,400	64,100	<240	<117	<140	<33.3	173,000	2,700	1,150,000	64,800	----	----	----	<56.1	<1.03	20.9	22.2 J+	<0.330	<0.150	169,000
U4-MW-16S	4/12/2022	FD	BL02	UMCf	54.8 - 64.8	9,860	64,100	<240	<117	<140	33.3 R	171,000	2,850	1,140,000	64,400	----	----	----	<56.1	<1.03	21.2	22.5 J+	<0.330	<0.150	168,000
U4-MW-16S	12/6/2022	N	EM04	UMCf	54.8 - 64.8	1,030 J+	<2400 UJ	<2400 R	<117 UJ	522	68.4 J	173,000	<48.0 UJ	988,000	174,000	174,000	<8450 UJ	<8450 UJ	<18.5 UJ	<1.03 UJ	37.5	18.0	<0.190 UJ	<0.150 UJ	136,000
U4-MW-16S	3/15/2023	N	EM07	UMCf	54.8 - 64.8	<0.300	<24,000	84,200	<117	944	253	107,000	<48.0	<594	1,770,000	1,770,000	<8,450	<8,450	<56.1	<1.03	61.8	260	<0.330	<0.150	203,000
U4-MW-16S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	<0.300	<240	<240 UJ	<117	1,790	260 J+	113,000	<48.0	861 J	1,860,000	1,860,000	<8,450	<8,450	<56.1	<1.03	72.6	462	<0.330	<0.150	254,000
U4-SLMW	11/10/2022	N	EM03	N/A	-	<0.300	4,220 J-	<240	<117	325	46.9 J	----	384	221,000	----	----	----	----	----	----	----	----	----	----	----
U4-T3	10/13/2022	N	EM02	N/A	-	928,000	7,380,000	<240,000	----	----	----	1,890,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-T3	11/3/2022	N	EM03	N/A	-	887,000	7,450,000	<240,000	----	----	----	1,780,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-T3	12/6/2022	N	EM04	N/A	-	766,000	5,280,000	<240000 UJ	----	----	----	1,250,000	----	----	----	----	----	----	----	----	----	----	----	----	----

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	E314.0	E300.1		E350.1	E351.2	E365.1	Anions by E300.0/SW9065A			Alkalinity by SM2320B		Alkalinity by SM2320B		Dissolved Metals by SW6010B/SW6020						
						Perchlorate	Chlorate	Chlorite	Ammonia (as N)	Total Kjeldahl Nitrogen (TKN)	Phosphorus	Chloride	Nitrate (as N)	Sulfate	Alkalinity as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Hydroxide Alkalinity as CaCO3	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-T3	1/9/2023	N	EM05	N/A	-	886,000	7,910,000	<240,000	----	----	----	1,850,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-T3	2/13/2023	N	EM06	N/A	-	877,000	7,800,000	<24,000	----	----	----	1,770,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-T3	3/13/2023	N	EM07	N/A	-	815,000	7,400,000	<24,000	----	----	----	1,810,000	14,500	----	----	----	----	----	----	----	----	----	----	----	----
U4-T3	4/19/2023	N	EM08	N/A	-	406,000	2,880,000	<24,000	----	----	----	885,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-T3	5/18/2023	N	EM09	N/A	-	498,000	4,200,000	<24,000	----	----	----	1,230,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-T3	6/12/2023	N	EM10	N/A	-	488,000	3,720,000	<240000 UJ	----	----	----	1,240,000	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-T3	7/11/2023	N	EM11	N/A	-	451,000	3,990,000	<24,000	----	----	----	1,260,000	----	----	----	----	----	----	----	----	----	----	----	----	----

Notes:
FD - Field duplicate
E - Field instrument error.
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 low.
J+ - The result is an estimated quantity, but the result may be biased high.
N/A - Not Applicable
mg/L - milligrams per liter
µg/L - micrograms per liter
N - Normal field sample

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.

UMCf- Upper Muddy Creek Formation
< - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
-- Not tested.
M-252 damaged/obstructed when checked on June 14, 2023 for EM10.

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Dissolved Metals by SW6010B/SW6020																		FIELD TESTS	
						Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silver	Sodium	Thallium	Uranium	Vanadium	Zinc	Conductivity	Dissolved Oxygen
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mS/cm	mg/L
M-247-100	4/20/2022	N	BL02	UMCf	100.5 - 110.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	0.956	1.80
M-249-100	4/20/2022	N	BL02	UMCf	99.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	34.552	0.56
M-251-100	4/19/2022	N	BL02	UMCf	92.5 - 102.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	42.112	1.63
M-251-100	10/13/2022	N	EM02	UMCf	92.5 - 102.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16.998	4.13
M-251-100	11/2/2022	N	EM03	UMCf	92.5 - 102.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	18.268	4.61
M-251-100	12/8/2022	N	EM04	UMCf	92.5 - 102.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	19.870	4.83
M-251-100	1/11/2023	N	EM05	UMCf	92.5 - 102.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9.502	5.52
M-251-100	2/13/2023	N	EM06	UMCf	92.5 - 102.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10.973	6.27
M-251-100	3/17/2023	N	EM07	UMCf	92.5 - 102.5	20,700	<0.840	<7.55	<18.0	<4.24	235,000	2.11 J	8.60	<4.08	----	33,800	4.45 J	<0.350	1,700,000	<0.605	6.02 J	11.3 J	<15.1	12.924	8.09
M-251-100	4/21/2023	N	EM08	UMCf	92.5 - 102.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	17.375	0.57
M-251-100	5/9/2023	N	EM09	UMCf	92.5 - 102.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	19.858	4.58
M-251-100	6/14/2023	N	EM10	UMCf	92.5 - 102.5	35,400	<0.840	<7.55	<18.0	<4.24	380,000	3.41 J	7.87	<4.08	----	60,000	4.63 J	<0.350	2,690,000	<0.605	5.71	<4.99	<15.1	19.291	3.85
M-251-100	7/14/2023	N	EM11	UMCf	92.5 - 102.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	17.476	5.11
M-251-60	4/18/2022	N	BL02	UMCf	52.3 - 62.3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.163	5.64
M-251-60	3/15/2023	N	EM07	UMCf	52.3 - 62.3	1,520	<0.840	1.58 J	<18.0	<0.849	155 J	<0.934	24.2	<0.816	----	31,400	2.90	<0.0700	815,000	<0.121	0.164 J	88.6	3.06 J	3.539	2.45
M-251-60	6/14/2023	N	EM10	UMCf	52.3 - 62.3	1,760	1.83 J	2.35 J	<18.0	<0.849	149 J	<0.934	23.4	<0.816	----	18,800	3.26	<0.0700	836,000	<0.121	0.184 J	82.9	9.60 J	4.110	1.37
M-252	4/21/2022	N	BL02	UMCf	132.3 - 142.3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.053	5.66
M-252	3/15/2023	N	EM07	UMCf	132.3 - 142.3	91.0	<0.840	1.88 J	44.5 J	<0.849	21,100	21.9	7.34	<0.816	----	23,700	1.89 J	<0.0700	307,000	<0.121	0.682 J	<4.99	<3.02	1.095	1.94
M-253-100	4/20/2022	N	BL02	UMCf	100.8 - 110.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.393	3.04
M-255-100	4/20/2022	N	BL02	UMCf	100.2 - 110.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.198	1.87
U4-E-01D	4/18/2022	N	BL02	UMCf	94.7 - 109.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	42.734	0.85
U4-E-01D	3/14/2023	N	EM07	UMCf	94.7 - 109.7	3.28 J	<0.840	2.98 J	<18.0	<0.849	28,500	3.24 J	5.79	1.55 J	----	5,180	2.33 J+	<0.0700	109,000	<0.121	4.22	<4.99	31.6	1.180	7.21
U4-E-01I	4/19/2022	N	BL02	UMCf	74.6 - 89.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	0.072	9.17
U4-E-01I	4/19/2022	FD	BL02	UMCf	74.6 - 89.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-01I	3/14/2023	N	EM07	UMCf	74.6 - 89.6	16,400	<0.840	<1.51	24.9 J	2.57	183,000	9.17 J	7.93	1.50 J	----	23,900	2.79 J+	<0.0700	1,240,000	<0.121	13.1	11.1 J	6.82 J	8.100	8.18
U4-E-01I	4/20/2023	N	EM08	UMCf	74.6 - 89.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6.667	0.56
U4-E-01I	5/10/2023	N	EM09	UMCf	74.6 - 89.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	19.499	-8.13
U4-E-01I	6/12/2023	N	EM10	UMCf	74.6 - 89.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.467	6.43
U4-E-01I	7/11/2023	N	EM11	UMCf	74.6 - 89.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4.658	2.89
U4-E-02D	4/20/2022	N	BL02	UMCf	94.4 - 109.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9.255	0.62
U4-E-02D	3/14/2023	N	EM07	UMCf	94.4 - 109.4	9.61 J	<0.840	2.84 J	33.4 J	<0.849	28,000	5.58 J	5.60	7.62	----	5,090	2.54 J+	0.250 J	107,000	<0.121	4.17	<4.99	39.1	1.040	5.47
U4-E-02I	4/18/2022	N	BL02	UMCf	74.4 - 89.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9.309	4.25
U4-E-02I	3/14/2023	N	EM07	UMCf	74.4 - 89.4	2,140	<0.840	<1.51	182	<0.849	34,100	25.4	6.14	<0.816	----	7,080	2.28 J+	0.161 J	310,000	<0.121	8.65	11.2 J	109	1.211	5.22
U4-E-02I	4/20/2023	N	EM08	UMCf	74.4 - 89.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.027	0.34
U4-E-02I	5/11/2023	N	EM09	UMCf	74.4 - 89.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	59.186	15.52
U4-E-02I	6/12/2023	N	EM10	UMCf	74.4 - 89.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.989	5.67
U4-E-02I	7/11/2023	N	EM11	UMCf	74.4 - 89.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.684	5.14
U4-E-03D	4/19/2022	N	BL02	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	36.139	0.68
U4-E-03D	10/13/2022	N	EM02	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	11/3/2022	N	EM03	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16.802	4.86
U4-E-03D	12/6/2022	N	EM04	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11.752	6.10
U4-E-03D	1/9/2023	N	EM05	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9.776	7.80
U4-E-03D	2/13/2023	N	EM06	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11.469	7.00
U4-E-03D	3/13/2023	N	EM07	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-03D	3/14/2023	N	EM07	UMCf	95.1 - 110.1	34,800	<0.840	16.8 J	<18.0	<4.24	190,000	3.76 J	13.1	<4.08	----	39,600	4.70 J	<0.350	2,730,000	<0.605	13.7	11.5 J	<15.1	13.740	5.37
U4-E-03D	4/19/2023	N	EM08	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11.829	0.51
U4-E-03D	5/11/2023	N	EM09	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	121.248	17.27
U4-E-03D	6/12/2023	N	EM10	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16.419	6.77
U4-E-03D	7/11/2023	N	EM11	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16.930	2.16
U4-E-04D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	22.249	1.29
U4-E-04D	3/14/2023	N	EM07	UMCf	95.0 - 110.0	<1.40	<0.840	3.27 J	342	<0.849	27,900	4.47 J	4.87 J	4.33	----	5,050	1.98 J	<0.0700	106,000	<0.121	4.19	<4.99	35.1	0.999	6.07
U4-E-04I	4/18/2022	N	BL02	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4.524	0.84
U4-E-04I	3/14/2023	N	EM07	UMCf	75.0 - 90.0	58,500	<0.840	<7.55	20.6 J	<4.24	414,000	20.2	13.6	78.0	----	65,500	6.52 J	<0.350	4,390,000	<0.605	10.1	6.22 J	<15.1	22.410	4.33
U4-E-05D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	26.037	3.43
U4-E-05D	3/16/2023	N	EM07	UMCf	95.0 - 110.0	1.57 J	0.903 J	3.65 J	23.0 J	<0.849	27,900	253	5.45	7.12	----	5,590	1.43 J	<0.0700	102,000	<0.121	3.57	<4.99	90.4	0.537	1.78
U4-E-05I	4/19/2022	N	BL02	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.209	0.59
U4-E-05I	3/15/2023	N	EM07	UMCf	75.0 - 90.0	7,780	<0.840	5.23	<18.0	<0.849	28,600	9.92 J	9.77	58.2	----	11,800	1.85 J	<0.0700	698,000	<0.121	13.2	16.6 J	10.1 J	8.778	7.39
U4-E-06D	4/11/2022	N	BL02	UMCf	95.1 - 110.1	11,900 J	<0.840	<1.51	<18.0	<0.849	255,000 J	19.9	3.31 J	5.53	25.3 J	32,800 J	2.53	<0.0700	1,310,000	<0.121	5.59	<4.99	5.24 J	9.911	2.39
U4-E-06I	4/11/2022	N	BL02	UMCf	73.2 - 88.2	2,270	<0.840	2.20 J	<18.0	<0.849	88,400	8.86 J	13.6	<0.816	45.1 J	23,300	2.37	<0.0700	624,000	<0.121	7.83	17.4 J	4.73 J	4.282	2.10
U4-E-06I	4/11/2022	FD	BL02	UMCf	73.2 - 88.2	2,260	<0.840	3.02 J	<18.0	<0.849	87,900	8.46 J	13.9	<0.816	46.2 J	23,200	2.53	<0.0700	622,000	<0.121	7.85	15.5 J	5.71 J	----	----
U4-E-06I	10/12/2022	N	EM02	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-06I	11/3/2022	N	EM03	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-06I	12/6/2022	N	EM04	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.809	2.83
U4-E-06I	1/9/2023	N	EM05	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.965	55.80
U4-E-06I	2/13/2023	N	EM06	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8.481	6.55
U4-E-06I	3/13/2023	N	EM07	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.755	2.06
U4-E-06I	4/17/2023	N	EM08	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8.065	0.62
U4-E-06I	5/15/2023	N	EM09	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	13.700	2.61
U4-E-06I	6/12/2023	N	EM10	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	15.651	5.52
U4-E-06I	7/11/2023	N	EM11	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	14.385	2.42
U4-E-07D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	79,000	<4.20	<15.1	<90.0	<8.49	634,000	22.5 J	8.85 J	<8.16	<91.5	74,800	9.10 J	<0.700	5,760,000	<1.21	5.33 J	<25.0	<30.2	28.599	1.02
U4-E-07I	4/12/2022	N	BL02	UMCf	74.7 - 89.7	15,100	<0.840	2.99 J	<18.0	<0.849	66,000	8.86 J	18.0	1.14 J	194 J	23,400	3.34	<0.0700	1,610,000	<0.121	9.05	45.7	3.42 J	6.791	2.78
U4-E-07I	10/11/2022	N	EM02	UMCf	74.7 - 89.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-07I	11/3/2022	N	EM03	UMCf	74.7 - 89.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	14.508	4.32
U4-E-07I	12/6/2022	N	EM04	UMCf	74.7 - 89.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	13.019	2.90
U4-E-07I	1/9/2023	N	EM05	UMCf	74.7 - 89.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7.227	4.15
U4-E-07I	2/13/2023	N	EM06	UMCf	74.7 - 89.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	12.582	6.63
U4-E-07I	3/13/2023	N	EM07	UMCf	74.7 - 89.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.774	3.04
U4-E-07I	4/19/2023	N	EM08	UMCf	74.7 - 89.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	12.284	0.26

DRAFT

Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Dissolved Metals by SW6010B/SW6020																		FIELD TESTS	
						Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silver	Sodium	Thallium	Uranium	Vanadium	Zinc	Conductivity	Dissolved Oxygen
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mS/cm	mg/L
U4-E-07I	5/15/2023	N	EM09	UMCf	74.7 - 89.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7.144	2.56
U4-E-07I	6/12/2023	N	EM10	UMCf	74.7 - 89.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	14.175	2.72
U4-E-07I	7/11/2023	N	EM11	UMCf	74.7 - 89.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	14.819	1.95
U4-E-08D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	92,600	<4.20	<15.1	<90.0	<8.49	737,000	54.7	10.2 J	<8.16	<91.5	82,200	7.15 J	<0.700	6,200,000	<1.21	7.00 J	<25.0	<30.2	31.747	1.11
U4-E-08D	10/11/2022	N	EM02	UMCf	94.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-08D	11/3/2022	N	EM03	UMCf	94.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	22.510	2.00
U4-E-08D	12/6/2022	N	EM04	UMCf	94.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	17.697	3.19
U4-E-08D	1/9/2023	N	EM05	UMCf	94.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10.120	58.00
U4-E-08D	2/13/2023	N	EM06	UMCf	94.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16.329	6.82
U4-E-08D	3/13/2023	N	EM07	UMCf	94.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	13.288	2.58
U4-E-08D	4/19/2023	N	EM08	UMCf	94.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	15747.000	0.26
U4-E-08D	5/17/2023	N	EM09	UMCf	94.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	13.979	3.62
U4-E-08D	6/12/2023	N	EM10	UMCf	94.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	18.024	2.95
U4-E-08D	7/11/2023	N	EM11	UMCf	94.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16.343	1.76
U4-E-09D	4/15/2022	N	BL02	UMCf	94.5 - 109.5	27,200	<0.840	<15.1	18.8 J	<8.49	360,000	23.2	<5.80	<8.16	172 J	46,900	3.01 J	<0.700	1,840,000	<1.21	5.49 J	7.06 J	<30.2	16.373	1.12
U4-E-09I	4/14/2022	N	BL02	UMCf	74.9 - 89.9	9,660	<0.840	6.53	<18.0	<0.849	91,600	21.6	13.2	2.61	199 J	25,300	2.47	<0.0700	1,100,000	<0.121	9.29	16.8 J	3.75 J	6.980	5.93
U4-E-10D	4/13/2022	N	BL02	UMCf	94.5 - 109.5	9,680	<0.840	<1.51	<18.0	<0.849	165,000	7.51 J	8.19	20.5	34.0 J	29,700	2.51	<0.0700	1,120,000	<0.121	1.64	6.53 J	<3.02	8.624	0.77
U4-E-10I	4/13/2022	N	BL02	UMCf	74.2 - 89.2	16,100	<0.840	4.02 J	<18.0	<0.849	133,000	7.93 J	11.6	2.29	<18.3	26,000	2.58	<0.0700	1,410,000	<0.121	10.6	14.5 J	7.05 J	9.367	1.04
U4-MW-01D	4/19/2022	N	BL02	UMCf	96.7 - 106.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11.556	0.72
U4-MW-01D	2/16/2023	N	EM06	UMCf	96.7 - 106.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7.060	11.76
U4-MW-01D	3/20/2023	N	EM07	UMCf	96.7 - 106.7	4,860	<0.840	6.39	<18.0	<0.849	62,300	<0.934	<1.16	<0.816	----	5,630	3.03	<0.0700	165,000	<0.121	3.18	<4.99	<3.02	12.024	5.68
U4-MW-01D	6/13/2023	N	EM10	UMCf	96.7 - 106.7	19,800	<0.840	<15.1	<18.0	<8.49	240,000 J+	2.25 J	5.02 J+	<8.16	----	26,500	148	<0.700	769,000	<1.21	3.51	6.20 J	<30.2	7.279	5.89
U4-MW-01DD	4/19/2022	N	BL02	UMCf	119.9 - 129.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.873	0.81
U4-MW-01DD	4/19/2022	FD	BL02	UMCf	119.9 - 129.9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-01DD	3/15/2023	N	EM07	UMCf	119.9 - 129.9	8,120	<0.840	3.13 J	<18.0	<0.849	125,000	11.3 J+	6.64	<0.816	----	21,800	1.92 J	<0.0700	377,000	<0.121	2.59	<4.99	<3.02	6.737	2.84
U4-MW-01DD	6/13/2023	N	EM10	UMCf	119.9 - 129.9	9,010	<0.840	<15.1	<18.0	<8.49	108,000 J+	3.52 J	3.58 J	<8.16	----	23,300	82.9	<0.700	421,000	<1.21	1.09	<4.99	<30.2	4.786	3.56
U4-MW-01I	4/19/2022	N	BL02	UMCf	76.7 - 86.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9.209	0.67
U4-MW-01I	3/20/2023	N	EM07	UMCf	76.7 - 86.7	5,440	<0.840	7.21	<18.0	1.06 J	85,700	4.20 J	<1.16	<0.816	----	7,270	3.38	0.146 J	213,000	0.148 J	3.88	<4.99	<3.02	16.598	7.69
U4-MW-01I	6/12/2023	N	EM10	UMCf	76.7 - 86.7	19,200	<0.840	4.18 J	<18.0 UJ	<0.849	252,000	1.32 J	5.17	2.49	----	27,400	2.52	<0.0700	779,000	<0.121	3.83	<4.99	11.4 J	7.447	5.80
U4-MW-01S	4/18/2022	N	BL02	UMCf	54.7 - 64.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4.903	4.81
U4-MW-01S	3/15/2023	N	EM07	UMCf	54.7 - 64.7	1,290	<0.840	5.26	66.4 J	<0.849	4,240	<0.934	24.4	<0.816	----	17,500	2.64	<0.0700	859,000	<0.121	2.66	66.7	<3.02	4.199	5.90
U4-MW-01S	6/13/2023	N	EM10	UMCf	54.7 - 64.7	1,530	<0.840	<1.51	43.8 J	<0.849	3,920 J+	82.4	24.6	172	----	18,800	3.01	<0.0700	854,000	<0.121	2.22	67.6	<3.02	4.283	4.21
U4-MW-02D	4/14/2022	N	BL02	UMCf	95.0 - 110.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	47.936	0.74
U4-MW-02D	10/11/2022	N	EM02	UMCf	95.0 - 110.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	82.713	0.99
U4-MW-02D	11/1/2022	N	EM03	UMCf	95.0 - 110.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	61.099	0.93
U4-MW-02D	12/7/2022	N	EM04	UMCf	95.0 - 110.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	41.262	1.18
U4-MW-02D	1/10/2023	N	EM05	UMCf	95.0 - 110.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	28.405	1.73
U4-MW-02D	2/13/2023	N	EM06	UMCf	95.0 - 110.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	25.274	2.04
U4-MW-02D	3/17/2023	N	EM07	UMCf	95.0 - 110.0	94,700	<0.840	<15.1	<18.0	<8.49	636,000	5.23 J	16.0	<8.16	----	94,100	7.47 J	1.64 J	6,650,000	<1.21	3.50 J	<4.99	<30.2	38.385	2.05
U4-MW-02D	4/19/2023	N	EM08	UMCf	95.0 - 110.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	37.915	0.18
U4-MW-02D	5/9/2023	N	EM09	UMCf	95.0 - 110.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	35.930	2.52
U4-MW-02D	6/13/2023	N	EM10	UMCf	95.0 - 110.0	96,900	<4.20	<15.1	<90.0	<8.49	599,000 J+	4.80 J	14.7 J	<8.16	----	82,700	51.6	0.800 J	7,010,000	<1.21	53.6	<25.0	<30.2	35.233	7.26
U4-MW-02D	7/18/2023	N	EM11	UMCf	95.0 - 110.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	40.985	1.73
U4-MW-02I	4/14/2022	N	BL02	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8.827	3.75
U4-MW-02I	10/11/2022	N	EM02	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	20.389	0.98
U4-MW-02I	11/2/2022	N	EM03	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	17.936	0.44
U4-MW-02I	11/2/2022	FD	EM03	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	12/8/2022	N	EM04	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.625	1.11
U4-MW-02I	12/8/2022	FD	EM04	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	1/13/2023	N	EM05	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	1/13/2023	FD	EM05	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	2/15/2023	N	EM06	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	22.789	1.09
U4-MW-02I	2/15/2023	FD	EM06	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	3/17/2023	N	EM07	UMCf	75.0 - 90.0	61,100	<0.840	<7.55	<18.0	<4.24	294,000	221	23.4	103	----	73,000	6.92 J	<0.350	4,660,000	<0.605	19.3	8.84 J	<15.1	27.205	0.39
U4-MW-02I	3/17/2023	FD	EM07	UMCf	75.0 - 90.0	61,000	<0.840	<7.55	<18.0	<4.24	289,000	229	23.8	99.2	----	71,300	4.91 J	<0.350	4,660,000	<0.605	18.7	12.3 J	<15.1	----	----
U4-MW-02I	4/20/2023	N	EM08	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.331	0.04
U4-MW-02I	4/20/2023	FD	EM08	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	5/9/2023	N	EM09	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.966	1.00
U4-MW-02I	5/9/2023	FD	EM09	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	6/12/2023	N	EM10	UMCf	75.0 - 90.0	515	2.84 J	4.33 J	236 J+	<0.849 UJ	82,700	972	7.65	46.0	----	19,000	0.654 J	<0.0700	836,000	<0.121	60.1	18.9 J	12.9 J	4.378	1.99
U4-MW-02I	6/12/2023	FD	EM10	UMCf	75.0 - 90.0	491	2.71 J	7.48	214 J+	4.08 J	79,800	943	7.12	46.1	----	18,400	0.552 J	<0.0700	810,000	<0.121	62.5	18.3 J	15.9 J	----	----
U4-MW-02I	7/18/2023	N	EM11	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4.126	0.21
U4-MW-02I	7/18/2023	FD	EM11	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-03D	4/20/2022	N	BL02	UMCf	96.6 - 106.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	19.006	2.71
U4-MW-03D	2/16/2023	N	EM06	UMCf	96.6 - 106.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7.848	5.12
U4-MW-03D	3/16/2023	N	EM07	UMCf	96.6 - 106.6	28,100	<0.840	<7.55	<18.0	<4.24	369,000	8.20 J	4.49 J	<4.08	----	35,900	1.88 J	<0.350	1,840,000	<0.605	2.41 J	<4.99	<15.1	797.196	3.67
U4-MW-03D	3/16/2023	FD	EM07	UMCf	96.6 - 106.6	28,200	<0.840	<7.55	<18.0	4.90 J	369,000	2.65 J	5.12	<4.08	----	35,900	3.11 J	<0.350	1,890,000	<0.605	2.52 J	<4.99	<15.1	----	----
U4-MW-03D	6/15/2023	N	EM10	UMCf	96.6 - 106.6	28,300	<0.840	<7.55	<18.0	<4.24	332,000	1.55 J	4.90 J	<4.08	----	36,600	3.02 J	<0.350	1,820,000	<0.605	2.67	<25.0	<15.1	12.408	7.77
U4-MW-03DD	4/20/2022	N	BL02	UMCf	119.7 - 129.7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.756	1.07
U4-MW-03DD	3/15/2023	N	EM07	UMCf	119.7 - 129.7	64.2	<0.840	<1.51	<18.0	<0.849	16,400	3.34 J	8.98	<0.816	----	6,600	1.83 J	<0.0700	145,000	<0.121	2.55	7.92 J	<3.02	1.855	2.71
U4-MW-03DD	6/15/2023	N	EM10	UMCf	119.7 - 129.7	48.5	<0.840	<1.51	<18.0	<0.849	16,600	1.74 J	8.83 J+	1.35 J	----	6,690	1.57 J	<0.0700	143,000	<0.121	2.35	11.0 J	<3.02	1.081	1.55
U4-MW-03I	4/19/2022	N	BL02	UMCf	76.6 - 86.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6.055	1.28
U4-MW-03I	3/15/2023	N	EM07	UMCf	76.6 - 86.6	25,400	<0.840	<1.51	<18.0	<0.849	325,000	5.11 J	5.12	<0.816	----	37,100	2.88 J+	0.0987 J	1,590,000	0.158 J	4.09	<4.99	<3.02	22.711	4.02
U4-MW-03I	6/14/2023	N	EM10	UMCf	76.6 - 86.6	23,500	<0.840	<7.55	<18.0	<4.24	274,000	1.63 J	6.28	<4.08	----	36,500	3.33 J	<0.350	1,540,000	<0.605	3.39 J	8.63 J	<15.1	12.632	4.07
U4-MW-03I	6/14/2023	FD	EM10	UMCf	76.6 - 86.6	24,400	<0.840	<7.55	<18.0	<4.24	284,000	1.57 J	7.16	<4.08	----	38,100	3.25 J	<0.350	1,640,000	<0.605	3.43 J	7.62 J	<15.1	----	----
U4-MW-03S	4/18/2022	N	BL02	UMCf	54.5 - 64.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4.716	9.18
U4-MW-03S	4/18/2022	FD	BL02	UMCf	54.5 - 64.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-03S	3/15/2023	N	EM07	UMCf	54.5 - 64.5	2,290	<0.840	<1.51	<18.0	<0.849	584 J	3.04 J	20.8	<0.816	----	11,100	3.27 J+	<0.0700	892,000	<0.121	6.81	159	<3.02	7.108	3.63
U4-MW-03S	6/15/2023	N	EM10	UMCf	54.5 - 64.5	2,620	<0.840	<1.51	<18.0	<0.849	16,800	<0.934	21.4	<0.816	----	12,000	2.90	<0.0700	971,000	<0.121	5.87	105	<3.02	4.357	0.56

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Dissolved Metals by SW6010B/SW6020																		FIELD TESTS	
						Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silver	Sodium	Thallium	Uranium	Vanadium	Zinc	Conductivity	Dissolved Oxygen
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mS/cm	mg/L
U4-MW-04D	4/19/2022	N	BL02	UMCf	97.0 - 107.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	50.188	0.90
U4-MW-04D	2/16/2023	N	EM06	UMCf	97.0 - 107.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.802	7.81
U4-MW-04D	3/21/2023	N	EM07	UMCf	97.0 - 107.0	2,740	<0.840	<1.51	<18.0	<0.849	23,700	1.08 J	<1.16	<0.816	----	2,920	2.08	<0.0700	205,000	<0.121	9.80	<4.99	<3.02	5.697	7.32
U4-MW-04D	6/14/2023	N	EM10	UMCf	97.0 - 107.0	11,100	2.01 J	<7.55	<18.0	<4.24	92,600	8.64 J	3.74 J	<4.08	----	16,200	2.08 J	<0.350	965,000	<0.605	15.5	11.8 J	<15.1	5.920	0.79
U4-MW-04I	4/19/2022	N	BL02	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	22.833	0.68
U4-MW-04I	3/20/2023	N	EM07	UMCf	76.8 - 86.8	7,070	<0.840	19.3 J	<18.0	<4.24	71,500	<0.934	1.55 J	<4.08	----	6,810	2.95 J	<0.350	482,000	<0.605	7.91	<4.99	<15.1	15.330	5.23
U4-MW-04I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	28,200	<0.840	<7.55	<18.0	<4.24	256,000	17.1	3.55 J	<4.08	----	34,800	4.23 J	<0.350	2,010,000	<0.605	22.0	6.74 J	<15.1	12.208	1.12
U4-MW-05D	4/15/2022	N	BL02	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	39.740	0.77
U4-MW-05D	10/13/2022	N	EM02	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	24.933	3.56
U4-MW-05D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	17.012	4.46
U4-MW-05D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16.306	4.72
U4-MW-05D	1/11/2023	N	EM05	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10.893	5.62
U4-MW-05D	2/14/2023	N	EM06	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.665	7.00
U4-MW-05D	3/16/2023	N	EM07	UMCf	98.2 - 108.2	28,700	<0.840	<7.55	<18.0	<4.24	129,000	2.45 J	15.8	<4.08	----	34,300	<1.50	<0.350	2,670,000	<0.605	13.1	11.8 J	<15.1	13.970	5.77
U4-MW-05D	4/20/2023	N	EM08	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8.597	0.09
U4-MW-05D	5/10/2023	N	EM09	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	22.381	-39.98
U4-MW-05D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	6,510	<0.840	<7.55	<18.0	<4.24	108,000	432	17.0	6.24 J	----	26,000	2.13 J	<0.350	1,810,000	<0.605	93.9	<4.99	<15.1	6.646	0.78
U4-MW-05D	7/18/2023	N	EM11	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11.868	0.37
U4-MW-05I	4/15/2022	N	BL02	UMCf	76.6 - 86.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	20.080	0.87
U4-MW-05I	10/13/2022	N	EM02	UMCf	76.6 - 86.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	24.065	2.94
U4-MW-05I	11/3/2022	N	EM03	UMCf	76.6 - 86.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	21.533	3.08
U4-MW-05I	12/8/2022	N	EM04	UMCf	76.6 - 86.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	0.258	6.78
U4-MW-05I	1/11/2023	N	EM05	UMCf	76.6 - 86.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	12.599	4.84
U4-MW-05I	2/14/2023	N	EM06	UMCf	76.6 - 86.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.446	5.76
U4-MW-05I	3/14/2023	N	EM07	UMCf	76.6 - 86.6	30,300	<0.840	<7.55	490	<4.24	117,000	9.99 J	22.5	<4.08	----	36,600	3.42 J	<0.350	2,700,000	<0.605	16.0	21.8	<15.1	23.991	6.62
U4-MW-05I	4/21/2023	N	EM08	UMCf	76.6 - 86.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.477	0.92
U4-MW-05I	5/10/2023	N	EM09	UMCf	76.6 - 86.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	13.468	-1.10
U4-MW-05I	6/15/2023	N	EM10	UMCf	76.6 - 86.6	468	<0.840	<1.51	742	<0.849	81,600	609	4.70 J	11.8	----	20,900	0.461 J	<0.0700	1,810,000	<0.121	96.4	24.8	9.57 J	4.781	0.37
U4-MW-05I	7/17/2023	N	EM11	UMCf	76.6 - 86.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10.427	0.14
U4-MW-06D	4/19/2022	N	BL02	UMCf	97.1 - 107.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-06D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16.354	5.93
U4-MW-06D	3/21/2023	N	EM07	UMCf	97.1 - 107.1	7,300	<0.840	<1.51	<18.0	<0.849	62,500	1.26 J	<1.16	<0.816	----	7,760	3.38	0.293 J	530,000	0.144 J	6.77	<4.99	<3.02	9.930	5.41
U4-MW-06D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	38,400	<0.840	18.1 J	<18.0	<4.24	370,000	10.4	6.49	<4.08	----	47,800	2.38 J	<0.350	3,030,000	<0.605	7.14	<49.9	16.2 J	10.958	5.42
U4-MW-06I	4/19/2022	N	BL02	UMCf	76.5 - 86.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6.356	0.75
U4-MW-06I	3/14/2023	N	EM07	UMCf	76.5 - 86.5	40,000	<0.840	<7.55	<18.0	<4.24	322,000	3.27 J	13.6	<4.08	----	51,200	6.26 J	<0.350	3,280,000	<0.605	9.11	11.5 J	<15.1	4.941	6.89
U4-MW-06I	6/16/2023	N	EM10	UMCf	76.5 - 86.5	40,100	<0.840	22.5 J	<18.0	<4.24	352,000	37.1	10.8	<4.08	----	52,400	3.90 J	<0.350	3,300,000	<0.605	31.8	<49.9	15.5 J	6.217	8.13
U4-MW-07D	4/15/2022	N	BL02	UMCf	96.8 - 106.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10.924	4.48
U4-MW-07D	10/12/2022	N	EM02	UMCf	96.8 - 106.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.057	6.89
U4-MW-07D	10/12/2022	FD	EM02	UMCf	96.8 - 106.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	11/3/2022	N	EM03	UMCf	96.8 - 106.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.730	6.43
U4-MW-07D	12/7/2022	N	EM04	UMCf	96.8 - 106.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.462	8.66
U4-MW-07D	1/11/2023	N	EM05	UMCf	96.8 - 106.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.736	11.30
U4-MW-07D	2/14/2023	N	EM06	UMCf	96.8 - 106.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.217	9.30
U4-MW-07D	3/16/2023	N	EM07	UMCf	96.8 - 106.5	931	<0.840	<1.51	86.5 J	<0.849	39,700	1.27 J	3.84 J	<0.816	----	5,290	1.91 J	<0.0700	189,000	<0.121	7.45	<4.99	<3.02	0.029	7.54
U4-MW-07D	4/21/2023	N	EM08	UMCf	96.8 - 106.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4.642	0.05
U4-MW-07D	5/11/2023	N	EM09	UMCf	96.8 - 106.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	37.585	44.89
U4-MW-07D	6/13/2023	N	EM10	UMCf	96.8 - 106.5	1,700	5.04 J	1.55 J	<18.0	<0.849	204,000 J+	2,920	3.64 J	32.4	----	15,100 J+	5.68	<0.0700	537,000	0.168 J	3.74 J	8.40 J	<3.02	4.893	1.10
U4-MW-07D	7/17/2023	N	EM11	UMCf	96.8 - 106.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16.019	0.37
U4-MW-07I	4/15/2022	N	BL02	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.556	0.59
U4-MW-07I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.078	6.24
U4-MW-07I	11/3/2022	N	EM03	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.794	6.05
U4-MW-07I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.562	8.32
U4-MW-07I	1/11/2023	N	EM05	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.955	9.11
U4-MW-07I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.786	8.45
U4-MW-07I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	2,670	<0.840	<1.51	29.1 J	<0.849	46,800	0.976 J	3.33 J	0.924 J	----	7,190	1.39 J	<0.0700	314,000	<0.121	8.83	5.92 J	5.20 J	6.144	7.27
U4-MW-07I	4/21/2023	N	EM08	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4.708	0.07
U4-MW-07I	5/11/2023	N	EM09	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	42.407	48.03
U4-MW-07I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	161	3.08 J	<1.51	638	<0.849	108,000	971	2.53 J	6.14 J+	----	16,500	0.349 J	<0.0700	946,000	<0.121	62.7	10.3 J	<3.02	4.631	0.23
U4-MW-07I	7/17/2023	N	EM11	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10.648	0.37
U4-MW-08D	4/13/2022	N	BL02	UMCf	98.6 - 108.6	112,000	<4.20	<15.1	<90.0	<8.49	707,000	37.2 J	11.9 J	<8.16	<91.5	102,000	7.61 J	<0.700	7,950,000	<1.21	10.1	<25.0	<30.2	43.677	1.07
U4-MW-08D	12/7/2022	N	EM04	UMCf	98.6 - 108.6	49,000	<0.298	<7.55	<140	<4.24	330,000	11.7 J	3.10 J	<4.08	----	43,000	4.50 J	<0.350	3,880,000	<0.605	24.7	6.96 J	<15.1	15.745	1.70
U4-MW-08D	3/17/2023	N	EM07	UMCf	98.6 - 108.6	40,100	<0.840	<7.55	<18.0	<4.24	378,000	40.2 J+	4.72 J	<4.08	----	49,900	6.98 J	<0.350	3,810,000	<0.605	103	<4.99	<15.1	15.242	1.42
U4-MW-08D	6/13/2023	N	EM10	UMCf	98.6 - 108.6	56,200	<0.840	<15.1	<18.0	<8.49	542,000 J+	68.9	5.34 J+	<8.16	----	61,800	4.01 J	0.863 J	4,800,000	<1.21	96.5	<4.99	<30.2	26.142	2.23
U4-MW-08DD	4/20/2022	N	BL02	UMCf	119.8 - 129.8	764	<0.840	<1.51	<18.0	<0.849	28,400	14.7	9.57	1.49 J	110 J	11,000	2.68	<0.0700	258,000	<0.121	3.24	10.4 J	<3.02	1.774	0.95
U4-MW-08DD	4/20/2022	FD	BL02	UMCf	119.8 - 129.8	780	<0.840	<1.51	<18.0	<0.849	28,400	14.6	9.89	1.44 J	107 J	11,100	2.31	<0.0700	258,000	<0.121	3.20	9.34 J	<3.02	----	----
U4-MW-08DD	12/8/2022	N	EM04	UMCf	119.8 - 129.8	56.7	0.145 J	<1.51	<28.1	<0.849	23,100	31.7	10.9	3.15	----	9,950	2.00	<0.0700	179,000	<0.121	3.17	8.61	23.0 J	1.034	1.20
U4-MW-08DD	3/15/2023	N	EM07	UMCf	119.8 - 129.8	1,300	<0.840	2.67 J	<18.0	0.963 J	92,600	2.52 J	4.92 J	1.72 J	----	15,400	2.01	<0.0700	359,000	<0.121	2.28	<4.99	<3.02	7.824	2.01
U4-MW-08DD	6/14/2023	N	EM10	UMCf	119.8 - 129.8	1,220	1.76 J	<1.51	18.3 J	<0.849	80,800	19.3	8.85	17.2 J+	----	15,400	1.85 J	<0.0700	330,000	0.830 J	2.36	8.83 J	<3.02	2.973	2.71
U4-MW-08I	4/13/2022	N	BL02	UMCf	78.0 - 88.0	8,950	<0.840	1.90 J	<18.0	<0.849	44,400	5.20 J	18.7	0.820 J	25.4 J	23,000	2.69	<0.0700	1,300,000	<0.121	6.55	23.5	3.30 J	8.786	1.97
U4-MW-08I	12/7/2022	N	EM04	UMCf	78.0 - 88.0	31,400	1.54 J	<7.55	<140	<4.24	166,000	29.6	12.8 J	113	----	36,600	3.16 J	<0.350	2,570,000	<0.605	23.7	18.2 J	<15.1	8.950	2.32
U4-MW-08I	12/7/2022	FD	EM04	UMCf	78.0 - 88.0	31,000	1.41 J	<7.55	<140	<4.24	163,000	28.6	12.7 J	106	----	36,200	3.40 J	<0.350	2,540,000	<0.605	23.2	18.3 J	<15.1	----	----
U4-MW-08I	3/17/2023	N	EM07	UMCf	78.0 - 88.0	48,700	<0.840	<7.55	<18.0	<4.24	288,000	13.6 J+	16.2	29.8	----	55,900	6.53 J	<0.350	3,640,000	<0.605	41.3	11.9 J	<15.1	7.198	2.29
U4-MW-08I	6/13/2023	N	EM10	UMCf	78.0 - 88.0	11,200	<0.840	<15.1	<18.0	<8.49	78,400 J+	23.4	11.1 J+	9.78 J	----	25,100	<3.00	<0.700	1,580,000	1.43 J	75.9	16.6 J	<30.2	8.097	1.90
U4-MW-08S	4/15/2022	N	BL02	UMCf	54.9 - 64.9	519	<0.840	<1.51	26.0 J	<0.849	3,570	<0.934	20.1	<0.816	<18.3	20,400	2.19	<0.0700	580,000	<0.121	0.591 J	47.5	<3.02	3.391	3.42
U4-MW-08S	12/7/2022	N	EM04	UMCf	54.9 - 64.9	284	0.0886 J	<1.51	31.9 J	<0.849	30,800	10.2	20.4	3.02	----	18,200	1.95 J	<0.0700	624,000	<0.121	13.4	49.2	<3.02	2.838	2.17
U4-MW-08S	12/7/2022	FD	EM04	UMCf	54.9 - 64.9	275	0.0711 J	<1.51	39.7 J	<0.849	30,800	10.5	20.0	2.30	----	17,900	1.80 J	<0.0700	612,000	<0.121	13.2	48.5	4.34 J	----	----
U4-MW-08S	3/13/2023	N	EM07	UMCf	54.9 - 64.9	10.3	<0.840	<1.51	38.3 J	<0.849	61,700	428	3.71 J	1.37 J	----	17,800	<0.300	<0.0700	464,000	<0.121	11.8	5.34 J	<3.02	0.027	7.40
U4-MW-08S	3/13/2023	FD	EM07	UMCf	54.9 - 64.9	8.64 J	<0.840	<1.51	54.4 J	<0.849	55,500	406	4.57 J	1.59 J	----	16,900	<0.300	<0.0700	467,000	<0.121	13.7	5.55 J	<3.02	----	----
U4-MW-08S	6/13/2023	N	EM10	UMCf	54.9 - 64.9	10.0 J	<0.840	<1.51	81.2 J	<0.849	68,300	1,310	2.92 J	2.34	----	15,900	<0.300 UJ	<0.0700	551,000	<0.121	18.7	8.86 J	<3.02	2.956	0.72

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Dissolved Metals by SW6010B/SW6020																	FIELD TESTS	
						Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silver	Sodium	Thallium	Uranium	Vanadium	Zinc	Conductivity	Dissolved Oxygen
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mS/cm	mg/L
U4-MW-08S	6/13/2023	FD	EM10	UMCf	54.9 - 64.9	9.09 J	<0.840	<1.51	84.9 J	<0.849	66,600 J	1,300	1.59 J	2.34	----	15,800	0.300 J	<0.0700	554,000	<0.121	18.0	9.37 J	<3.02	----	----
U4-MW-09D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	5,930	<0.840	<15.1	<18.0	<8.49	532,000	4.62 J	<1.16	<8.16	<18.3	6,610	3.90 J	<0.700	475,000	<1.21	10.2	<4.99	165 J	25.834	1.79
U4-MW-09D	12/6/2022	N	EM04	UMCf	96.9 - 106.9	7,460	0.202 J	<1.51 UJ	<28.1 UJ	<0.849 UJ	71,500	5.78	6.30	11.1	----	12,100	1.98 J	<0.0700 UJ	680,000	<0.121 UJ	9.26	23.1	<3.02 UJ	3.375	6.84
U4-MW-09D	3/16/2023	N	EM07	UMCf	96.9 - 106.9	3,650	<0.840	1.58 J	30.6 J	<0.849	136,000	71.7	1.39 J	10.6	----	17,400	1.73 J	<0.0700	879,000	<0.121	48.7	8.91 J	<3.02	4.632	1.55
U4-MW-09D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	1,830	4.15 J	<1.51	<18.0	<0.849	144,000	536	8.71	13.9 J+	----	19,700	0.834 J	<0.0700	821,000	0.147 J	62.1	8.47 J	<3.02	5.788	1.36
U4-MW-09DD	4/14/2022	N	BL02	UMCf	119.8 - 129.8	154	<0.840	3.53 J	18.0 J	<0.849	20,000	7.39 J	9.61	<0.816	221 J	7,460	1.98 J	<0.0700	181,000	<0.121	2.98	9.16 J	3.03 J	1.339	1.49
U4-MW-09DD	12/6/2022	N	EM04	UMCf	119.8 - 129.8	137	<0.0596 UJ	<1.51 UJ	<28.1 UJ	<0.849 UJ	21,100	1.17 J	9.02	<0.816 UJ	----	7,030	1.86 J	<0.0700 UJ	162,000	<0.121 UJ	3.11	10.6	<3.02 UJ	1.036	1.23
U4-MW-09DD	3/21/2023	N	EM07	UMCf	119.8 - 129.8	199	<0.840	<1.51	<18.0	<0.849	43,200	2.54 J	5.69	7.63	----	9,310	2.06	<0.0700	199,000	<0.121	2.36	9.68 J	<3.02	1.698	4.64
U4-MW-09DD	6/15/2023	N	EM10	UMCf	119.8 - 129.8	117	<0.840	<1.51	<18.0	<0.849	45,600	6.67 J	6.80 J+	53.7	----	10,000	2.18	<0.0700	214,000	<0.121	2.86	8.61 J	<3.02	1.722	3.91
U4-MW-09I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	2,350	<0.840	2.16 J	<18.0	<0.849	42,300	4.58 J	13.2	0.971 J	172 J	19,300	2.24	<0.0700	588,000	<0.121	5.48	19.1 J	<3.02	3.354	10.37
U4-MW-09I	12/6/2022	N	EM04	UMCf	76.8 - 86.8	13,400	0.835 J	8.06 J	<140 UJ	<4.24 UJ	100,000	21.9 J	7.84 J	83.7	----	20,600	2.26 J	<0.350 UJ	1,150,000	<0.605 UJ	10.8	10.7 J	<15.1 UJ	4.939	5.28
U4-MW-09I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	8,400	<0.840	<1.51	22.6 J	<0.849	153,000	44.5	3.36 J	105	----	21,400	1.80 J	<0.0700	1,140,000	<0.121	60.5	9.36 J	<3.02	16.829	0.37
U4-MW-09I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	2,550	2.84 J	<1.51	35.7 J	<0.849	160,000	251	4.93 J	32.4	----	23,300	1.04 J	<0.0700	966,000	<0.121	83.1	12.0 J	<3.02	6.158	1.16
U4-MW-09S	4/14/2022	N	BL02	UMCf	55.3 - 65.3	398	<0.840	1.69 J	141	<0.849	30,200	5.72 J	19.0	<0.816	168 J	14,000	2.13	<0.0700	461,000	<0.121	6.57	36.3	<3.02	2.893	4.00
U4-MW-09S	12/6/2022	N	EM04	UMCf	55.3 - 65.3	2,780	<0.0596 UJ	<1.51 UJ	<28.1 UJ	<0.849 UJ	7,810	1.21 J	14.0	1.83 J	----	9,350	2.30	<0.0700 UJ	841,000	<0.121 UJ	4.45	67.2	<3.02 UJ	3.158	5.76
U4-MW-09S	3/17/2023	N	EM07	UMCf	55.3 - 65.3	2,360	<0.840	<1.51	25.0 J	1.12 J	7,010	4.65 J	27.9	1.63 J	----	9,940	2.10	<0.0700	780,000	<0.121	9.84	61.6	8.34 J	3.822	1.29
U4-MW-09S	6/15/2023	N	EM10	UMCf	55.3 - 65.3	45.2	<0.840	<1.51	96.5 J	<0.849	11,600	186	8.50 J+	14.6	----	13,400	<0.300	<0.0700	1,500,000	1.23 J	81.8	48.1	9.78 J	4.352	0.69
U4-MW-10D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	5,290	<0.840	<1.51	<18.0	<0.849	134,000	23.5	8.67	<0.816	32.2 J	24,200	2.14	<0.0700	626,000	<0.121	9.13	8.78 J	3.53 J	5.411	0.91
U4-MW-10D	12/5/2022	N	EM04	UMCf	96.9 - 106.9	3,310	<0.840	<1.51	<18.0	<0.849	87,500	2.32 J	3.34 J	<0.816	----	15,500	2.22	<0.0700	----	<0.121	5.41	7.55 J	<3.02	2.690	3.80
U4-MW-10D	3/17/2023	N	EM07	UMCf	96.9 - 106.9	196	1.20 J	2.98 J	421	<0.849	184,000	2,160	3.54 J	11.9	----	18,100	0.811 J	<0.0700	303,000	<0.121	95.1	<4.99	7.73 J	542.825	0.85
U4-MW-10D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	45.6	0.983 J	<1.51	502	<0.849	164,000	2,470	1.71 J	3.57 J+	----	18,000	0.312 J	<0.0700	300,000	<0.121	25.4	<4.99	<3.02	3.761	0.26
U4-MW-10I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	5,960	<0.840	2.97 J	27.9 J	<0.849	135,000	25.2	17.8	1.08 J	194 J	31,700	2.88	<0.0700	995,000	0.490 J	6.45	9.70 J	4.88 J	7.650	0.90
U4-MW-10I	12/5/2022	N	EM04	UMCf	77.1 - 87.1	490	<0.840	<1.51	<18.0	<0.849	87,800	34.4	16.9	<0.816	----	17,000	2.24	<0.0700	----	<0.121	11.5	16.8 J	<3.02	2.740	0.62
U4-MW-10I	3/17/2023	N	EM07	UMCf	77.1 - 87.1	23.9	1.35 J	<1.51	266	1.14 J	157,000	917	11.2	58.9	----	22,400	0.803 J	<0.0700	586,000	<0.121	0.368 J	10.7 J	10.4 J	735.012	3.48
U4-MW-10I	6/14/2023	N	EM10	UMCf	77.1 - 87.1	45.1	<0.840	<1.51	1,070	<0.849	119,000	3,120	1.25 J	1.44 J	----	20,200	<0.300	<0.0700	465,000	<0.121	5.72	23.8	<3.02	3.790	0.34
U4-MW-11D	4/15/2022	N	BL02	UMCf	97.4 - 107.4	92,800	<4.20	<15.1	<90.0	<8.49	652,000	68.0	17.8 J	<8.16	315 J	86,800	6.05 J	<0.700	5,920,000	<1.21	5.93 J	<25.0	<30.2	31.458	0.75
U4-MW-11D	9/26/2022	N	EM01	UMCf	97.4 - 107.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	49.507	1.26
U4-MW-11D	10/11/2022	N	EM02	UMCf	97.4 - 107.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	49.047	1.30
U4-MW-11D	11/1/2022	N	EM03	UMCf	97.4 - 107.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	25.648	1.17
U4-MW-11D	12/6/2022	N	EM04	UMCf	97.4 - 107.4	75,700	<5.96 UJ	35.1 J	<2810 UJ	<84.9 UJ	601,000	<70.4 UJ	<34.8 UJ	<8.16 UJ	----	60,900 J	<30.0 UJ	<7.00 UJ	5,170,000	<12.1 UJ	32.5 J	<66.4 UJ	<302 UJ	5.464	1.37
U4-MW-11D	1/12/2023	N	EM05	UMCf	97.4 - 107.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	25.673	0.68
U4-MW-11D	2/14/2023	N	EM06	UMCf	97.4 - 107.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	20.311	1.11
U4-MW-11D	3/16/2023	N	EM07	UMCf	97.4 - 107.4	58,900	<0.840	<7.55	25.8 J	<4.24	499,000	88.2	9.80	<4.08	----	62,800	4.91 J	<0.350	4,620,000	<0.605	40.9	<4.99	<15.1	24.191	1.15
U4-MW-11D	4/18/2023	N	EM08	UMCf	97.4 - 107.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	18.366	0.11
U4-MW-11D	5/17/2023	N	EM09	UMCf	97.4 - 107.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	26.832	1.06
U4-MW-11D	6/16/2023	N	EM10	UMCf	97.4 - 107.4	85,700	<8.40	32.6	<18.0	<4.24	596,000	136	11.7	<4.08	----	80,500	5.86 J	0.357 J	5,770,000	0.739 J	37.0	<49.9	29.6 J	13.654	1.92
U4-MW-11D	7/14/2023	N	EM11	UMCf	97.4 - 107.4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	19.620	0.72
U4-MW-11I	4/14/2022	N	BL02	UMCf	77.0 - 87.0	6,040	<0.840	1.60 J	40.5 J	<0.849	47,100	10.4	18.7	1.07 J	202 J	26,900	2.57	<0.0700	924,000	<0.121	3.18	14.2 J	<3.02	7.803	1.01
U4-MW-11I	9/26/2022	N	EM01	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.582	10.67
U4-MW-11I	9/26/2022	FD	EM01	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	10/10/2022	N	EM02	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.413	1.08
U4-MW-11I	10/10/2022	FD	EM02	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	10/31/2022	N	EM03	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.179	0.82
U4-MW-11I	10/31/2022	FD	EM03	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	12/6/2022	N	EM04	UMCf	77.0 - 87.0	77.4	0.243 J	<1.51 UJ	134	<0.849 UJ	89,300	577	2.21 J	3.32	----	22,800	<0.300 UJ	<0.0700 UJ	609,000	<0.121 UJ	37.6	21.7	<3.02 UJ	3.016	2.77
U4-MW-11I	12/6/2022	FD	EM04	UMCf	77.0 - 87.0	76.1	0.242 J	<1.51 UJ	128	<0.849 UJ	88,400	564	1.46 J	2.79	----	23,200	3.38	<0.0700 UJ	595,000	<0.121 UJ	38.2	21.2	<3.02 UJ	----	----
U4-MW-11I	1/12/2023	N	EM05	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.038	7.09
U4-MW-11I	1/12/2023	FD	EM05	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	2/14/2023	N	EM06	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9.120	0.83
U4-MW-11I	2/14/2023	FD	EM06	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	3/16/2023	N	EM07	UMCf	77.0 - 87.0	54.2 J	<0.840	<1.51	271 J+	<0.849	117,000 J	1,250 J	<1.16	1.86 J	----	23,000 J	0.614 J	<0.0700	602,000 J	<0.121	14.1	19.2 J	<3.02	3.476	0.45
U4-MW-11I	3/16/2023	FD	EM07	UMCf	77.0 - 87.0	37.1 J	<0.840	<1.51	295 J+	<0.849	78,000 J	831 J	<1.16	1.87 J	----	15,200 J	<0.300	<0.0700	398,000 J	<0.121	13.7	10.2 J	4.87 J	----	----
U4-MW-11I	4/18/2023	N	EM08	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.218	0.53
U4-MW-11I	4/18/2023	FD	EM08	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	5/19/2023	N	EM09	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.152	0.28
U4-MW-11I	5/19/2023	FD	EM09	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	6/15/2023	N	EM10	UMCf	77.0 - 87.0	40.6	<0.840	<1.51 UJ	607	<0.849	107,000	1,240	2.49 J	1.94 J	----	19,900	0.379 J	<0.0700	495,000	<0.121	9.57	23.2	<3.02	3.350	1.03
U4-MW-11I	6/15/2023	FD	EM10	UMCf	77.0 - 87.0	40.2	<0.840	11.4 J	629	<0.849	105,000	1,230	1.89 J	1.75 J	----	20,000	<0.300	<0.0700	498,000	<0.121	9.57	22.3	<3.02	----	----
U4-MW-11I	7/13/2023	N	EM11	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.282	0.19
U4-MW-11I	7/13/2023	FD	EM11	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	4/15/2022	N	BL02	UMCf	97.1 - 107.1	72,500	<4.20	<15.1	92.3 J	<8.49	501,000	59.4	15.8 J	<8.16	365 J	83,300	6.13 J	<0.700	4,920,000	<1.21	10.8	<4.99	<30.2	32.048	0.90
U4-MW-12D	9/27/2022	N	EM01	UMCf	97.1 - 107.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	17.403	5.30
U4-MW-12D	10/12/2022	N	EM02	UMCf	97.1 - 107.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11.998	2.16
U4-MW-12D	11/2/2022	N	EM03	UMCf	97.1 - 107.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9.367	1.89
U4-MW-12D	12/7/2022	N	EM04	UMCf	97.1 - 107.1	48,500	<0.298	<7.55	<140	<4.24	300,000	23.4 J	8.18 J	<4.08	----	43,100	3.67 J	<0.350	3,260,000	<0.605	23.3	9.35 J	20.1 J	15.505	2.44
U4-MW-12D	1/12/2023	N	EM05	UMCf	97.1 - 107.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9.215	1.80
U4-MW-12D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16.607	1.11
U4-MW-12D	3/14/2023	N	EM07	UMCf	97.1 - 107.1	32,900	<0.840	<7.55	29.5 J	<4.24	286,000	37.2	7.27	<4.08	----	44,100	4.79 J	<0.350	2,610,000	<0.605	13.7	8.65 J	<15.1	12.160	1.14
U4-MW-12D	4/17/2023	N	EM08	UMCf	97.1 - 107.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	18.271	10.22
U4-MW-12D	5/17/2023	N	EM09	UMCf	97.1 - 107.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	27.758	1.10
U4-MW-12D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	37,600	<0.840	18.2 J	<18.0	<4.24	334,000	79.3	8.08	<4.08	----	49,400	3.24 J	<0.350	2,850,000	<0.605	13.4	<49.9	19.1 J	14.311	0.66
U4-MW-12D	7/13/2023	N	EM11	UMCf	97.1 - 107.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	13.058	1.09
U4-MW-12I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	17,200	<0.840	3.24 J	18.3 J	2.29	126,000	44.1	17.6	4.10 J	122 J	35,700	5.65 J	0.454 J	1,720,000	2.39	9.47	9.09 J	<3.02	11.234	1.32
U4-MW-12I	4/14/2022	FD	BL02	UMCf	76.8 - 86.8	16,700	<0.840	2.11 J	41.4 J	<0.849	125,000	44.4	17.7	1.90 J	265 J+	35,500	3.39 J	<0.0700	1,690,000	<0.121	7.29	6.67 J	<3.02	----	----
U4-MW-12I	9/27/2022	N	EM01	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.677	0.92
U4-MW-12I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.587	1.25
U4-MW-12I	11/2/2022	N	EM03	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.684	1.15
U4-MW-12I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	63.3	0.171 J	<1.51	<28.1	<0.849	44,500	264	15.7	2.09	----	16,700	0.587 J	<0.0700	490,000	<0.121	41.0	6.05	<3.02	2.533	1.36
U4-MW-12I	12/7/2022	FD	EM04	UMCf	76.8 - 86.8	64.8	0.173 J	<1.51	41.2 J	<0.849	44,600	264	16.2	3.19	----	16,800	0.457 J	<0.0700	499,000	<0.121	41.4	6.27	<3.02	----	----

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Dissolved Metals by SW6010B/SW6020																	FIELD TESTS	
						Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silver	Sodium	Thallium	Uranium	Vanadium	Zinc	Conductivity	Dissolved Oxygen
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mS/cm	mg/L
U4-MW-12I	1/13/2023	N	EM05	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.485	0.76
U4-MW-12I	3/13/2023	N	EM07	UMCf	76.8 - 86.8	15.9	1.39 J	<7.55	243	<0.849	89,200	1,200	1.40 J	<4.08	----	23,800	0.309 J	<0.0700	591,000	<0.121	15.5	13.0 J	<15.1	2.868	0.28
U4-MW-12I	4/17/2023	N	EM08	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.160	0.35
U4-MW-12I	5/17/2023	N	EM09	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.078	0.72
U4-MW-12I	6/16/2023	N	EM10	UMCf	76.8 - 86.8	25.7	<0.840	<1.51	1,420	<0.849	121,000	1,920	<1.16	1.81 J	----	20,400	<0.300	<0.0700	628,000	0.831 J	12.9	19.9 J	4.77 J	3.243	0.35
U4-MW-12I	7/11/2023	N	EM11	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.411	2.36
U4-MW-13D	4/14/2022	N	BL02	UMCf	98.2 - 108.2	55,300	<4.20	<15.1	<90.0	<8.49	664,000	32.9 J	9.95 J	<8.16	140 J	71,200	4.11 J	<0.700	3,990,000	<1.21	10.8	<25.0	<30.2	32.518	0.90
U4-MW-13D	9/28/2022	N	EM01	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11.793	0.96
U4-MW-13D	10/11/2022	N	EM02	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11.124	1.77
U4-MW-13D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.404	1.67
U4-MW-13D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	17,900	<0.298	<7.55	<140	<4.24	276,000	92.8	2.40 J	<4.08	----	26,600	2.64 J	<0.350	1,170,000	<0.605	34.4	4.77 J	<15.1	7.937	2.99
U4-MW-13D	1/12/2023	N	EM05	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4.505	1.39
U4-MW-13D	2/15/2023	N	EM06	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8.150	1.44
U4-MW-13D	3/17/2023	N	EM07	UMCf	98.2 - 108.2	12,900	<0.840	<1.51	<18.0	<0.849	150,000	40.4 J+	4.44 J	0.893 J	----	22,300	2.57	0.289 J	849,000	0.310 J	13.2	6.57 J	13.0 J	5.920	2.07
U4-MW-13D	4/18/2023	N	EM08	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4.930	0.14
U4-MW-13D	5/17/2023	N	EM09	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7.513	1.34
U4-MW-13D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	9,000	<0.840	1.84 J	<18.0	<0.849	146,000	44.0	2.60 J	0.858 J	----	21,200	2.16	<0.0700	790,000	0.240 J	35.0	<4.99	<3.02	6.112	0.61
U4-MW-13D	7/12/2023	N	EM11	UMCf	98.2 - 108.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6.603	0.50
U4-MW-13I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	20,300	<0.840	<1.51	<18.0	<0.849	169,000	28.6	13.8	1.80 J	132 J	33,100	3.62	<0.0700	1,640,000	<0.121	7.29	9.14 J	<3.02	11.607	2.38
U4-MW-13I	9/28/2022	N	EM01	UMCf	77.1 - 87.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5.667	2.79
U4-MW-13I	10/10/2022	N	EM02	UMCf	77.1 - 87.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6.053	1.93
U4-MW-13I	11/3/2022	N	EM03	UMCf	77.1 - 87.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.675	2.64
U4-MW-13I	12/6/2022	N	EM04	UMCf	77.1 - 87.1	892	0.138 J	<1.51 UJ	32.3 J	<0.849 UJ	48,300	161	9.01	2.47	----	16,700	1.08 J	<0.0700 UJ	759,000	<0.121 UJ	38.3	7.72	<3.02 UJ	3.613	1.73
U4-MW-13I	1/12/2023	N	EM05	UMCf	77.1 - 87.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.079	1.19
U4-MW-13I	2/14/2023	N	EM06	UMCf	77.1 - 87.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.065	0.61
U4-MW-13I	3/16/2023	N	EM07	UMCf	77.1 - 87.1	255	<0.840	<1.51	52.5 J	<0.849	44,100	228	5.96	2.33	----	13,800	<0.300	<0.0700	655,000	<0.121	19.8	<4.99	<3.02	1.654	0.98
U4-MW-13I	4/19/2023	N	EM08	UMCf	77.1 - 87.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.452	0.02
U4-MW-13I	5/17/2023	N	EM09	UMCf	77.1 - 87.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4.125	0.52
U4-MW-13I	6/15/2023	N	EM10	UMCf	77.1 - 87.1	151	<0.840	<1.51	500	<0.849	54,900	381	12.0 J+	3.27	----	15,300	<0.300	<0.0700	606,000	<0.121	27.5	12.0 J	<3.02	3.300	0.32
U4-MW-13I	7/12/2023	N	EM11	UMCf	77.1 - 87.1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.564	2.68
U4-MW-14D	4/13/2022	N	BL02	UMCf	97.3 - 107.3	308	<0.840	3.44 J	<18.0	<0.849	152,000	79.2	41.2	9.04	<18.3	25,400	3.31	<0.0700	673,000	<0.121	18.5	22.2	<3.02	5.770	0.87
U4-MW-14D	12/6/2022	N	EM04	UMCf	97.3 - 107.3	6,790	<0.0596 UJ	<1.51 UJ	40.3 J	1.09 J	128,000	21.5	5.90	<0.816 UJ	----	19,100	2.46	<0.0700 UJ	469,000	0.156 J	8.22	14.1	<3.02 UJ	4.415	2.55
U4-MW-14D	3/16/2023	N	EM07	UMCf	97.3 - 107.3	4,500	<0.840	3.77 J	65.8 J	<0.849	71,500	14.2 J+	3.16 J	<0.816	----	14,500	1.69 J	<0.0700	373,000	<0.121	8.52	9.49 J	6.57 J	181.910	1.08
U4-MW-14D	6/15/2023	N	EM10	UMCf	97.3 - 107.3	4,270	<0.840	<1.51	<18.0	<0.849	85,000	17.7	4.70 J	<0.816	----	16,800	1.85 J	<0.0700	420,000	<0.121	23.0	<4.99	<3.02	4.035	0.82
U4-MW-14I	4/14/2022	N	BL02	UMCf	77.3 - 87.3	2,150	<0.840	<1.51	<18.0	<0.849	52,400	19.0	16.2	1.09 J	191 J	25,400	2.53	<0.0700	596,000	<0.121	4.68	13.3 J	<3.02	5.720	0.77
U4-MW-14I	12/6/2022	N	EM04	UMCf	77.3 - 87.3	4,710	0.0650 J	<1.51 UJ	<28.1 UJ	<0.849 UJ	139,000	32.4	9.57	1.12 J	----	22,000	2.86	<0.0700 UJ	518,000	0.243 J	15.3	14.3	<3.02 UJ	4.279	2.18
U4-MW-14I	3/16/2023	N	EM07	UMCf	77.3 - 87.3	4,510	<0.840	<1.51	<18.0	<0.849	79,600	11.1 J+	5.22	<0.816	----	16,700	1.98 J	<0.0700	413,000	<0.121	11.3	13.6 J	<3.02	213.617	0.55
U4-MW-14I	6/15/2023	N	EM10	UMCf	77.3 - 87.3	700	<0.840	1.54 J	<18.0	<0.849	115,000	214	7.41 J+	8.26	----	21,000	1.67 J	<0.0700	553,000	<0.121	36.8	12.4 J	<3.02	4.589	0.61
U4-MW-15D	4/13/2022	N	BL02	UMCf	96.0 - 106.0	4,940	<0.840	<1.51	21.8 J	<0.849	157,000	26.1	9.77	0.944 J	<18.3	25,500	2.38	<0.0700	646,000	0.186 J	13.6	8.06 J	<3.02	5.015	1.02
U4-MW-15D	12/5/2022	N	EM04	UMCf	96.0 - 106.0	3,170	<0.840	<1.51	<18.0	<0.849	92,400	10.3	6.33	<0.816	----	18,700	2.23	<0.0700	436,000	<0.121	11.6	7.40 J	<3.02	2.298	15.40
U4-MW-15D	3/20/2023	N	EM07	UMCf	96.0 - 106.0	3,210	<0.840	2.97 J	<18.0	<0.849	80,100	5.33 J	6.57	<0.816	----	15,400	2.33	<0.0700	318,000	<0.121	6.45	8.42 J	<3.02	2.799	0.93
U4-MW-15D	6/14/2023	N	EM10	UMCf	96.0 - 106.0	3,870	<0.840	<1.51	<18.0	<0.849	99,200	25.2	7.40	<0.816	----	20,900	2.44	<0.0700	415,000	<0.121	10.1	11.3 J	<3.02	5.069	0.61
U4-MW-15DD	4/13/2022	N	BL02	UMCf	120.3 - 130.3	64.4	<0.840	2.23 J	162	<0.849	15,400	2.57 J	10.4	2.78	<18.3	6,830	2.15	<0.0700	159,000	<0.121	4.23	17.9 J	<3.02	0.999	2.14
U4-MW-15DD	12/5/2022	N	EM04	UMCf	120.3 - 130.3	16.3	<0.840	<1.51	<18.0	<0.849	16,800	5.61 J	7.88	31.6	----	6,430	1.91 J	<0.0700	----	<0.121	3.37	12.9 J	<3.02	0.666	2.14
U4-MW-15DD	3/15/2023	N	EM07	UMCf	120.3 - 130.3	13.8	<0.840	1.53 J	45.7 J	4.52 J+	17,300	7.24 J	8.41	44.8	----	6,510	1.89 J	<0.0700	137,000	<0.121	3.10	11.8 J	<3.02	0.888	1.96
U4-MW-15DD	6/13/2023	N	EM10	UMCf	120.3 - 130.3	7.06 J	<0.840	<1.51	29.4 J	<0.849	17,000 J+	14.9 J+	12.7 J+	57.6	----	6,460 J+	2.25	<0.0700	138,000	<0.121	2.81	6.34 J	<3.02	1.027	0.94
U4-MW-15I	4/12/2022	N	BL02	UMCf	76.8 - 86.8	5,510	<0.840	<1.51	24.4 J	<0.849	56,500	14.9	17.8	<0.816	25.2 J	22,300	2.64	<0.0700	897,000	<0.121	6.59	18.7 J	<3.02	5.348	1.45
U4-MW-15I	12/5/2022	N	EM04	UMCf	76.8 - 86.8	5,040	<0.840	<1.51	<18.0	<0.849	73,800	61.8	11.5	2.11	----	22,500	2.82	0.105 J	976,000	0.663 J	52.3	14.2 J	<3.02	2.972	1.05
U4-MW-15I	3/17/2023	N	EM07	UMCf	76.8 - 86.8	108	<0.840	<1.51	7,360	<0.849	137,000	4,380	<1.16	2.63	----	16,200	<0.300	<0.0700	387,000	<0.121	69.9	65.7	6.91 J	473.418	0.66
U4-MW-15I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	89.2	1.25 J	<1.51	5,050	<0.849	136,000	3,610	<1.16	2.53 J+	----	18,700	<0.300	<0.0700	448,000	<0.121	5.30	31.2	5.29 J	3.653	0.38
U4-MW-15S	4/13/2022	N	BL02	UMCf	54.8 - 64.8	268 J	<0.840	<1.51	95.9 J	<0.849	50,100 J	2.61 J	19.2	<0.816	50.3 J	15,200 J	2.71	<0.0700	387,000 J	<0.121	4.94	23.5	<3.02	2.466	5.73
U4-MW-15S	12/5/2022	N	EM04	UMCf	54.8 - 64.8	16.9	<0.840	<1.51	3,440	<0.849	61,300	465	1.18 J	2.37	----	33,300	0.690 J	<0.0700	277,000	<0.121	6.64	21.0	<3.02	1.328	0.91
U4-MW-15S	3/13/2023	N	EM07	UMCf	54.8 - 64.8	9.67 J	1.30 J	<7.55	<18.0	<0.849	56,900	267	<1.16	<4.08	----	18,700	<0.300	<0.0700	299,000	<0.121	1.92	14.4 J	<15.1	1.687	1.02
U4-MW-15S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	9.11 J	<0.840	<1.51	154 J+	<0.849	69,600 J+	354	<1.16	1.34 J	----	20,100	<0.300	0.0721 J	421,000	0.259 J	2.57	8.42 J	<3.02	2.659	0.19
U4-MW-16D	4/11/2022	N	BL02	UMCf	96.8 - 106.8	12,600	<0.840	<15.1	<18.0	<8.49	240,000	12.4	4.62 J	<8.16	<18.3	30,600	5.89 J	<0.700	1,210,000	<1.21	6.64 J	<4.99	44.4 J	27.119	4.03
U4-MW-16D	12/5/2022	N	EM04	UMCf	96.8 - 106.8	27,600	<0.840	<1.51	<18.0	<0.849	318,000	25.7	11.8	<0.816 UJ	----	8,140	0.707 J	<0.0700	522,000	<0.121	5.45	<4.99	<3.02	14.259	2.61
U4-MW-16D	3/14/2023	N	EM07	UMCf	96.8 - 106.8	16,800	<0.840	<7.55	<18.0	<4.24	326,000	114	5.53	<4.08	----	39,200	5.22 J	<0.350	1,750,000	<0.605	18.7	6.38 J	<15.1	9.893	2.42
U4-MW-16D	6/13/2023	N	EM10	UMCf	96.8 - 106.8	39,300	<0.840	<15.1	<18.0	<8.49	502,000 J+	286	7.04 J+	<8.16	----	52,500	3.17 J	<0.700	2,970,000	<1.21	35.6	5.43 J	<30.2	23.075	1.17
U4-MW-16DD	4/12/2022	N	BL02	UMCf	120.8 - 130.8	922	<0.840	2.29 J	25.5 J	<0.849	48,200	11.0	13.8	0.870 J	<18.3	12,500	3.05	<0.0700	390,000	<0.121	7.68	18.9 J	5.37 J	2.380	1.10
U4-MW-16DD	12/5/2022	N	EM04	UMCf	120.8 - 130.8	203	<0.840	<1.51	<18.0	<0.849	36,000	7.25 J	12.6	<0.816	----	10,300	2.31	<0.0700	----	<0.121	7.92	14.0 J	<3.02	1.722	1.93
U4-MW-16DD	3/15/2023	N	EM07	UMCf	120.8 - 130.8	167	<0.840	2.22 J	<18.0	<0.849	33,400	4.46 J	10.4	2.13	----	9,810	1.97 J	<0.0700	246,000	<0.121	7.16	15.9 J	3.04 J	1.622	2.67
U4-MW-16DD	6/13/2023	N	EM10	UMCf	120.8 - 130.8	192	<0.840	3.20 J	<18.0	<0.849	28,800 J+	2.70 J	12.0 J+	<0.816	----	10,000 J+	2.26	<0.0700	227,000	<0.121	6.69	21.9	<3.02	1.625	0.95
U4-MW-16I	4/11/2022	N	BL02	UMCf	77.0 - 87.0	8,620	<0.840	<1.51	<18.0	<0.849	76,200	2.20 J	13.7	<0.816	<18.3	30,800	2.58	<0.0700	968,000	<0.121	2.26	<4.99	3.91 J	6.673	8.63
U4-MW-16I	12/5/2022	N	EM04	UMCf	77.0 - 87.0	10.9	<0.840	<1.51	33.5 J	<0.849	85,400	629	5.24	7.02	----	25,600	<0.300	<0.0700	----	<0.121	65.4	7.90 J	6.02 J	2.618	1.36
U4-MW-16I	12/5/2022	FD	EM04	UMCf	77.0 - 87.0	11.4	<0.840	<1.51	33.8 J	<0.849	86,100	634	5.43	4.10 J	----	24,600	<0.300	<0.0700	----	<0.121	62.1	5.85 J	<3.02	----	----
U4-MW-16I	3/13/2023	N	EM07	UMCf	77.0 - 87.0	19.0	1.47 J	<1.51	3,540	1.23 J	229,000	4,580	<1.16	6.94	----	25,600	<0.300	<0.0700	342,000	<0.121	20.1	18.4 J	<3.02	0.020	8.09
U4-MW-16I	3/13/2023	FD	EM07	UMCf	77.0 - 87.0	18.7	1.01 J	<1.51	3,530	<0.849	229,000	4,600	1.59 J	6.97	----	25,500	<0.300	<0.0700	342,000	<0.121	18.7	23.0	<3.02	----	----
U4-MW-16I	6/12/2023	N	EM10	UMCf	77.0 - 87.0	16.8	<0.840	1.67 J	5,740	<0.849 UJ	199,000	4,650	<1.16	8.25	----	17,500	<0.300	<0.0700	276,000	<0.121	13.7	19.6 J	5.25 J	3.244	1.03
U4-MW-16I	6/12/2023	FD	EM10	UMCf	77.0 - 87.0	14.7	<0.840	2.48 J	5,810	4.76 J	202,000	4,640	<1.16	8.37	----	17,600	<0.300	<0.0700	280,000	0.282 J	13.0	21.3	8.93 J	----	----
U4-MW-16S	4/12/2022	N	BL02	UMCf	54.8 - 64.8	427	<0.840	<1.51	<18.0	<0.849	37,500	2.69 J	18.3	<0.816	28.9 J	18,500	2.47	<0.0700	409,000	<0.121	3.64	15.4 J	<3.02	2.712	4.29
U4-MW-16S	4/12/2022	FD	BL02	UMCf	54.8 - 64.8	426	<0.840	<1.51	<18.0	<0.849	37,700	2.07 J	18.4	<0.816	25.5 J	18,300	2.96	<0.0700	405,000	<0.121	3.66	14.3 J	<3.02	----	----
U4-MW-16S	12/6/2022	N	EM04	UMCf	54.8 - 64.8	77.3	0.147 J	<1.51 UJ	<28.1 UJ	<0.849 UJ	57,200	19.9	40.2	<0.816 UJ	----	16,000	1.13 J	<0.0700 UJ	386,000	<0.121 UJ	12.5	7.59	<3.02 UJ	2.562	1.29
U4-MW-16S	3/15/2023	N	EM07	UMCf	54.8 - 64.8	6.40 J	<0.840	<1.51	10,700	<0.849	151,000	1,240	<1.16	<4.08	----	21,100	0.408 J	0.100 J	567,000	<0.121	0.247 J	7.88 J	<15.1	3.549	0.71
U4-MW-16S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	13.3 J+	<0.840	<1.51	12,500	<0.849	203,000 J+	2,430	<1.16	3.19	----	20,200	<0.300	<0.0700	455,000	<0.121	0.234 J	8.63 J	<3.02	3.772	0.40
U4-SLMW	11/10/2022	N	EM03	N/A	-	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-T3	10/13/2022	N	EM02	N/A	-	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-T3	11/3/2022	N	EM03	N/A	-	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	16.618	2.05
U4-T3	12/6/2022	N	EM04	N/A	-	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10.943	3.89

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Dissolved Metals by SW6010B/SW6020																	FIELD TESTS	
						Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Phosphorus	Potassium	Selenium	Silver	Sodium	Thallium	Uranium	Vanadium	Zinc	Conductivity	Dissolved Oxygen
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mS/cm	mg/L
U4-T3	1/9/2023	N	EM05	N/A	-	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	10.447	5.03
U4-T3	2/13/2023	N	EM06	N/A	-	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	13.131	7.12
U4-T3	3/13/2023	N	EM07	N/A	-	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	9.552	6.11
U4-T3	4/19/2023	N	EM08	N/A	-	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6.951	0.42
U4-T3	5/18/2023	N	EM09	N/A	-	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	17.125	3.18
U4-T3	6/12/2023	N	EM10	N/A	-	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	13.126	6.38
U4-T3	7/11/2023	N	EM11	N/A	-	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	0.029	1.56

Notes:
FD - Field duplicate
E - Field instrument error.
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 low.
J+ - The result is an estimated quantity, but the result may be biased high.
N/A - Not Applicable
mg/L - milligrams per liter
µg/L - micrograms per liter
N - Normal field sample

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.

UMCf- Upper Muddy Creek Formation
< - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
-- Not tested.
M-252 damaged/obstructed when checked on June 14, 2023 for EM10.

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	FIELD TESTS							RSK175			SM2540C	SW7199	SW9060A/SM5 310B	Volatile Organic Compounds by SW8260B						
						Ferrous Iron	Oxidation-Reduction Potential	pH	Purge Rate	Sulfide	Temperature	Turbidity	Ethane	Ethene	Methane	Total Dissolved Solids	Chromium, Hexavalent	Total Organic Carbon	1,1,1,2-Tetrachloro-ethane	1,1,1-Trichloro-ethane	1,1,2,2-Tetrachloro-ethane	1,1,2-Trichloro-ethane	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,1-Dichloro-propene
						mg/L	mV	SU	mL/min	mg/L	C	NTU	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
M-247-100	4/20/2022	N	BL02	UMCf	100.5 - 110.5	0.0 U	22.9	8.02	190	0.0 U	26.9	22.0	----	----	----	712,000	<150	----	----	----	----	----	----	----	----
M-249-100	4/20/2022	N	BL02	UMCf	99.6 - 109.6	0.0 U	140.6	6.99	120	0.0 U	27.5	60.6	----	----	----	54,000,000	77,000	----	----	----	----	----	----	----	----
M-251-100	4/19/2022	N	BL02	UMCf	92.5 - 102.5	0.0 U	212.1	7.36	100	0.0 U	26.3	17.1	----	----	----	39,900,000	96,900 J-	1,410 J+	<0.147	<0.149	<0.133	<0.158	0.204 J	0.484 J	<0.142
M-251-100	10/13/2022	N	EM02	UMCf	92.5 - 102.5	----	172.0	7.19	280	----	24.9	58.8	----	----	----	25,800,000	57,600	3,660 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.398 J	0.297 J
M-251-100	11/2/2022	N	EM03	UMCf	92.5 - 102.5	----	118.7	7.71	250	----	24.1	33.2	----	----	----	18,700,000	39,500	1,030 J+	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
M-251-100	12/8/2022	N	EM04	UMCf	92.5 - 102.5	----	123.6	7.38	100	----	22.0	17.3	----	----	----	15,000,000 J	32,300	1,720 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
M-251-100	1/11/2023	N	EM05	UMCf	92.5 - 102.5	----	132.4	7.49	250	----	23.0	50.5	----	----	----	22,400,000	43,900	1,240 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.206 J	<0.142
M-251-100	2/13/2023	N	EM06	UMCf	92.5 - 102.5	----	184.3	8.08	80	----	23.4	21.0	----	----	----	9,740,000	42,700	1,130 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	0.158 J
M-251-100	3/17/2023	N	EM07	UMCf	92.5 - 102.5	0.0 U	129.4	7.57	70	0.0 U	23.8	21.3	<4.07	<4.26	<2.91	15,300,000	23,100	1,660 J+	<7.35	<7.45	<6.65	<7.90	<5.00	<9.40	<7.10
M-251-100	4/21/2023	N	EM08	UMCf	92.5 - 102.5	0.0 U	106.3	7.44	120	0.0 U	24.3	32.6	----	----	----	18,500,000	34,100	1,460 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.195 J	0.194 J
M-251-100	5/9/2023	N	EM09	UMCf	92.5 - 102.5	0.0 U	147.1	7.40	140	0.0 U	29.7	9.1	----	----	----	19,900,000	34,200	1,540 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.242 J	<0.142
M-251-100	6/14/2023	N	EM10	UMCf	92.5 - 102.5	0.0 U	221.0	7.55	270	0.0 U	27.4	47.1	<4.07	<4.26	49.1	20,400,000	16,600	957 J	<7.35	<7.45	<6.65	<7.90	<5.00	<9.40	<7.10
M-251-100	7/14/2023	N	EM11	UMCf	92.5 - 102.5	0.0 U	285.2	7.83	120	0.0 U	30.3	19.4	----	----	----	18,000,000	43,900 J-	1,540	<0.147	<0.149	<0.133	<0.158	<0.100	0.228 J	0.251 J
M-251-60	4/18/2022	N	BL02	UMCf	52.3 - 62.3	0.0 U	44.4	10.69	100	0.0 U	30.5	18.3	----	----	----	2,330,000 J	1,510 J-	1,590 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
M-251-60	3/15/2023	N	EM07	UMCf	52.3 - 62.3	0.0 U	14.4	11.12	0	0.0 U	23.5	10.4	<4.07	<4.26	<2.91	2,490,000	1,590	3,420 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
M-251-60	6/14/2023	N	EM10	UMCf	52.3 - 62.3	0.0 U	112.5	10.40	300	0.0 U	27.1	203.3	<4.07	<4.26	233	2,690,000	1,780	1,290 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
M-252	4/21/2022	N	BL02	UMCf	132.3 - 142.3	0.0 U	142.6	8.13	100	0.0 U	29.6	9.9	----	----	----	1,410,000	32.5 J	520 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
M-252	3/15/2023	N	EM07	UMCf	132.3 - 142.3	0.0 U	142.0	8.10	20	0.0 U	21.5	9.8	<4.07	<4.26	<2.91	2,590,000	45.8	1,020 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
M-253-100	4/20/2022	N	BL02	UMCf	100.8 - 110.8	0.0 U	36.4	8.03	60	0.0 U	25.2	21.0	----	----	----	2,130,000	598	----	----	----	----	----	----	----	----
M-255-100	4/20/2022	N	BL02	UMCf	100.2 - 110.2	0.0 U	175.7	7.89	100	0.0 U	25.1	12.0	----	----	----	1,600,000	1,350	----	----	----	----	----	----	----	----
U4-E-01D	4/18/2022	N	BL02	UMCf	94.7 - 109.7	0.0 U	167.3	7.78	100	0.0 U	26.2	8.7	----	----	----	43,600,000	87,000 J-	1,030 J+	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-E-01D	3/14/2023	N	EM07	UMCf	94.7 - 109.7	0.0 U	172.0	8.08	100	0.0 U	21.8	9.1	<4.07	<4.26	<2.91	606,000	1.43	36,400	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-01I	4/19/2022	N	BL02	UMCf	74.6 - 89.6	0.0 U	120.6	8.70	100	0.0 U	26.5	2.7	----	----	----	4,770,000 J	6,190 J-	2,420 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-01I	4/19/2022	FD	BL02	UMCf	74.6 - 89.6	----	----	----	----	----	----	----	----	----	----	2,770,000 J	7,860 J-	2,670 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-01I	3/14/2023	N	EM07	UMCf	74.6 - 89.6	0.0 U	138.0	7.74	100	0.0 U	23.0	14.8	<4.07	<4.26	<2.91	6,170,000	16,300	2,230 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-01I	4/20/2023	N	EM08	UMCf	74.6 - 89.6	----	41.1	7.06	----	----	23.3	3.9	----	----	----	4,720,000	9,830	12,700	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-01I	5/10/2023	N	EM09	UMCf	74.6 - 89.6	----	92.8	6.87	----	----	30.7	12.3	----	----	----	6,020,000	9,400 J-	34,200	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-01I	6/12/2023	N	EM10	UMCf	74.6 - 89.6	----	234.8	6.65	----	----	28.8	1.8	----	----	----	8,260,000	17,400	94,200	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-01I	7/11/2023	N	EM11	UMCf	74.6 - 89.6	----	-164.3	6.15	----	----	29.2	147.7	----	----	----	3,590,000	<30.0	968,000	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-E-02D	4/20/2022	N	BL02	UMCf	94.4 - 109.4	0.0 U	129.9	7.36	130	0.0 U	27.0	2.0	----	----	----	10,800,000	17,400	1,540 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-02D	3/14/2023	N	EM07	UMCf	94.4 - 109.4	0.0 U	36.0	7.96	100	0.0 U	21.6	14.7	<4.07	<4.26	<2.91	625,000	7.77	2,720 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-02I	4/18/2022	N	BL02	UMCf	74.4 - 89.4	0.0 U	190.6	8.46	105	0.0 U	24.6	9.8	----	----	----	4,130,000	8,910 J-	1,240 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-02I	3/14/2023	N	EM07	UMCf	74.4 - 89.4	0.0 U	162.8	7.49	50	0.0 U	19.2	7.6	<4.07	<4.26	<2.91	1,340,000	1,980 J-	3,580 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-02I	4/20/2023	N	EM08	UMCf	74.4 - 89.4	----	-84.5	7.19	----	----	24.3	56.6	----	----	----	3,830,000	6,860	53,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-02I	5/11/2023	N	EM09	UMCf	74.4 - 89.4	----	10.9	8.30	----	----	32.0	28.2	----	----	----	3,440,000	5,730	125,000	<0.147 UJ	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-02I	6/12/2023	N	EM10	UMCf	74.4 - 89.4	----	-127.4	6.82	----	----	28.1	3.8	----	----	----	3,940,000	2,190	312,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-02I	7/11/2023	N	EM11	UMCf	74.4 - 89.4	----	-26.8	7.10	----	----	28.7	12.3	----	----	----	4,560,000	3,130	315,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-03D	4/19/2022	N	BL02	UMCf	95.1 - 110.1	0.0 U	96.0	7.14	200	0.0 U	28.6	33.2	----	----	----	34,400,000	77,900 J-	1,660 J+	<0.147	<0.149	<0.133	<0.158	0.126 J	0.465 J	<0.142
U4-E-03D	10/13/2022	N	EM02	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	18,900,000 J-	48,700	971 J	<29.4	<29.8	<26.6	<31.6	<20.0	<37.6	<28.4
U4-E-03D	11/3/2022	N	EM03	UMCf	95.1 - 110.1	----	109.3	7.34	----	----	17.8	225.3	----	----	----	15,400,000	44,000	1,710 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.481 J	0.479 J
U4-E-03D	12/6/2022	N	EM04	UMCf	95.1 - 110.1	----	198.2	7.40	----	----	22.1	1.8	----	----	----	16,000,000	37,000 J-	1,380 J+	<2.94 UJ	<2.98 UJ	<2.66 UJ	<3.16 UJ	<2.00 UJ	<3.76 UJ	<2.84 UJ
U4-E-03D	1/9/2023	N	EM05	UMCf	95.1 - 110.1	----	117.4	7.79	----	----	21.2	0.0	----	----	----	9,860,000	36,100	1,410 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.264 J	0.273 J
U4-E-03D	2/13/2023	N	EM06	UMCf	95.1 - 110.1	----	83.8	7.44	----	----	22.4	0.1	----	----	----	12,000,000	34,100	1,260 J+	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-E-03D	3/13/2023	N	EM07	UMCf	95.1 - 110.1	----	----	----	----	----	----	----	----	----	----	11,700,000	35,600	1,920 J+	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-E-03D	3/14/2023	N	EM07	UMCf	95.1 - 110.1	0.0 U	76.6	7.30	120	0.0 U	23.7	33.0	<4.07	<4.26	683	12,200,000	35,400	1,520 J+	<29.4	<29.8	<26.6	<31.6	<20.0	<37.6	<28.4
U4-E-03D	4/19/2023	N	EM08	UMCf	95.1 - 110.1	----	-58.5	6.55	----	----	21.7	62.2	----	----	----	12,600,000	35,400	83,500	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-E-03D	5/11/2023	N	EM09	UMCf	95.1 - 110.1	----	51.7	6.26	----	----	30.3	35.2	----	----	----	8,660,000	28,600	213,000	<0.147 UJ	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-03D	6/12/2023	N	EM10	UMCf	95.1 - 110.1	----	180.8	6.40	----	----	28.6	9.5	----	----	----	12,000,000	35,500	123,000	<0.147	<0.149	<0.133	<0.158	<0.100	0.331 J	0.346 J
U4-E-03D	7/11/2023	N	EM11	UMCf	95.1 - 110.1	----	154.2	6.62	----	----	30.3	181.7	----	----	----	15,400,000	38,500	28,700	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	0.275 J
U4-E-04D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	0.0 U	34.2	7.19	70	0.0 U	25.5	15.1	----	----	----	24,000,000	37,500 J-	1,380 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.223 J	<0.142
U4-E-04D	3/14/2023	N	EM07	UMCf	95.0 - 110.0	0.0 U	48.3	8.06	100	0.0 U	21.1	13.7	<4.07	<4.26	<2.91	640,000	0.538	3,170 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-04I	4/18/2022	N	BL02	UMCf	75.0 - 90.0	0.0 U	-18.2	8.40	70	0.0 U	27.4	28.9	----	----	----	3,430,000	3,380 J-	863 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-04I	3/14/2023	N	EM07	UMCf	75.0 - 90.0	0.0 U	83.0	7.42	0	0.0 U	22.2	15.0	<4.07	<4.26	32.4	20,900,000	60,300	1,580 J+	<7.35	<7.45	<6.65	<7.90	<5.00	<9.40	<7.10
U4-E-05D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	0.0 U	177.7	7.33	100	0.0 U	28.8	45.2	----	----	----	28,400,000	47,900 J-	1,070 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.271 J	<0.142
U4-E-05D	3/16/2023	N	EM07	UMCf	95.0 - 110.0	0.0 U	116.2	7.65	30	0.0 U	18.5	56.5	<4.07	<4.26	45.8 J+	641,000	0.272 J	2,450 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-05I	4/19/2022	N	BL02	UMCf	75.0 - 90.0	0.0 U	101.8	8.45	100	0.0 U	28.4	10.5	----	----	----	4,070,000	5,710 J-	1,110 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-05I	3/15/2023	N	EM07	UMCf	75.0 - 90.0	0.0 U	56.3	7.92	90	0.0 U	23.0	31.5	<4.07	<4.26	<2.91	2,690,000	8,200	2,960 J+	<0.147 UJ	<0.149 UJ	<0.133 UJ	<0.158 UJ	<0.100 UJ	<0.188 UJ	<0.142 UJ
U4-E-06D	4/11/2022	N	BL02	UMCf	95.1 - 110.1	0.0 U	138.8	7.24	90	0.0 U	23.5	37.2	<4.07	<4.26	<2.91	9,590,000	10,800	605 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-06I	4/11/2022	N	BL02	UMCf	73.2 - 88.2	0.0 U	128.1	7.47	90	0.0 U	25.8	11.6	<4.07	<4.26	<2.91	3,220,000	2,420	863 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-06I	4/11/2022	FD	BL02	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	<4.07	<4.26	<2.91	3,150,000	3,210	909 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-06I	10/12/2022	N	EM02	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	9,760,000 J-	9,930	221,000	<0.147	<0.149	<0.133	<0.158	<0.100	0.210 J	0.258 J
U4-E-06I	11/3/2022	N	EM03	UMCf	73.2 - 88.2	----	----	----	----	----	----	----	----	----	----	5,900,000	3,080	659,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	0.204 J
U4-E-06I	12/6/2022	N	EM04	UMCf	73.2 - 88.2	----	-204.0	6.62	----	----	23.2	38.3	----	----	----	6,870,000	1,860 J-	69,200	<1.47 UJ	<1.49 UJ	<1.33 UJ	<1.58 UJ	<1.00 UJ	<1.88 UJ	<1.42 UJ
U4-E-06I	1/9/2023	N	EM05	UMCf	73.2 - 88.2	----	111.2	6.81	----	----	23.0	4.4	----	----	----	7,540,000	17,700	117,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	0.224 J
U4-E-06I	2/13/2023	N	EM06	UMCf	73.2 - 88.2	----	-78.1	6.72	----	----	23.0	75.8	----	----	----	7,500,000	158 J-	516,000	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-E-06I	3/13/2023	N	EM07	UMCf	73.2 - 88.2	----	5.2	5.87	----	----	15.5	29.5	----	----	----	4,760,000	34.3 J-	399,000	<2.94	<2.98	<2.66	<3.16	<2.00	<3.76	<2.84
U4-E-06I	4/17/2023	N	EM08	UMCf	73.2 - 88.2	----	137.4	6.39	----	----	25.4	64.2	----	----	----	4,860,000	1,190	198,000	<2.94	<2.98	<2.66	<3.16	<2.00	<3.76	<2.84
U4-E-06I	5/15/2023	N	EM09	UMCf	73.2 - 88.2	----	68.3	7.63	----	----	33.7	59.0	----	----	----	18,800,000	37,200	29,900	<3.68	<3.73	<3.33	<3.95	<2.50	<4.70	<3.55
U4-E-06I	6/12/2023	N	EM10	UMCf	73.2 - 88.2	----	259.0	6.56	----	----	26.4	60.6	----	----	----	11,600,000	25,300	66,900 J-	<0.147	<0.149	<0.133	<0.158	<0.100	0.235 J	0.288 J
U4-E-06I	7/11/2023	N	EM11	UMCf	73.2 - 88.2	----	83.3	6.39	----	----	30.3	244.0	----	----	----	13,200,000	22,800	10,600	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-07D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	0.0 U	134.9	7.20	100	0.0 U	18.5	16.0	<4.07	<4.26	<2.91	37,900,000	76,300 J-	3,200 J	<0.147	<0.149	<0.133	<0.158	<0.100	0.682 J	0.594 J
U4-E-07I	4/12/2022	N	BL02	UMCf	74.7 - 89.7	0.0 U	164.9	8.12	100	0.0 U	20.2	2.8	<4.07	<4.26	<2.91	6,860,000	12,200 J	2,760 J	<0.147	<0.149	<0.133	<0.158	0.122 J	0.424 J	<0.142
U4-E-07I	10/11/2022	N	EM02	UMCf	74.7 - 89.7	----	----	----	----	----	----	----	----	----	----	17,000,000	48,700	12,500	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-E-07I	11/3/2022	N	EM03	UMCf	74.7 - 89.7	----	191.3	7.16	----	----	22.3	21294.5	----	----	----	12,800,000	42,300 J-	18,800	<0.147	<0.149	<0.133	<0.158	<0.100	0.225 J	0.316 J
U4-E-07I	12/6/2022	N	EM04	UMCf	74.7 - 89.7	----	29.1	7.20	----	----	24.0	3.7	----	----	----	15,000,000	38,500	17,100	<3.68 UJ	<3.73 UJ	<3.33 UJ	<3.95 UJ	<2.50 UJ	<4.70 UJ	<3.55 UJ
U4-E-07I	1/9/2023	N	EM05	UMCf	74.7 - 89.7	----	90.9	7.45	----	----	21.9	0.2	----	----	----	11,800,000	39,800	4,110	<0.147	<0.149	<0.133	<0.158	<0.100	0.281 J	<0.142
U4-E-07I	2/13/2023	N	EM06	UMCf	74.7 - 89.7	----	28.0	7.84	----	----	21.8	1.1	----	----	----	13,100,000	43,200	10,100	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-E-07I	3/13/2023	N	EM07	UMCf	74.7 - 89.7	----	90.3	7.05	----	----	24.2	79.0	----	----	----	12,500,000	41,600	6,770	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-E-07I	4/19/2023	N	EM08	UMCf	74.7 - 89.7	----	138.8	6.73	----	----	23.9	12.1	----	----	----	12,300,000	35,400	8,630	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	FIELD TESTS							RSK175			SM2540C	SW7199	SW9060A/SM5 310B	Volatile Organic Compounds by SW8260B						
						Ferrous Iron	Oxidation-Reduction Potential	pH	Purge Rate	Sulfide	Temperature	Turbidity	Ethane	Ethene	Methane	Total Dissolved Solids	Chromium, Hexavalent	Total Organic Carbon	1,1,1,2-Tetrachloro-ethane	1,1,1-Trichloro-ethane	1,1,2,2-Tetrachloro-ethane	1,1,2-Trichloro-ethane	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,1-Dichloro-propene
						mg/L	mV	SU	mL/min	mg/L	C	NTU	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-E-07I	5/15/2023	N	EM09	UMCf	74.7 - 89.7	----	120.1	7.60	----	----	34.0	189.9	----	----	----	12,800,000	31,700	6,020	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-E-07I	6/12/2023	N	EM10	UMCf	74.7 - 89.7	----	225.2	6.92	----	----	27.4	8.7	----	----	----	9,840,000	29,400	7,650 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.315 J	0.338 J
U4-E-07I	7/11/2023	N	EM11	UMCf	74.7 - 89.7	----	220.3	6.87	----	----	34.4	398.2	----	----	----	11,300,000	33,100	11,400	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-08D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	0.0 U	185.4	7.17	100	0.0 U	20.2	3.6	<4.07	<4.26	<2.91	39,500,000	85,100 J-	3,170 J	<0.147	<0.149	<0.133	<0.158	<0.100	0.759 J	0.631 J
U4-E-08D	10/11/2022	N	EM02	UMCf	94.6 - 109.6	----	----	----	----	----	----	----	----	----	----	24,000,000	69,700	2,450	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-E-08D	11/3/2022	N	EM03	UMCf	94.6 - 109.6	----	-21.2	6.86	----	----	21.8	24.9	----	----	----	22,800,000	60,100 J-	2,770 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.501 J	0.528 J
U4-E-08D	12/6/2022	N	EM04	UMCf	94.6 - 109.6	----	140.3	7.03	----	----	23.8	-0.4	----	----	----	23,600,000	52,600 J-	2,490 J+	<3.68 UJ	<3.73 UJ	<3.33 UJ	<3.95 UJ	<2.50 UJ	<4.70 UJ	<3.55 UJ
U4-E-08D	1/9/2023	N	EM05	UMCf	94.6 - 109.6	----	94.3	7.21	----	----	21.7	0.0	----	----	----	14,100,000	52,500	2,610 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.285 J	0.335 J
U4-E-08D	2/13/2023	N	EM06	UMCf	94.6 - 109.6	----	139.4	7.51	----	----	21.7	11.6	----	----	----	15,800,000	51,000	2,770	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-E-08D	3/13/2023	N	EM07	UMCf	94.6 - 109.6	----	188.9	6.86	----	----	24.5	72.7	----	----	----	16,100,000	47,800	3,510 J+	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-E-08D	4/19/2023	N	EM08	UMCf	94.6 - 109.6	----	52.0	6.45	----	----	24.2	2.4	----	----	----	17,200,000	42,700	3,960	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-E-08D	5/17/2023	N	EM09	UMCf	94.6 - 109.6	----	138.5	7.13	----	----	33.3	149.7	----	----	----	18,900,000	37,700	5,820 J+	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-E-08D	6/12/2023	N	EM10	UMCf	94.6 - 109.6	----	271.2	6.93	----	----	27.4	10.9	----	----	----	16,600,000	36,800	3,530	<0.147	<0.149	<0.133	<0.158	<0.100	0.250 J	0.284 J
U4-E-08D	7/11/2023	N	EM11	UMCf	94.6 - 109.6	----	307.9	6.95	----	----	31.1	3385.4	----	----	----	16,500,000	42,100	3,900 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-09D	4/15/2022	N	BL02	UMCf	94.5 - 109.5	0.0 U	131.3	7.20	100	0.0 U	26.7	5.2	<4.07	<4.26	<2.91	7,500,000	26,400 J-	875 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-E-09I	4/14/2022	N	BL02	UMCf	74.9 - 89.9	0.0 U	42.3	7.51	100	0.0 U	25.0	53.8	<4.07	<4.26	<2.91	5,550,000	13,000	1,280 J	<0.147	<0.149	<0.133	<0.158	<0.100	0.401 J	<0.142
U4-E-10D	4/13/2022	N	BL02	UMCf	94.5 - 109.5	0.0 U	200.4	8.07	100	0.0 U	23.0	13.1	<4.07	<4.26	<2.91	3,940,000	9,360	766 J	<0.147	<0.149	<0.133	<0.158	<0.100	0.398 J	<0.142
U4-E-10I	4/13/2022	N	BL02	UMCf	74.2 - 89.2	0.0 U	223.7	7.20	100	0.0 U	21.6	17.0	<4.07	<4.26	<2.91	3,690,000	17,000	1,790 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01D	4/19/2022	N	BL02	UMCf	96.7 - 106.7	0.0 U	130.5	7.14	130	0.0 U	30.0	7.9	----	----	----	7,230,000	16,500 J-	952 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01D	2/16/2023	N	EM06	UMCf	96.7 - 106.7	----	190.0	7.35	60	----	22.9	55.9	----	----	----	----	31,700	----	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-01D	3/20/2023	N	EM07	UMCf	96.7 - 106.7	0.0 U	164.9	7.53	80	0.0 U	22.7	543.3	<4.07	<4.26	<2.91	11,300,000	26,300	768 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01D	6/13/2023	N	EM10	UMCf	96.7 - 106.7	0.0 U	217.9	7.51	360	0.0 U	26.1	437.1	<4.07	<4.26	<2.91	7,810,000	19,500	742 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01DD	4/19/2022	N	BL02	UMCf	119.9 - 129.9	0.0 U	70.8	7.75	100	0.0 U	33.3	27.7	----	----	----	1,040,000	477 J	1,120 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01DD	4/19/2022	FD	BL02	UMCf	119.9 - 129.9	----	----	----	----	----	----	----	----	----	----	1,020,000	458 J	1,080 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01DD	3/15/2023	N	EM07	UMCf	119.9 - 129.9	0.0 U	61.8	7.33	100	0.0 U	24.7	56.4	<4.07	<4.26	<2.91	3,960,000	11,400	1,100 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01DD	6/13/2023	N	EM10	UMCf	119.9 - 129.9	0.0 U	171.6	7.59	320	0.0 U	31.4	73.2	<4.07	<4.26	<2.91	4,250,000	9,380	1,010 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01I	4/19/2022	N	BL02	UMCf	76.7 - 86.7	0.0 U	103.3	7.70	220	0.0 U	27.3	60.1	----	----	----	3,790,000	<150 UJ	1,160 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01I	3/20/2023	N	EM07	UMCf	76.7 - 86.7	0.0 U	137.9	7.59	110	0.0 U	23.5	2768.5	<4.07	<4.26	11.4	12,700,000	26,500	751 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01I	6/12/2023	N	EM10	UMCf	76.7 - 86.7	0.0 U	159.7	7.60	480	0.0 U	27.3	515.2	<4.07	<4.26	<2.91	7,010,000	18,000	706 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01S	4/18/2022	N	BL02	UMCf	54.7 - 64.7	0.0 U	99.5	8.75	220	0.0 U	27.6	1501.7	----	----	----	3,130,000	1,770 J-	972 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01S	3/15/2023	N	EM07	UMCf	54.7 - 64.7	0.0 U	-4.5	8.44	100	0.0 U	24.7	147.1	<4.07	<4.26	<2.91	2,670,000	1,330	1,420 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-01S	6/13/2023	N	EM10	UMCf	54.7 - 64.7	0.0 U	164.7	8.57	420	0.0 U	28.4	158.0	<4.07	<4.26	<2.91	2,950,000	1,440	803 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-02D	4/14/2022	N	BL02	UMCf	95.0 - 110.0	0.0 U	206.4	7.25	100	0.0 U	26.4	5.4	----	----	----	63,700,000	95,800	1,570 J	<0.147	<0.149	<0.133	<0.158	0.135 J	0.735 J	<0.142
U4-MW-02D	10/11/2022	N	EM02	UMCf	95.0 - 110.0	----	202.1	7.14	280	----	26.1	2.9	----	----	----	75,100,000 J-	148,000	787 J	<0.147	<0.149	<0.133	<0.158	<0.100	0.517 J	<0.142
U4-MW-02D	11/1/2022	N	EM03	UMCf	95.0 - 110.0	----	114.9	7.21	150	----	27.6	1.4	----	----	----	53,300,000	139,000	558 J	<7.35	<7.45	<6.65	<7.90	<5.00	<9.40	<7.10
U4-MW-02D	12/7/2022	N	EM04	UMCf	95.0 - 110.0	----	139.7	7.32	100	----	23.6	5.1	----	----	----	29,900,000	152,000 J-	924 J	<0.147	<0.149	<0.133	<0.158	0.165 J	0.832 J	0.619 J
U4-MW-02D	1/10/2023	N	EM05	UMCf	95.0 - 110.0	----	124.2	7.31	250	----	23.0	3.5	----	----	----	36,600,000	110,000	1,850 J	<0.147	<0.149	<0.133	<0.158	0.118 J	0.763 J	0.566 J
U4-MW-02D	2/13/2023	N	EM06	UMCf	95.0 - 110.0	----	199.9	7.39	210	----	23.7	11.6	----	----	----	44,500,000	120,000 J-	869 J	<0.147	<0.149	<0.133	<0.158	0.124 J	0.902 J	0.663 J
U4-MW-02D	3/17/2023	N	EM07	UMCf	95.0 - 110.0	0.0 U	178.4	7.26	100	0.0 U	24.8	8.9	<4.07	<4.26	<2.91	51,200,000	106,000	1,830 J+	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-MW-02D	4/19/2023	N	EM08	UMCf	95.0 - 110.0	0.0 U	42.5	7.15	120	0.0 U	26.0	9.4	----	----	----	41,000,000	122,000	1,620	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-02D	5/9/2023	N	EM09	UMCf	95.0 - 110.0	0.0 U	94.9	7.25	120	0.0 U	25.5	12.2	----	----	----	26,900,000 J	107,000 J-	1,930 J+	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-02D	6/13/2023	N	EM10	UMCf	95.0 - 110.0	0.0 U	154.1	7.28	100	0.0 U	28.1	3.4	<4.07	<4.26	<2.91	42,700,000	95,500	1,140 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.382 J	0.188 J
U4-MW-02D	7/18/2023	N	EM11	UMCf	95.0 - 110.0	0.0 U	117.3	7.25	220	0.0 U	27.7	32.3	----	----	----	55,900,000	109,000	1,680 J+	<0.147	<0.149	<0.133	<0.158	0.108 J	0.768 J	<0.142
U4-MW-02I	4/14/2022	N	BL02	UMCf	75.0 - 90.0	0.0 U	159.8	8.09	100	0.0 U	28.4	15.2	----	----	----	6,660,000	12,800	1,100 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.431 J	<0.142
U4-MW-02I	10/11/2022	N	EM02	UMCf	75.0 - 90.0	----	172.7	7.07	280	----	25.3	56.9	----	----	----	11,000,000	33,900	8,510	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-02I	11/2/2022	N	EM03	UMCf	75.0 - 90.0	----	148.7	6.86	200	----	25.0	36.2	----	----	----	15,700,000	48,200	88,500	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-02I	11/2/2022	FD	EM03	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	20,400,000	46,600	75,900	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-02I	12/8/2022	N	EM04	UMCf	75.0 - 90.0	----	168.4	6.91	100	----	14.5	5.0	----	----	----	1,860,000 J	3,720 J-	31,600 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-02I	12/8/2022	FD	EM04	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	3,300,000 J	3,620	161,000 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-02I	1/13/2023	N	EM05	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	8,500,000	21,700	76,100	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-02I	1/13/2023	FD	EM05	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	8,640,000	21,900	74,900 J-	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-02I	2/15/2023	N	EM06	UMCf	75.0 - 90.0	----	232.8	6.61	100	----	23.4	115.7	----	----	----	26,500,000	69,100 J-	10,700	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-02I	2/15/2023	FD	EM06	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	24,800,000	69,400 J-	13,300	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-02I	3/17/2023	N	EM07	UMCf	75.0 - 90.0	0.0 U	129.0	6.43	105	0.0 U	25.4	37.4	<4.07	<4.26	3,560	30,400,000	69,400	12,000	<29.4	<29.8	<26.6	<31.6	<20.0	<37.6	<28.4
U4-MW-02I	3/17/2023	FD	EM07	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	<4.07	<4.26	3,310	29,100,000	68,600	12,700	<29.4	<29.8	<26.6	<31.6	<20.0	<37.6	<28.4
U4-MW-02I	4/20/2023	N	EM08	UMCf	75.0 - 90.0	0.0 U	8.1	6.31	130	0.0 U	25.3	129.2	----	----	----	2,060,000	3.98 J-	104,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-02I	4/20/2023	FD	EM08	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	1,990,000	4.15 J-	105,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-02I	5/9/2023	N	EM09	UMCf	75.0 - 90.0	0.0 U	135.2	6.57	140	0.0 U	26.8	30.3	----	----	----	2,200,000	4.96	141,000 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-02I	5/9/2023	FD	EM09	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	2,770,000	5.57	35,900 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-02I	6/12/2023	N	EM10	UMCf	75.0 - 90.0	0.0 U	110.4	6.57	60	0.0 U	30.7	13.7	<4.07	<4.26	6,720	2,860,000	1.15	159,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-02I	6/12/2023	FD	EM10	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	<4.07	<4.26	6,540	2,990,000	1.28	157,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-02I	7/18/2023	N	EM11	UMCf	75.0 - 90.0	1.0	-196.8	6.37	330	2.0	27.0	79.4	----	----	----	2,810,000	0.301 J	255,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-02I	7/18/2023	FD	EM11	UMCf	75.0 - 90.0	----	----	----	----	----	----	----	----	----	----	2,690,000 J-	0.573	291,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-03D	4/20/2022	N	BL02	UMCf	96.6 - 106.6	0.0 U	209.7	7.29	100	0.0 U	26.7	31.0	----	----	----	23,000,000	42,100	964 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-03D	2/16/2023	N	EM06	UMCf	96.6 - 106.6	----	168.2	7.47	60	----	22.6	35.4	----	----	----	----	31,800	----	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-03D	3/16/2023	N	EM07	UMCf	96.6 - 106.6	0.0 U	76.1	7.37	100	0.0 U	23.8	35.8	<4.07	<4.26	59.1 J	14,400,000	28,100	816 J	<2.94	<2.98	<2.66	<3.16	<2.00	<3.76	<2.84
U4-MW-03D	3/16/2023	FD	EM07	UMCf	96.6 - 106.6	----	----	----	----	----	----	----	<4.07	<4.26	<2.91 UJ	13,400,000	27,200	831 J	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-03D	6/15/2023	N	EM10	UMCf	96.6 - 106.6	0.0 U	277.6	7.31	270	0.0 U	26.5	236.1	<4.07	<4.26	<2.91	10,000,000	28,000	538 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-03DD	4/20/2022	N	BL02	UMCf	119.7 - 129.7	0.0 U	220.6	7.54	100	0.0 U	26.3	24.2	----	----	----	2,070,000	2,660	999 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-03DD	3/15/2023	N	EM07	UMCf	119.7 - 129.7	0.0 U	35.0	8.22	110	0.0 U	22.1	-57.2	<4.07	<4.26	<2.91	567,000	60.5	846 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-03DD	6/15/2023	N	EM10	UMCf	119.7 - 129.7	0.0 U	185.0	8.22	200	0.0 U	28.0	20.2	<4.07	<4.26	<2.91	556,000	42.9	274 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-03I	4/19/2022	N	BL02	UMCf	76.6 - 86.6	0.0 U	57.0	8.02	60	0.0 U	30.2	8489.8	----	----	----	2,350,000	<150 UJ	3,300 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-03I	3/15/2023	N	EM07	UMCf	76.6 - 86.6	0.0 U	95.9	7.44	100	0.0 U	25.2	159.7	<4.07	<4.26	<2.91	12,000,000	24,500	1,260 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-03I	6/14/2023	N	EM10	UMCf	76.6 - 86.6	0.0 U	230.1	7.54	210	0.0 U	29.9	181.6	<4.07	<4.26	35.1	12,300,000	11,400	607 J	<2.94	<2.98	<2.66	<3.16	<2.00	<3.76	<2.84
U4-MW-03I	6/14/2023	FD	EM10	UMCf	76.6 - 86.6	----	----	----	----	----	----	----	<4.07	<4.26	33.9	12,100,000	11,500	620 J	<3.68	<3.73	<3.33	<3.95	<2.50	<4.70	<3.55
U4-MW-03S	4/18/2022	N	BL02	UMCf	54.5 - 64.5	0.0 U	105.4	9.74	195	0.0 U	27.3	38.0	----	----	----	2,890,000	1,390 J-	1,200 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-03S	4/18/2022	FD	BL02	UMCf	54.5 - 64.5	----	----	----	----	----	----	----	----	----	----	2,190,000 J-	1,390 J-	1,320 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-03S	3/15/2023	N	EM07	UMCf	54.5 - 64.5	0.0 U	-0.9	9.48	100	0.0 U	22.1	-21.0	<4.07	<4.26	<2.91	2,440,000 J	2,300	1,480 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-03S	6/15/2023	N	EM10	UMCf	54.5 - 64.5	0.0 U	171.1	8.84	240	0.0 U	27.3	21.3	<4.07	<4.26	799	2,880,000	2,470	2,310 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	FIELD TESTS							RSK175			SM2540C	SW7199	SW9060A/SM5 310B	Volatile Organic Compounds by SW8260B						
						Ferrous Iron	Oxidation-Reduction Potential	pH	Purge Rate	Sulfide	Temperature	Turbidity	Ethane	Ethene	Methane	Total Dissolved Solids	Chromium, Hexavalent	Total Organic Carbon	1,1,1,2-Tetrachloro-ethane	1,1,1-Trichloro-ethane	1,1,2,2-Tetrachloro-ethane	1,1,2-Trichloro-ethane	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,1-Dichloro-propene
						mg/L	mV	SU	mL/min	mg/L	C	NTU	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-04D	4/19/2022	N	BL02	UMCf	97.0 - 107.0	0.0 U	76.7	7.01	200	0.0 U	30.1	18.0	----	----	----	56,100,000	103,000 J	7,260 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.560 J	<0.142
U4-MW-04D	2/16/2023	N	EM06	UMCf	97.0 - 107.0	----	185.1	7.60	60	----	21.5	38.7	----	----	----	----	18,300	----	<7.35	<7.45	<6.65	<7.90	<5.00	<9.40	<7.10
U4-MW-04D	3/21/2023	N	EM07	UMCf	97.0 - 107.0	0.0 U	43.3	7.80	120	0.0 U	20.3	420.1	<4.07	<4.26	<2.91	5,570,000 J	14,300	1,210 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-04D	6/14/2023	N	EM10	UMCf	97.0 - 107.0	0.0 U	22.8	7.20	60	0.0 U	37.5	7.3	<4.07	<4.26	1,030	5,170,000	5,350	57,600	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-04I	4/19/2022	N	BL02	UMCf	76.8 - 86.8	0.0 U	49.8	7.36	100	0.0 U	27.6	78.2	----	----	----	22,500,000	34,300 J-	1,530 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-04I	3/20/2023	N	EM07	UMCf	76.8 - 86.8	0.0 U	144.6	7.43	200	0.0 U	23.3	482.0	<4.07	<4.26	<2.91	19,200,000	38,600	1,200 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	0.158 J
U4-MW-04I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	0.0 U	96.3	6.90	110	0.0 U	32.3	185.0	<4.07	<4.26	148	13,200,000	34,300	39,000	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-05D	4/15/2022	N	BL02	UMCf	98.2 - 108.2	0.0 U	146.1	7.03	100	0.0 U	28.3	39.5	----	----	----	27,800,000	73,100 J-	1,710 J	<0.147	<0.149	<0.133	<0.158	0.181 J	0.659 J	0.565 J
U4-MW-05D	10/13/2022	N	EM02	UMCf	98.2 - 108.2	----	190.6	7.02	280	----	28.3	235.7	----	----	----	30,400,000 J-	69,500	1,300 J	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-MW-05D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	----	121.3	7.64	140	----	23.6	92823.7	----	----	----	15,100,000	46,500	1,450 J+	<0.147	<0.149	<0.133	<0.158	0.118 J	0.278 J	0.297 J
U4-MW-05D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	----	143.6	7.59	0	----	23.1	106.9	----	----	----	15,100,000	44,900	1,200 J+	<0.147	<0.149	<0.133	<0.158	0.116 J	0.436 J	0.544 J
U4-MW-05D	1/11/2023	N	EM05	UMCf	98.2 - 108.2	----	187.0	7.27	250	----	22.5	138.6	----	----	----	10,200,000	44,700	1,200 J+	<0.147	<0.149	<0.133	<0.158	0.106 J	0.330 J	0.362 J
U4-MW-05D	2/14/2023	N	EM06	UMCf	98.2 - 108.2	----	190.5	7.55	80	----	15.4	268.7	----	----	----	9,200,000	31,800	1,090	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-MW-05D	3/16/2023	N	EM07	UMCf	98.2 - 108.2	0.0 U	57.4	7.45	100	0.0 U	24.8	331.6	<4.07	<4.26	55.6 J+	11,400,000	28,200	1,370 J+	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-MW-05D	4/20/2023	N	EM08	UMCf	98.2 - 108.2	0.0 U	36.1	7.31	100	0.0 U	27.4	130.7	----	----	----	6,160,000	18,900	4,520	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	0.187 J
U4-MW-05D	5/10/2023	N	EM09	UMCf	98.2 - 108.2	0.0 U	133.6	5.83	150	0.0 U	28.4	22.4	----	----	----	3,790,000	10,400	94,100	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	0.197 J
U4-MW-05D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	0.0 U	133.4	6.48	90	0.0 U	34.4	127.1	<4.07	<4.26	1,860	6,880,000	5,460	129,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-05D	7/18/2023	N	EM11	UMCf	98.2 - 108.2	0.0 U	182.4	6.42	220	0.0 U	31.1	127.0	----	----	----	8,820,000	7,530	22,100	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-05I	4/15/2022	N	BL02	UMCf	76.6 - 86.6	0.0 U	140.1	7.54	100	0.0 U	23.2	2057.3	----	----	----	12,900,000	42,800 J-	1,460 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.359 J	0.311 J
U4-MW-05I	10/13/2022	N	EM02	UMCf	76.6 - 86.6	----	205.5	7.04	280	----	25.6	1860.6	----	----	----	29,100,000	70,800	1,180 J	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-MW-05I	11/3/2022	N	EM03	UMCf	76.6 - 86.6	----	130.9	7.57	240	----	24.1	90637.6	----	----	----	22,800,000	61,900 J-	1,370 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.448 J	0.557 J
U4-MW-05I	12/8/2022	N	EM04	UMCf	76.6 - 86.6	----	132.0	7.34	100	----	23.3	1119.7	----	----	----	19,400,000 J	49,600	1,630 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.345 J	<0.142
U4-MW-05I	1/11/2023	N	EM05	UMCf	76.6 - 86.6	----	192.5	7.29	250	----	23.1	7501.5	----	----	----	10,300,000	45,300	1,400 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.289 J	0.462 J
U4-MW-05I	2/14/2023	N	EM06	UMCf	76.6 - 86.6	----	179.4	7.53	80	----	22.3	1495.6	----	----	----	9,860,000	36,900	1,260 J+	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-MW-05I	3/14/2023	N	EM07	UMCf	76.6 - 86.6	0.5	77.0	7.65	100	0.0 U	24.0	6501.9	<4.07	<4.26	<2.91	9,700,000	30,400	1,990 J+	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-MW-05I	4/21/2023	N	EM08	UMCf	76.6 - 86.6	0.0 U	-3.0	7.08	130	0.0 U	26.2	62.0	----	----	----	3,810,000	5,170	379,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-05I	5/10/2023	N	EM09	UMCf	76.6 - 86.6	0.0 U	-31.5	5.71	150	0.0 U	26.6	61.6	----	----	----	4,590,000	1.83	531,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-05I	6/15/2023	N	EM10	UMCf	76.6 - 86.6	0.5	-156.7	6.57	60	0.2	34.2	28.6	<4.07	<4.26	1,350	3,650,000	4.86	485,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-05I	7/17/2023	N	EM11	UMCf	76.6 - 86.6	0.0 U	141.8	6.71	300	0.0 U	29.0	5574.9	----	----	----	8,240,000	5,340	54,600 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-06D	4/19/2022	N	BL02	UMCf	97.1 - 107.1	0.0 U	----	----	----	0.0 U	----	----	----	----	----	43,400,000	73,100 J-	1,350 J+	<0.147	<0.149	<0.133	<0.158	0.134 J	0.315 J	<0.142
U4-MW-06D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	----	198.6	7.34	80	----	21.3	76.0	----	----	----	----	36,900 J-	----	<7.35	<7.45	<6.65	<7.90	<5.00	<9.40	<7.10
U4-MW-06D	3/21/2023	N	EM07	UMCf	97.1 - 107.1	0.0 U	196.2	7.10	120	0.0 U	21.2	55.0	<4.07	<4.26	<2.91	16,000,000	36,500	919 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-06D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	0.0 U	140.6	7.26	90	0.0 U	20.3	-2.7	<4.07	<4.26	<2.91	12,500,000	29,300	863 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-06I	4/19/2022	N	BL02	UMCf	76.5 - 86.5	0.0 U	132.2	8.14	100	0.0 U	27.5	171.5	----	----	----	3,420,000	3,070 J-	1,190 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-06I	3/14/2023	N	EM07	UMCf	76.5 - 86.5	0.0 U	120.3	7.90	0	0.0 U	18.2	204.9	<4.07	<4.26	<2.91	17,100,000	42,800	1,660 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-06I	6/16/2023	N	EM10	UMCf	76.5 - 86.5	0.0 U	94.8	8.27	50	0.0 U	22.3	-4.5	<4.07	<4.26	110	12,600,000	29,000	4,040	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07D	4/15/2022	N	BL02	UMCf	96.8 - 106.5	0.0 U	182.2	7.48	100	0.0 U	26.7	52.5	----	----	----	5,820,000	23,900 J+	631 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07D	10/12/2022	N	EM02	UMCf	96.8 - 106.5	----	93.5	7.79	50	----	28.7	9.7	----	----	----	1,310,000 J-	2,080	1,630 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07D	10/12/2022	FD	EM02	UMCf	96.8 - 106.5	----	----	----	----	----	----	----	----	----	----	1,330,000	2,120	1,490 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07D	11/3/2022	N	EM03	UMCf	96.8 - 106.5	----	111.1	7.85	200	----	23.9	97.4	----	----	----	1,220,000 J+	1,610 J-	1,680 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07D	12/7/2022	N	EM04	UMCf	96.8 - 106.5	----	106.4	7.83	100	----	23.8	14.1	----	----	----	1,050,000	1,080 J-	1,580 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07D	1/11/2023	N	EM05	UMCf	96.8 - 106.5	----	105.0	7.74	120	----	24.3	22.8	----	----	----	1,260,000	1,380 J-	1,480 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07D	2/14/2023	N	EM06	UMCf	96.8 - 106.5	----	161.8	7.79	90	----	22.3	73.4	----	----	----	1,070,000	1,250 J-	1,320	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07D	3/16/2023	N	EM07	UMCf	96.8 - 106.5	0.0 U	140.8	7.92	105	0.0 U	28.6	39.6	<4.07	<4.26	53.0 J+	1,070,000	922	1,930 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07D	4/21/2023	N	EM08	UMCf	96.8 - 106.5	0.0 U	-393.7	6.15	120	0.0 U	26.2	106.9	----	----	----	3,630,000	5,020	416,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07D	5/11/2023	N	EM09	UMCf	96.8 - 106.5	0.0 U	47.7	5.65	150	0.0 U	27.5	34.4	----	----	----	3,170,000	692	1,390 J+	<0.147 UJ	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07D	6/13/2023	N	EM10	UMCf	96.8 - 106.5	0.0 U	108.0	6.37	60	0.0 U	32.9	8.8	<4.07	<4.26	18,000	3,280,000	1,160 J-	392,000 J-	<0.147 UJ	<0.149 UJ	<0.133 UJ	<0.158 UJ	<0.100 UJ	<0.188 UJ	<0.142 UJ
U4-MW-07D	7/17/2023	N	EM11	UMCf	96.8 - 106.5	0.0 U	162.4	6.70	400	0.0 U	30.8	156.5	----	----	----	13,200,000	29,900	38,900	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07I	4/15/2022	N	BL02	UMCf	76.8 - 86.8	0.0 U	158.2	7.86	100	0.0 U	25.6	10.7	----	----	----	1,670,000	4,810 J+	2,760 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	----	135.0	7.86	50	----	26.9	119.0	----	----	----	1,350,000 J	2,720	1,370 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07I	11/3/2022	N	EM03	UMCf	76.8 - 86.8	----	141.5	7.93	180	----	23.9	1667.5	----	----	----	1,340,000	1,650 J-	1,530 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	----	96.7	7.97	100	----	24.0	210.3	----	----	----	1,220,000	1,360 J-	1,630 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07I	1/11/2023	N	EM05	UMCf	76.8 - 86.8	----	104.4	7.82	150	----	24.3	73.4	----	----	----	1,440,000	1,810 J-	1,420 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	----	124.7	7.66	80	----	22.3	134.0	----	----	----	1,520,000	2,640 J-	1,250	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	0.0 U	83.7	7.72	100	0.2	24.3	259.7	<4.07	<4.26	54.8 J+	1,630,000 J	2,670 J-	25,900 J-	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-07I	4/21/2023	N	EM08	UMCf	76.8 - 86.8	0.0 U	-161.7	6.53	130	0.0 U	26.1	277.9	----	----	----	2,670,000	4,860	113,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07I	5/11/2023	N	EM09	UMCf	76.8 - 86.8	1.0	-80.3	6.08	150	0.0 U	26.1	156.9	----	----	----	2,820,000	0.158 J	352,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-07I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	1.0	-262.2	6.78	60	0.4	29.9	105.6	<4.07	<4.26	376	3,030,000	<15.0	171,000	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-07I	7/17/2023	N	EM11	UMCf	76.8 - 86.8	0.0 U	133.1	6.53	210	0.0 U	27.5	504.0	----	----	----	7,260,000	1,900	47,900	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08D	4/13/2022	N	BL02	UMCf	98.6 - 108.6	0.0 U	166.4	6.92	100	0.0 U	24.7	98.8 E	<4.07	<4.26	<2.91	48,000,000	106,000	3,420 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08D	12/7/2022	N	EM04	UMCf	98.6 - 108.6	0.0 U	52.2	6.62	250	0.0 U	22.4	21.7	<4.07	<4.26	166	14,700,000	52,900 J-	6,460	<0.147	<0.149	<0.133	<0.158	<0.100	0.391 J	<0.142
U4-MW-08D	3/17/2023	N	EM07	UMCf	98.6 - 108.6	0.0 U	174.5	6.38	0	0.0 U	21.6	144.4	<4.07	<4.26	22,600	22,700,000	44,800	10,900 J-	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-MW-08D	6/13/2023	N	EM10	UMCf	98.6 - 108.6	0.0 U	126.1	6.54	100	0.0 U	27.2	142.7	<4.07	<4.26	31,700	37,200,000	55,900	9,200 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.303 J	0.210 J
U4-MW-08DD	4/20/2022	N	BL02	UMCf	119.8 - 129.8	0.0 U	5.0	7.70	70	0.0 U	24.6	62.4	<4.07	<4.26	<2.91	1,240,000	694	670 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08DD	4/20/2022	FD	BL02	UMCf	119.8 - 129.8	----	----	----	----	----	----	----	<4.07	<4.26	<2.91	1,220,000	723	672 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08DD	12/8/2022	N	EM04	UMCf	119.8 - 129.8	0.0 U	138.4	7.44	200	0.0 U	21.4	20.3	<4.07	<4.26	<2.91	751,000 J	384	1,170 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08DD	3/15/2023	N	EM07	UMCf	119.8 - 129.8	0.0 U	63.2	7.54	80	0.0 U	24.5	8.5	<4.07	<4.26	<2.91	2,690,000	1,280	935 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08DD	6/14/2023	N	EM10	UMCf	119.8 - 129.8	0.0 U	46.7	6.77	50	0.0 U	26.6	124.9	<4.07	<4.26	<2.91	2,380,000	1,270	550 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08I	4/13/2022	N	BL02	UMCf	78.0 - 88.0	0.0 U	183.3	7.71	100	0.0 U	22.8	-5857914.0 E	<4.07	<4.26	<2.91	3,380,000	7,950	1,740 J	<0.147	<0.149	<0.133	<0.158	<0.100	1.02	<0.142
U4-MW-08I	12/7/2022	N	EM04	UMCf	78.0 - 88.0	0.0 U	137.7	7.48	250	0.0 U	22.7	304.1	<4.07	<4.26	57.2	11,000,000	33,700	1,790 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.223 J	<0.142
U4-MW-08I	12/7/2022	FD	EM04	UMCf	78.0 - 88.0	----	----	----	----	----	----	----	<4.07	<4.26	55.5	----	34,200 J-	1,310 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.232 J	0.238 J
U4-MW-08I	3/17/2023	N	EM07	UMCf	78.0 - 88.0	0.0 U	157.8	6.95	35	0.0 U	20.5	641.8	<4.07	<4.26	17,900	22,300,000	54,200	1,640 J+	<7.35	<7.45	<6.65	<7.90	<5.00	<9.40	<7.10
U4-MW-08I	6/13/2023	N	EM10	UMCf	78.0 - 88.0	0.0 U	13.5	7.06	50	0.0 U	25.2	49.9	<4.07	<4.26	4,260	5,340,000	11,600	12,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	0.152 J
U4-MW-08S	4/15/2022	N	BL02	UMCf	54.9 - 64.9	0.0 U	79.6	9.96	285	0.0 U	27.1	55.4	<4.07	<4.26	<2.91	1,970,000	506 J+	1,190 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08S	12/7/2022	N	EM04	UMCf	54.9 - 64.9	0.0 U	40.0	8.08	250	0.0 U	22.4	182.5	<4.07	<4.26	427	1,600,000	254 J-	3,390 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08S	12/7/2022	FD	EM04	UMCf	54.9 - 64.9	----	----	----	----	----	----	----	<4.07	<4.26	472	1,850,000	265 J-	2,830 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08S	3/13/2023	N	EM07	UMCf	54.9 - 64.9	0.0 U	-138.1	7.85	60	0.2	31.0	2.9	<4.07	<4.26	21,300	1,570,000	<0.150	9,910	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08S	3/13/2023	FD	EM07	UMCf	54.9 - 64.9	----	----	----	----	----	----	----	<4.07	<4.26	21,300	1,410,000	<0.750 UJ	12,800 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-08S	6/13/2023	N	EM10	UMCf	54.9 - 64.9	0.0 U	-258.8	7.13	100	2.0	26.7	192.0	<4.07	<4.26	23,300	2,530,000	<15.0	190,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	FIELD TESTS							RSK175			SM2540C	SW7199	SW9060A/SM5 310B	Volatile Organic Compounds by SW8260B						
						Ferrous Iron	Oxidation-Reduction Potential	pH	Purge Rate	Sulfide	Temperature	Turbidity	Ethane	Ethene	Methane	Total Dissolved Solids	Chromium, Hexavalent	Total Organic Carbon	1,1,1,2-Tetrachloro-ethane	1,1,1-Trichloro-ethane	1,1,2,2-Tetrachloro-ethane	1,1,2-Trichloro-ethane	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,1-Dichloro-propene
						mg/L	mV	SU	mL/min	mg/L	C	NTU	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-08S	6/13/2023	FD	EM10	UMCf	54.9 - 64.9	----	----	----	----	----	----	----	<4.07	<4.26	26,800	2,110,000	<15.0	201,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-09D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	0.0 U	36.4	7.03	100	0.0 U	24.3	640.2	<4.07	<4.26	<2.91	30,000,000	67,800	1,590 J	<0.147	<0.149	<0.133	<0.158	<0.100	0.455 J	<0.142
U4-MW-09D	12/6/2022	N	EM04	UMCf	96.9 - 106.9	0.0 U	104.4	7.69	200	0.0 U	22.1	305.7	<4.07 UJ	<4.26 UJ	291	3,560,000	7,060 J-	751 J	<1.47 UJ	<1.49 UJ	<1.33 UJ	<1.58 UJ	<1.00 UJ	<1.88 UJ	<1.42 UJ
U4-MW-09D	3/16/2023	N	EM07	UMCf	96.9 - 106.9	0.0 U	-81.6	6.58	0	0.0 U	22.9	678.2	<4.07	<4.26	13,400	4,200,000	3,520	146,000	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-09D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	0.0 U	2.5	6.50	100	0.0 U	29.0	13.1	<4.07	<4.26	4,200	3,820,000	1,490	223,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-09DD	4/14/2022	N	BL02	UMCf	119.8 - 129.8	0.0 U	144.1	7.81	100	0.0 U	23.2	25.6	<4.07	<4.26	<2.91	759,000 J	121	493 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-09DD	12/6/2022	N	EM04	UMCf	119.8 - 129.8	0.0 U	63.9	7.85	250	0.0 U	22.6	11.4	<4.07 UJ	<4.26 UJ	<2.91 UJ	693,000	134	398 J	<0.147 UJ	<0.149 UJ	<0.133 UJ	<0.158 UJ	<0.100 UJ	<0.188 UJ	<0.142 UJ
U4-MW-09DD	3/21/2023	N	EM07	UMCf	119.8 - 129.8	0.0 U	146.4	7.90	70	0.0 U	20.1	26.7	<4.07	<4.26	<2.91	1,290,000	215 J-	310 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-09DD	6/15/2023	N	EM10	UMCf	119.8 - 129.8	0.0 U	-41.8	8.18	100	0.0 U	32.4	26.3	<4.07	<4.26	<2.91	1,210,000 J	94.8	699 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-09I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	0.0 U	8.8	7.57	120	0.0 U	24.5	322.6	<4.07	<4.26	<2.91	2,030,000	2,320	1,090 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-09I	12/6/2022	N	EM04	UMCf	76.8 - 86.8	0.0 U	124.5	7.49	250	0.0 U	22.6	1626.2	<4.07 UJ	<4.26 UJ	194	6,780,000	13,500 J-	1,040 J+	<1.47 UJ	<1.49 UJ	<1.33 UJ	<1.58 UJ	<1.00 UJ	<1.88 UJ	<1.42 UJ
U4-MW-09I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	0.7	-149.7	6.48	105	0.0 U	24.5	1692.0	<4.07	<4.26	18,200	4,970,000	7,920	43,900	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-09I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	0.0 U	112.1	6.32	200	0.0 U	28.3	49.1	<40.7	<42.6	7,840	4,140,000	1,130	33,900	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-09S	4/14/2022	N	BL02	UMCf	55.3 - 65.3	0.0 U	179.7	8.27	160	0.0 U	23.4	33.5	<4.07	<4.26	<2.91	1,900,000	387	892 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-09S	12/6/2022	N	EM04	UMCf	55.3 - 65.3	0.0 U	73.5	8.69	250	0.0 U	21.6	60.9	<4.07 UJ	<4.26 UJ	<2.91 UJ	3,460,000 J	2,740 J-	999 J	<0.147 UJ	<0.149 UJ	<0.133 UJ	<0.158 UJ	<0.100 UJ	<0.188 UJ	<0.142 UJ
U4-MW-09S	3/17/2023	N	EM07	UMCf	55.3 - 65.3	0.0 U	97.1	8.96	200	0.0 U	23.0	99.2	<4.07	<4.26	4,840	2,960,000	2,630	2,440 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-09S	6/15/2023	N	EM10	UMCf	55.3 - 65.3	0.0 U	-300.0	7.24	100	2.0	26.6	7.3	<4.07	<4.26	11,800	3,740,000	<15.0	724,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-10D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	0.0 U	206.3	7.33	100	0.0 U	22.6	52.9	<4.07	<4.26	<2.91	4,840,000	5,450	1,020 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-10D	12/5/2022	N	EM04	UMCf	96.9 - 106.9	0.0 U	70.0	7.73	100	0.0 U	22.9	43.2	<4.07	<4.26	257	2,400,000	3,640 J-	868 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-10D	3/17/2023	N	EM07	UMCf	96.9 - 106.9	0.5	-107.9	6.38	100	0.0 U	22.4	-399.7	<4.07	<4.26	29,800	3,170,000	1.22	225,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-10D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	1.0	-202.3	6.59	200	0.1	27.1	14.9	<4.07	<4.26	26,700	2,340,000	0.228 J	234,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-10I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	0.0 U	183.9	7.68	100	0.0 U	23.9	72915.5	<4.07	<4.26	<2.91	5,670,000	6,160	1,200 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.373 J	<0.142
U4-MW-10I	12/5/2022	N	EM04	UMCf	77.1 - 87.1	0.0 U	9.6	7.73	100	0.0 U	23.2	48.5	<4.07	<4.26	50.1	1,870,000	566 J-	3,630 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-10I	3/17/2023	N	EM07	UMCf	77.1 - 87.1	0.0 U	25.5	6.62	100	0.0 U	23.1	-345.3	<4.07	<4.26	20,300	3,110,000	1.11	11,400	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-10I	6/14/2023	N	EM10	UMCf	77.1 - 87.1	3.0	-173.2	6.54	200	0.6	25.7	22.8	<4.07	<4.26	21,500	2,240,000	0.333 J	257,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11D	4/15/2022	N	BL02	UMCf	97.4 - 107.4	0.0 U	194.9	7.12	100	0.0 U	23.3	218.4	<4.07	<4.26	<2.91	34,200,000	90,100 J+	3,440 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.543 J	0.380 J
U4-MW-11D	9/26/2022	N	EM01	UMCf	97.4 - 107.4	0.0 U	49.2	7.38	100	0.0 U	31.6	74.6	----	----	----	34,600,000	93,300	20,200 J+	<7.35	<7.45	<6.65	<7.90	<5.00	<9.40	<7.10
U4-MW-11D	10/11/2022	N	EM02	UMCf	97.4 - 107.4	0.0 U	5.2	7.07	250	0.0 U	23.7	155.4	----	----	----	40,200,000	96,300	1,360 J+	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-11D	11/1/2022	N	EM03	UMCf	97.4 - 107.4	0.0 U	-20.2	7.07	150	0.0 U	22.8	53.4	----	----	----	38,300,000	91,100	1,820 J+	<7.35	<7.45	<6.65	<7.90	<5.00	<9.40	<7.10
U4-MW-11D	12/6/2022	N	EM04	UMCf	97.4 - 107.4	0.0 U	156.0	6.76	0	0.0 U	16.9	21.4	<4.07 UJ	<4.26 UJ	215	27,000,000	32,300 J-	33,300	<3.68 UJ	<3.73 UJ	<3.33 UJ	<3.95 UJ	<2.50 UJ	<4.70 UJ	<3.55 UJ
U4-MW-11D	1/12/2023	N	EM05	UMCf	97.4 - 107.4	0.0 U	87.9	6.46	120	0.0 U	21.5	254.4	----	----	----	24,800,000	74,400	5,100	<29.4	<29.8	<26.6	<31.6	<20.0	<37.6	<28.4
U4-MW-11D	2/14/2023	N	EM06	UMCf	97.4 - 107.4	0.0 U	120.7	6.27	200	0.0 U	21.3	55.2	----	----	----	25,800,000	76,700	6,540	<29.4	<29.8	<26.6	<31.6	<20.0	<37.6	<28.4
U4-MW-11D	3/16/2023	N	EM07	UMCf	97.4 - 107.4	0.0 U	46.8	6.50	100	0.0 U	20.0	303.2	<4.07	<4.26	19,400	22,900,000	55,600 J-	5,970 J-	<29.4	<29.8	<26.6	<31.6	<20.0	<37.6	<28.4
U4-MW-11D	4/18/2023	N	EM08	UMCf	97.4 - 107.4	0.0 U	42.3	6.36	100	0.0 U	25.2	154.0	----	----	----	23,800,000	45,700	8,540	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-11D	5/17/2023	N	EM09	UMCf	97.4 - 107.4	0.0 U	155.6	5.79	140	0.0 U	24.2	83.1	----	----	----	647,000	47,300	3,860	<2.94 UJ	<2.98 UJ	<2.66 UJ	<3.16 UJ	<2.00 UJ	<3.76 UJ	<2.84 UJ
U4-MW-11D	6/16/2023	N	EM10	UMCf	97.4 - 107.4	0.0 U	54.6	6.71	100	0.0 U	22.1	4.2	<4.07	<4.26	29,300	25,900,000	71,900	5,300	<0.147	<0.149	<0.133	<0.158	<0.100	0.456 J	<0.142
U4-MW-11D	7/14/2023	N	EM11	UMCf	97.4 - 107.4	0.0 U	254.6	6.88	140	0.0 U	27.2	52.9	----	----	----	22,400,000	62,600 J-	6,680	<0.147	<0.149	<0.133	<0.158	<0.100	0.370 J	0.445 J
U4-MW-11I	4/14/2022	N	BL02	UMCf	77.0 - 87.0	0.0 U	123.8	7.72	110	0.0 U	26.3	99.8	<4.07	<4.26	<2.91	2,730,000	6,370	1,040 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.385 J	<0.142
U4-MW-11I	9/26/2022	N	EM01	UMCf	77.0 - 87.0	0.0 U	-17.7	6.92	100	0.0 U	27.0	384.2	----	----	----	2,470,000	1,320 J	208,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	9/26/2022	FD	EM01	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	2,690,000	1,330 J	201,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	10/10/2022	N	EM02	UMCf	77.0 - 87.0	0.0 U	-117.1	6.58	250	0.0 U	24.4	170.6	----	----	----	2,200,000	0.753 J-	61,800 J	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-11I	10/10/2022	FD	EM02	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	2,450,000	0.886	306,000 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	10/31/2022	N	EM03	UMCf	77.0 - 87.0	0.0 U	-266.8	6.57	180	0.6	23.3	36.5	----	----	----	2,390,000	1.95	364,000	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-11I	10/31/2022	FD	EM03	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	2,340,000	2.25	370,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	12/6/2022	N	EM04	UMCf	77.0 - 87.0	0.5	-294.3	7.16	0	0.6	23.8	41.5	<4.07 UJ	<4.26 UJ	5,160	2,550,000	1.79 J	55,800 J	<0.147 UJ	<0.149 UJ	<0.133 UJ	<0.158 UJ	<0.100 UJ	<0.188 UJ	<0.142 UJ
U4-MW-11I	12/6/2022	FD	EM04	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	<4.07 UJ	<4.26 UJ	5,360	2,610,000	0.403 J	276,000 J	<0.147 UJ	<0.149 UJ	<0.133 UJ	<0.158 UJ	<0.100 UJ	<0.188 UJ	<0.142 UJ
U4-MW-11I	1/12/2023	N	EM05	UMCf	77.0 - 87.0	0.0 U	-240.4	7.70	150	0.0 U	23.3	169.3	----	----	----	1,610,000	0.800	189,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	1/12/2023	FD	EM05	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	1,750,000	0.556	195,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	2/14/2023	N	EM06	UMCf	77.0 - 87.0	0.0 U	-236.7	6.75	200	0.0 U	20.1	50.9	----	----	----	8,560,000	<0.150	165,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	2/14/2023	FD	EM06	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	7,900,000	0.324 J	186,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	3/16/2023	N	EM07	UMCf	77.0 - 87.0	0.0 U	-241.6	6.86	100	0.8	20.3	130.6	<4.07	<4.26	23,600	2,020,000	<0.150 UJ	188,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	3/16/2023	FD	EM07	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	<4.07	<4.26	21,400	2,030,000	<0.150 UJ	197,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	4/18/2023	N	EM08	UMCf	77.0 - 87.0	0.0 U	-141.1	6.69	120	0.5	24.3	377.3	----	----	----	1,950,000	<0.150	146,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	4/18/2023	FD	EM08	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	2,070,000	0.158 J	147,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	5/19/2023	N	EM09	UMCf	77.0 - 87.0	0.0 U	-267.3	6.73	200	0.0 U	26.7	1679.2	----	----	----	2,390,000	<0.150 R	89,600 J-	<0.147 UJ	<0.149 UJ	<0.133 UJ	<0.158 UJ	<0.100 UJ	<0.188 UJ	<0.142 UJ
U4-MW-11I	5/19/2023	FD	EM09	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	2,430,000	<0.150 R	89,600 J-	<0.147 UJ	<0.149 UJ	<0.133 UJ	<0.158 UJ	<0.100 UJ	<0.188 UJ	<0.142 UJ
U4-MW-11I	6/15/2023	N	EM10	UMCf	77.0 - 87.0	1.0	-79.7	6.70	100	2.0	32.3	63.7	<4.07	<4.26	23,000	1,960,000	<0.150	103,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	6/15/2023	FD	EM10	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	<4.07	<4.26	24,000	1,910,000	<0.150	103,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	7/13/2023	N	EM11	UMCf	77.0 - 87.0	0.2	-243.1	6.68	300	2.4	27.1	39.7	----	----	----	2,070,000 J	<0.150	79,100 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-11I	7/13/2023	FD	EM11	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	----	----	----	2,070,000 J	<0.150	82,900 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12D	4/15/2022	N	BL02	UMCf	97.1 - 107.1	0.0 U	90.8	6.98	100	0.0 U	26.2	40.3	<4.07	<4.26	<2.91	29,700,000	63,700 J-	1,440 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.417 J	0.374 J
U4-MW-12D	9/27/2022	N	EM01	UMCf	97.1 - 107.1	0.0 U	183.7	7.31	100	0.0 U	27.2	97.6	----	----	----	14,900,000	41,900	903 J	<2.94	<2.98	<2.66	<3.16	<2.00	<3.76	<2.84
U4-MW-12D	10/12/2022	N	EM02	UMCf	97.1 - 107.1	0.0 U	193.7	7.02	250	0.0 U	23.4	141.7	----	----	----	19,300,000 J-	50,700	1,020 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.326 J	0.350 J
U4-MW-12D	11/2/2022	N	EM03	UMCf	97.1 - 107.1	0.0 U	145.9	7.12	250	0.0 U	20.8	84.0	----	----	----	16,600,000	47,900	469 J	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-12D	12/7/2022	N	EM04	UMCf	97.1 - 107.1	0.0 U	41.1	7.21	100	0.0 U	17.7	89.2	<4.07	<4.26	410	13,400,000	39,900	2,090 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.351 J	0.507 J
U4-MW-12D	1/12/2023	N	EM05	UMCf	97.1 - 107.1	0.0 U	94.5	6.98	250	0.0 U	21.3	23.7	----	----	----	14,300,000	39,300	1,970 J+	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-MW-12D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	0.0 U	42.6	6.93	210	0.0 U	22.0	44.6	----	----	----	13,800,000	37,000 J-	2,920	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-MW-12D	3/14/2023	N	EM07	UMCf	97.1 - 107.1	0.0 U	72.1	7.06	100	0.0 U	20.5	234.2	<4.07	<4.26	26,600	12,700,000	28,700	34,300	<7.35	<7.45	<6.65	<7.90	<5.00	<9.40	<7.10
U4-MW-12D	4/17/2023	N	EM08	UMCf	97.1 - 107.1	0.0 U	73.8	7.66	120	0.0 U	27.5	32.0	----	----	----	9,900,000	43,400	14,800	<0.735 UJ	<0.745 UJ	<0.665 UJ	<0.790 UJ	<0.500 UJ	<0.940 UJ	<0.710 UJ
U4-MW-12D	5/17/2023	N	EM09	UMCf	97.1 - 107.1	0.0 U	99.8	6.14	150	0.0 U	28.5	33.5	----	----	----	21,200,000	46,500	5,670 J+	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-MW-12D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	0.0 U	225.8	7.11	180	0.0 U	21.3	53.6	<4.07	<4.26	20,600	8,760,000	35,200	2,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12D	7/13/2023	N	EM11	UMCf	97.1 - 107.1	0.0 U	149.3	6.95	120	0.0 U	33.1	27.3	----	----	----	8,720,000	16,800	13,700	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	----	35.2	7.74	100	----	26.1	988.9	<4.07	<4.26	<2.91	8,680,000	21,200	1,630 J	<0.147	<0.149	<0.133	<0.158	<0.100	0.465 J	<0.142
U4-MW-12I	4/14/2022	FD	BL02	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	<4.07	<4.26	<2.91	8,670,000	19,400	1,930 J	<0.147	<0.149	<0.133	<0.158	<0.100	0.461 J	<0.142
U4-MW-12I	9/27/2022	N	EM01	UMCf	76.8 - 86.8	0.0 U	121.6	7.60	140	0.0 U	27.4	70.6	----	----	----	2,360,000	2,880 J-	1,440 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	0.0 U	190.1	7.30	280	0.0 U	23.5	343.0	----	----	----	2,410,000 J-	2,060	4,410 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12I	11/2/2022	N	EM03	UMCf	76.8 - 86.8	0.0 U	95.4	7.23	180	0.0 U	22.6	123.8	----	----	----	4,360,000	1,520	11,100	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	0.0 U	-290.6	7.38	80	0.6	20.5	20.9	<4.07	<4.26	1,070	1,370,000	<0.150 UJ	95,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12I	12/7/2022	FD	EM04	UMCf	76.8 - 86.8	----	----	----	----	----	----	----	<4.07	<4.26	1,110	----	2.33 J	84,500	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	FIELD TESTS							RSK175			SM2540C	SW7199	SW9060A/SM5 310B	Volatile Organic Compounds by SW8260B						
						Ferrous Iron	Oxidation-Reduction Potential	pH	Purge Rate	Sulfide	Temperature	Turbidity	Ethane	Ethene	Methane	Total Dissolved Solids	Chromium, Hexavalent	Total Organic Carbon	1,1,1,2-Tetrachloro-ethane	1,1,1-Trichloro-ethane	1,1,2,2-Tetrachloro-ethane	1,1,2-Trichloro-ethane	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,1-Dichloro-propene
						mg/L	mV	SU	mL/min	mg/L	C	NTU	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-12I	1/13/2023	N	EM05	UMCf	76.8 - 86.8	0.0 U	----	----	----	0.0 U	----	----	----	----	----	1,580,000	0.446 J	229,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	0.0 U	-291.6	6.89	210	0.0 U	20.6	2.3	----	----	----	3,010,000	<7.50 UJ	356,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12I	3/13/2023	N	EM07	UMCf	76.8 - 86.8	0.5	-279.2	6.90	100	1.4	21.4	4.0	<4.07	<4.26	35,200	2,270,000	<1.50	407,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12I	4/17/2023	N	EM08	UMCf	76.8 - 86.8	0.0 U	-233.8	7.15	130	0.4	26.1	18.8	----	----	----	2,040,000	<0.150	354,000	<0.147 UJ	<0.149 UJ	<0.133 UJ	<0.158 UJ	<0.100 UJ	<0.188 UJ	<0.142 UJ
U4-MW-12I	5/17/2023	N	EM09	UMCf	76.8 - 86.8	0.5	-107.3	6.19	160	0.4	27.6	10.9	----	----	----	3,020,000	<0.150	374,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12I	6/16/2023	N	EM10	UMCf	76.8 - 86.8	0.0 U	-162.1	7.01	200	0.0 U	22.3	53.8	<4.07	<4.26	25,600	2,180,000	<0.150	189,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-12I	7/11/2023	N	EM11	UMCf	76.8 - 86.8	0.0 U	-71.0	7.01	140	0.4	30.0	43.8	----	----	----	2,250,000 J	<0.150	126,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13D	4/14/2022	N	BL02	UMCf	98.2 - 108.2	0.0 U	136.1	6.94	100	0.0 U	25.2	85.7	<4.07	<4.26	<2.91	30,300,000	56,200	1,640 J	<0.147	<0.149	<0.133	<0.158	<0.100	0.565 J	<0.142
U4-MW-13D	9/28/2022	N	EM01	UMCf	98.2 - 108.2	0.0 U	-329.7	6.65	100	0.0 U	28.9	50.9	----	----	----	6,280,000 J+	45,000	58,400	<1.47	<1.49	<1.33	<1.58	<1.00	<1.88	<1.42
U4-MW-13D	10/11/2022	N	EM02	UMCf	98.2 - 108.2	0.0 U	-147.3	6.57	50	0.0 U	23.5	22.7	----	----	----	6,140,000	19,800	55,200	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	0.0 U	26.5	6.45	250	0.0 U	21.5	138.4	----	----	----	9,360,000 J	1,860	7,010	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	0.0 U	122.7	6.70	80	0.0 U	16.8	55.9	<4.07	<4.26	7,020	7,430,000	16,100	2,790 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13D	1/12/2023	N	EM05	UMCf	98.2 - 108.2	0.0 U	60.0	6.88	250	0.0 U	21.4	76.1	----	----	----	5,460,000	15,100	2,110 J+	<2.94	<2.98	<2.66	<3.16	<2.00	<3.76	<2.84
U4-MW-13D	2/15/2023	N	EM06	UMCf	98.2 - 108.2	0.0 U	65.4	6.90	210	0.0 U	20.6	58.9	----	----	----	6,380,000	15,600 J-	2,000 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13D	3/17/2023	N	EM07	UMCf	98.2 - 108.2	0.0 U	172.0	7.19	100	0.0 U	18.5	202.8	<4.07	<4.26	5,480	7,680,000	14,200	1,730 J+	<2.94	<2.98	<2.66	<3.16	<2.00	<3.76	<2.84
U4-MW-13D	4/18/2023	N	EM08	UMCf	98.2 - 108.2	0.0 U	74.2	7.35	120	0.0 U	26.3	119.0	----	----	----	5,400,000	9,530	1,240	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13D	5/17/2023	N	EM09	UMCf	98.2 - 108.2	0.0 U	115.2	6.74	140	0.0 U	29.8	63.6	----	----	----	4,570,000	8,150	1,670	<2.94	<2.98	<2.66	<3.16	<2.00	<3.76	<2.84
U4-MW-13D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	0.0 U	101.0	7.03	180	0.0 U	26.8	1.8	<4.07	<4.26	3,790	4,240,000	8,680	2,210 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13D	7/12/2023	N	EM11	UMCf	98.2 - 108.2	0.0 U	154.1	6.92	480	0.0 U	32.5	67.5	----	----	----	4,940,000	8,450	3,020	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	0.0 U	127.9	7.42	100	0.0 U	23.7	2478.1	<4.07	<4.26	<2.91	8,680,000	21,900	1,080 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.403 J	<0.142
U4-MW-13I	9/28/2022	N	EM01	UMCf	77.1 - 87.1	0.0 U	96.9	7.52	100	0.0 U	27.2	70.5	----	----	----	2,540,000 J+	17,000	2,450 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13I	10/10/2022	N	EM02	UMCf	77.1 - 87.1	0.0 U	110.0	7.58	50	0.0 U	27.9	142.6	----	----	----	2,660,000	8,000	1,900 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13I	11/3/2022	N	EM03	UMCf	77.1 - 87.1	0.0 U	141.8	7.46	250	0.0 U	20.1	119.3	----	----	----	3,340,000 J	5,840 J-	2,000 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13I	12/6/2022	N	EM04	UMCf	77.1 - 87.1	0.0 U	-292.7	7.58	100	0.1	19.9	94.5	<4.07 UJ	<4.26 UJ	1,300	2,710,000	<0.150 UJ	37,400	<0.735 UJ	<0.745 UJ	<0.665 UJ	<0.790 UJ	<0.500 UJ	<0.940 UJ	<0.710 UJ
U4-MW-13I	1/12/2023	N	EM05	UMCf	77.1 - 87.1	0.0 U	-245.9	7.13	250	0.0 U	20.1	118.8	----	----	----	1,960,000	4.48	67,800	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13I	2/14/2023	N	EM06	UMCf	77.1 - 87.1	0.0 U	-309.2	7.19	200	0.0 U	20.7	552.4	----	----	----	3,420,000	0.250 J	43,400	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-13I	3/16/2023	N	EM07	UMCf	77.1 - 87.1	0.0 U	-313.7	7.44	0	0.0 U	19.2	114.6	<4.07	<4.26	20,300	1,550,000	1.05 J	43,900	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13I	4/19/2023	N	EM08	UMCf	77.1 - 87.1	0.0 U	-303.7	7.07	130	0.4	23.5	23.1	----	----	----	1,690,000	0.606	25,800 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13I	5/17/2023	N	EM09	UMCf	77.1 - 87.1	0.0 U	-123.7	6.73	160	0.4	29.7	55.5	----	----	----	1,970,000	0.178 J	19,800	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13I	6/15/2023	N	EM10	UMCf	77.1 - 87.1	0.0 U	-73.9	7.04	180	0.0 U	27.5	10.7	<4.07	<4.26	23,600	1,680,000	0.559	21,100	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-13I	7/12/2023	N	EM11	UMCf	77.1 - 87.1	0.2	135.1	7.11	440	0.0 U	35.1	121.0	----	----	----	1,580,000 J	99.0	21,300	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-14D	4/13/2022	N	BL02	UMCf	97.3 - 107.3	0.0 U	161.5	7.20	100	0.0 U	26.5	50.4	<4.07	<4.26	<2.91	2,550,000	239	1,220 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.409 J	<0.142
U4-MW-14D	12/6/2022	N	EM04	UMCf	97.3 - 107.3	0.0 U	75.3	7.39	80	0.0 U	20.7	58.1	<4.07 UJ	<4.26 UJ	<2.91 UJ	4,530,000	5,860	570 J	<0.735 UJ	<0.745 UJ	<0.665 UJ	<0.790 UJ	<0.500 UJ	<0.940 UJ	<0.710 UJ
U4-MW-14D	3/16/2023	N	EM07	UMCf	97.3 - 107.3	0.0 U	143.2	7.47	100	0.0 U	21.8	115.4	<4.07	<4.26	15.0 J+	2,650,000	4,450	1,010 J+	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-14D	6/15/2023	N	EM10	UMCf	97.3 - 107.3	0.0 U	119.7	7.08	180	0.0 U	30.3	59.1	<4.07	<4.26	619	2,750,000	3,980	1,710 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-14I	4/14/2022	N	BL02	UMCf	77.3 - 87.3	0.0 U	110.5	8.07	150	0.0 U	22.8	57.4	<4.07	<4.26	<2.91	3,220,000	2,270	1,090 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-14I	12/6/2022	N	EM04	UMCf	77.3 - 87.3	0.0 U	63.8	7.41	80	0.0 U	16.8	23.4	<4.07 UJ	<4.26 UJ	29.8	5,260,000	4,360 J-	786 J	<0.735 UJ	<0.745 UJ	<0.665 UJ	<0.790 UJ	<0.500 UJ	<0.940 UJ	<0.710 UJ
U4-MW-14I	3/16/2023	N	EM07	UMCf	77.3 - 87.3	0.0 U	166.5	7.45	130	0.0 U	21.5	-48.0	<4.07	<4.26	123 J+	3,130,000	4,560	1,030 J+	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-MW-14I	6/15/2023	N	EM10	UMCf	77.3 - 87.3	0.0 U	174.8	7.01	200	0.0 U	26.9	11.4	<4.07	<4.26	5,640	3,260,000	782	3,660	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15D	4/13/2022	N	BL02	UMCf	96.0 - 106.0	0.0 U	209.2	7.09	100	0.0 U	20.7	76.6	<4.07	<4.26	<2.91	3,490,000	5,240	1,240 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15D	12/5/2022	N	EM04	UMCf	96.0 - 106.0	0.0 U	168.4	7.52	200	0.0 U	22.3	435.5	<4.07	<4.26	<2.91	2,880,000	3,380 J-	922 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15D	3/20/2023	N	EM07	UMCf	96.0 - 106.0	0.0 U	127.9	7.39	200	0.0 U	20.8	20.3	<4.07	<4.26	324	3,030,000	3,630	362 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15D	6/14/2023	N	EM10	UMCf	96.0 - 106.0	0.0 U	36.2	7.16	180	0.0 U	26.4	119.9	<4.07	<4.26	8,050	3,680,000	4,490	818 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15DD	4/13/2022	N	BL02	UMCf	120.3 - 130.3	0.0 U	123.8	8.36	100	0.0 U	18.6	82.3	<4.07	<4.26	<2.91	677,000	67.5	532 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15DD	12/5/2022	N	EM04	UMCf	120.3 - 130.3	0.0 U	-139.8	8.59	250	0.0 U	21.5	51.1	<4.07	<4.26	<2.91	553,000	14.5	505 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15DD	3/15/2023	N	EM07	UMCf	120.3 - 130.3	0.0 U	104.0	9.13	100	0.0 U	22.2	99.0	<4.07	<4.26	<2.91	548,000	12.5 J-	224 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15DD	6/13/2023	N	EM10	UMCf	120.3 - 130.3	0.0 U	20.5	8.36	180	0.0 U	28.2	779.0	<4.07	<4.26	<2.91	589,000	2.29 J	337 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15I	4/12/2022	N	BL02	UMCf	76.8 - 86.8	0.0 U	125.1	7.95	150	0.0 U	22.6	20895.7 E	<4.07	<4.26	<2.91	4,080,000	5,010	1,440 J	<0.147	<0.149	<0.133	<0.158	<0.100	0.367 J	<0.142
U4-MW-15I	12/5/2022	N	EM04	UMCf	76.8 - 86.8	0.0 U	161.9	6.87	250	0.0 U	23.0	137.7	<4.07	<4.26	3,490	3,130,000	4,730 J-	60,700	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15I	3/17/2023	N	EM07	UMCf	76.8 - 86.8	0.4	-173.7	6.17	120	6.0	21.6	-223.4	<4.07	<4.26	10,900	3,730,000	2.22	565,000	<2.94	<2.98	<2.66	<3.16	<2.00	<3.76	<2.84
U4-MW-15I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	5.5	-124.6	6.30	180	0.0 U	24.3	30.1	<40.7	<42.6	21,400	2,280,000	<0.750	306,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15S	4/13/2022	N	BL02	UMCf	54.8 - 64.8	0.0 U	165.2	8.11	200	0.0 U	21.5	71.7	<4.07	<4.26	<2.91	1,450,000	262	848 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15S	12/5/2022	N	EM04	UMCf	54.8 - 64.8	0.0 U	-309.1	5.99	250	0.0 U	22.0	32.2	<4.07	<4.26	20,200	1,850,000	0.995	499,000	<3.68	<3.73	<3.33	<3.95	<2.50	<4.70	<3.55
U4-MW-15S	3/13/2023	N	EM07	UMCf	54.8 - 64.8	0.0 U	-307.8	7.07	0	0.0 U	20.4	38.9	<4.07	<4.26	24,500	1,250,000	<0.150	116,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-15S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	0.0 U	-211.4	6.94	200	0.0 U	32.8	2.4	<4.07	<4.26	34,800	1,600,000	<15.0	95,700 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16D	4/11/2022	N	BL02	UMCf	96.8 - 106.8	0.0 U	165.2	7.15	100	0.0 U	23.7	84.8 E	<4.07	<4.26	<2.91	30,500,000	61,300	1,340 J	<0.147	<0.149	<0.133	<0.158	<0.100	0.237 J	<0.142
U4-MW-16D	12/5/2022	N	EM04	UMCf	96.8 - 106.8	0.0 U	63.9	7.13	80	0.0 U	21.8	84.8	<4.07	<4.26	374	13,400,000	21,900	3,980 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16D	3/14/2023	N	EM07	UMCf	96.8 - 106.8	0.0 U	134.5	6.47	100	0.0 U	17.8	12.1	<4.07	<4.26	6,230	10,300,000	13,800	25,100	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16D	6/13/2023	N	EM10	UMCf	96.8 - 106.8	0.0 U	212.9	6.65	180	0.0 U	25.2	34.1	<4.07	<4.26	11,800	28,600,000	38,700	10,500 J+	<0.147	<0.149	<0.133	<0.158	<0.100	0.189 J	0.196 J
U4-MW-16DD	4/12/2022	N	BL02	UMCf	120.8 - 130.8	0.0 U	121.7	7.62	100	0.0 U	18.3	35.4	<4.07	<4.26	<2.91	1,940,000	682	827 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16DD	12/5/2022	N	EM04	UMCf	120.8 - 130.8	0.0 U	43.7	7.71	100	0.0 U	21.7	18.9	<4.07	<4.26	<2.91	1,220,000	215 J-	852 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16DD	3/15/2023	N	EM07	UMCf	120.8 - 130.8	0.0 U	-32.6	7.56	100	0.0 U	18.6	11.4	<4.07	<4.26	<2.91	1,160,000	149 J-	1,350 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16DD	6/13/2023	N	EM10	UMCf	120.8 - 130.8	0.0 U	44.0	7.78	180	0.0 U	27.3	12.0	<4.07	<4.26	55.6	1,130,000	183	825 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16I	4/11/2022	N	BL02	UMCf	77.0 - 87.0	0.0 U	129.8	8.36	200	0.0 U	23.5	-449448.0 E	<4.07	<4.26	<2.91	5,220,000	9,350	950 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16I	12/5/2022	N	EM04	UMCf	77.0 - 87.0	0.0 U	-277.0	7.32	60	0.5	22.2	5.3	<4.07	<4.26	2,930	2,120,000	0.467 J	515,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16I	12/5/2022	FD	EM04	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	<4.07	<4.26	3,090	2,000,000	0.735	515,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16I	3/13/2023	N	EM07	UMCf	77.0 - 87.0	----	-54.8	7.33	100	----	20.6	5.3	<4.07	<4.26	28,900	2,930,000	<0.750 UJ	747,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16I	3/13/2023	FD	EM07	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	<4.07	<4.26	26,500	2,980,000	<0.750	731,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16I	6/12/2023	N	EM10	UMCf	77.0 - 87.0	5.5	-65.3	6.76	200	0.1	25.4	12.6	<4.07	<4.26	34,000	2,200,000 J	<1.50	363,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16I	6/12/2023	FD	EM10	UMCf	77.0 - 87.0	----	----	----	----	----	----	----	<4.07	<4.26	32,700	2,130,000 J	<1.50	372,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16S	4/12/2022	N	BL02	UMCf	54.8 - 64.8	0.0 U	136.6	8.80	200	0.0 U	22.3	-8.5	<4.07	8.07 J	19.8	1,990,000	365 J-	1,070 J+	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16S	4/12/2022	FD	BL02	UMCf	54.8 - 64.8	----	----	----	----	----	----	----	<4.07	<4.26	<2.91	2,000,000	361 J-	931 J	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16S	12/6/2022	N	EM04	UMCf	54.8 - 64.8	0.0 U	24.7	8.01	120	0.0 U	22.5	35.4	<4.07 UJ	<4.26 UJ	134	1,630,000	50.6	23,300	<0.147 UJ	<0.149 UJ	<0.133 UJ	<0.158 UJ	<0.100 UJ	<0.188 UJ	<0.142 UJ
U4-MW-16S	3/15/2023	N	EM07	UMCf	54.8 - 64.8	6.0	-159.7	6.65	100	0.4	20.5	74.4	<4.07	<4.26	26,300	3,050,000	<0.150 UJ	726,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-MW-16S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	7.0	-105.2	6.67	200	0.6	25.3	87.7	<4.07	<4.26	25,200	3,330,000	<0.150	710,000 J-	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-SLMW	11/10/2022	N	EM03	N/A	-	----	----	----	----	----	----	----	----	----	----	588,000	<0.150	3,660 J+	<0.735	<0.745	<0.665	<0.790	<0.500	<0.940	<0.710
U4-T3	10/13/2022	N	EM02	N/A	-	----	----	----	----	----	----	----	----	----	----	16,100,000 J-	38,400	114,000	<0.147	<0.149	<0.133	<0.158	<0.100	0.284 J	0.271 J
U4-T3	11/3/2022	N	EM03	N/A	-	----	-60.4	6.51	----	----	20.4	169.1	----	----	----	15,400,000	36,900	61,500	<0.147	<0.149	<0.133	<0.158	<0.100	0.293 J	0.376 J
U4-T3	12/6/2022	N	EM04	N/A	-	----	-8.5	6.72	----	----	21.4	30.1	----	----	----	12,600,000	25,100 J-	76,300	<2.94 UJ	<2.98 UJ	<2.66 UJ	<3.16 UJ	<2.00 UJ	<3.76 UJ	<2.84 UJ

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	FIELD TESTS							RSK175			SM2540C	SW7199	SW9060A/SM5 310B	Volatile Organic Compounds by SW8260B						
						Ferrous Iron	Oxidation-Reduction Potential	pH	Purge Rate	Sulfide	Temperature	Turbidity	Ethane	Ethene	Methane	Total Dissolved Solids	Chromium, Hexavalent	Total Organic Carbon	1,1,1,2-Tetrachloro-ethane	1,1,1-Trichloro-ethane	1,1,2,2-Tetrachloro-ethane	1,1,2-Trichloro-ethane	1,1-Dichloro-ethane	1,1-Dichloro-ethene	1,1-Dichloro-propene
						mg/L	mV	SU	mL/min	mg/L	C	NTU	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-T3	1/9/2023	N	EM05	N/A	-	----	111.4	7.05	----	----	19.9	0.0	----	----	----	12,200,000	37,400	17,100	<0.147	<0.149	<0.133	<0.158	<0.100	0.236 J	0.273 J
U4-T3	2/13/2023	N	EM06	N/A	-	----	159.2	7.44	----	----	23.6	3.3	----	----	----	13,200,000	36,600	17,700	<14.7	<14.9	<13.3	<15.8	<10.0	<18.8	<14.2
U4-T3	3/13/2023	N	EM07	N/A	-	----	197.0	7.43	----	----	23.5	1.9	----	----	----	11,700,000	39,800	2,980 J+	<3.68	<3.73	<3.33	<3.95	<2.50	<4.70	<3.55
U4-T3	4/19/2023	N	EM08	N/A	-	----	-27.7	6.94	----	----	22.6	3.7	----	----	----	7,080,000	14,900	31,800	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	0.143 J
U4-T3	5/18/2023	N	EM09	N/A	-	----	49.6	5.71	----	----	30.9	5.5	----	----	----	10,800,000	20,400	89,500	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-T3	6/12/2023	N	EM10	N/A	-	----	225.9	6.88	----	----	33.8	1.9	----	----	----	9,060,000	20,700	150,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142
U4-T3	7/11/2023	N	EM11	N/A	-	----	-61.3	6.54	----	----	35.0	111.4	----	----	----	9,260,000 J-	9,780	388,000	<0.147	<0.149	<0.133	<0.158	<0.100	<0.188	<0.142

Notes:
FD - Field duplicate
E - Field instrument error.
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 low.
J+ - The result is an estimated quantity, but the result may be biased high.
N/A - Not Applicable
mg/L - milligrams per liter
µg/L - micrograms per liter
N - Normal field sample

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.

UMCf- Upper Muddy Creek Formation
< - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
-- Not tested.
M-252 damaged/obstructed when checked on June 14, 2023 for EM10.

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						1,2,3-Trichloro-benzene	1,2,3-Trichloro-propane	1,2,4-Trichloro-benzene	1,2,4-Trimethyl-benzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromo-ethane	1,2-Dichlorob-enzene	1,2-Dichloro-ethane	1,2-Dichloro-propane	1,3,5-Trimethyl-benzene (Mesitylene)	1,3-Dichloro-benzene	1,3-Dichloro-propane	1,4-Dichloro-benzene	2,2-Dichloro-propane	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-Pentanone	Acetone
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
M-247-100	4/20/2022	N	BL02	UMCf	100.5 - 110.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-249-100	4/20/2022	N	BL02	UMCf	99.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-251-100	4/19/2022	N	BL02	UMCf	92.5 - 102.5	<0.230	0.428 J	<0.481	<0.322	<0.276	<0.126	<0.107	0.346 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
M-251-100	10/13/2022	N	EM02	UMCf	92.5 - 102.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
M-251-100	11/2/2022	N	EM03	UMCf	92.5 - 102.5	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	<113
M-251-100	12/8/2022	N	EM04	UMCf	92.5 - 102.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
M-251-100	1/11/2023	N	EM05	UMCf	92.5 - 102.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
M-251-100	2/13/2023	N	EM06	UMCf	92.5 - 102.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.46 J	<0.106	<0.787	<0.114	<0.478	<11.3
M-251-100	3/17/2023	N	EM07	UMCf	92.5 - 102.5	<11.5	<11.9	<24.1	<16.1	<13.8	<6.30	<5.35	<4.09	<7.45	<5.20	<5.50	<5.50	<6.00	<8.05	<59.5	<5.30	<39.4	<5.70	<23.9	<565
M-251-100	4/21/2023	N	EM08	UMCf	92.5 - 102.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.142 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
M-251-100	5/9/2023	N	EM09	UMCf	92.5 - 102.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.171 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
M-251-100	6/14/2023	N	EM10	UMCf	92.5 - 102.5	<11.5	<11.9	<24.1	<16.1	<13.8	<6.30	<5.35	<4.09	<7.45	<5.20	<5.50	<5.50	<6.00	<8.05	<59.5	<5.30	<39.4	<5.70	<23.9	<565
M-251-100	7/14/2023	N	EM11	UMCf	92.5 - 102.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.126 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
M-251-60	4/18/2022	N	BL02	UMCf	52.3 - 62.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
M-251-60	3/15/2023	N	EM07	UMCf	52.3 - 62.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
M-251-60	6/14/2023	N	EM10	UMCf	52.3 - 62.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
M-252	4/21/2022	N	BL02	UMCf	132.3 - 142.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	7.60 J	<0.106	<0.787	<0.114	<0.478	<11.3
M-252	3/15/2023	N	EM07	UMCf	132.3 - 142.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
M-253-100	4/20/2022	N	BL02	UMCf	100.8 - 110.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-255-100	4/20/2022	N	BL02	UMCf	100.2 - 110.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-01D	4/18/2022	N	BL02	UMCf	94.7 - 109.7	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-E-01D	3/14/2023	N	EM07	UMCf	94.7 - 109.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-01I	4/19/2022	N	BL02	UMCf	74.6 - 89.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	3.29 J	<0.106	<0.787	<0.114	<0.478	11.7 J
U4-E-01I	4/19/2022	FD	BL02	UMCf	74.6 - 89.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	3.45 J	<0.106	0.848 J	<0.114	<0.478	11.7 J
U4-E-01I	3/14/2023	N	EM07	UMCf	74.6 - 89.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.0909 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-01I	4/20/2023	N	EM08	UMCf	74.6 - 89.6	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-01I	5/10/2023	N	EM09	UMCf	74.6 - 89.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	5.34 J	<0.106	<0.787	<0.114	<0.478	44.5 J
U4-E-01I	6/12/2023	N	EM10	UMCf	74.6 - 89.6	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	19.7	<0.106	<0.787 UJ	<0.114	<0.478	84.3 J+
U4-E-01I	7/11/2023	N	EM11	UMCf	74.6 - 89.6	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	59.3 J
U4-E-02D	4/20/2022	N	BL02	UMCf	94.4 - 109.4	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-02D	3/14/2023	N	EM07	UMCf	94.4 - 109.4	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-02I	4/18/2022	N	BL02	UMCf	74.4 - 89.4	<0.230	<0.237	<0.481	<0.322 UJ	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104 R	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-02I	3/14/2023	N	EM07	UMCf	74.4 - 89.4	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-02I	4/20/2023	N	EM08	UMCf	74.4 - 89.4	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	5.27 J	<0.106	<0.787	<0.114	<0.478	17.6 J
U4-E-02I	5/11/2023	N	EM09	UMCf	74.4 - 89.4	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	12.3	<0.106	<0.787	<0.114	<0.478	52.8
U4-E-02I	6/12/2023	N	EM10	UMCf	74.4 - 89.4	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	31.6	<0.106	<0.787 UJ	<0.114	<0.478	31.2 J
U4-E-02I	7/11/2023	N	EM11	UMCf	74.4 - 89.4	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	36.2 J
U4-E-03D	4/19/2022	N	BL02	UMCf	95.1 - 110.1	<0.230	0.293 J	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-03D	10/13/2022	N	EM02	UMCf	95.1 - 110.1	<46.0	<47.4	<96.2	<64.4	<55.2	<25.2	<21.4	<16.4	<29.8	<20.8	<22.0	<22.0	<24.0	<32.2	<238	<21.2	<157	<22.8	<95.6	<2,260
U4-E-03D	11/3/2022	N	EM03	UMCf	95.1 - 110.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-03D	12/6/2022	N	EM04	UMCf	95.1 - 110.1	<4.60 UJ	<4.74 UJ	<9.62 UJ	<6.44 UJ	<5.52 UJ	<2.52 UJ	<2.14 UJ	<1.64 UJ	<2.98 UJ	<2.08 UJ	<2.20 UJ	<2.20 UJ	<2.40 UJ	<3.22 UJ	<23.8 UJ	<2.12 UJ	<15.7 UJ	<2.28 UJ	<9.56 UJ	<226 UJ
U4-E-03D	1/9/2023	N	EM05	UMCf	95.1 - 110.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-03D	2/13/2023	N	EM06	UMCf	95.1 - 110.1	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-E-03D	3/13/2023	N	EM07	UMCf	95.1 - 110.1	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-E-03D	3/14/2023	N	EM07	UMCf	95.1 - 110.1	<46.0	<47.4	<96.2	<64.4	<55.2	<25.2	<21.4	<16.4	<29.8	<20.8	<22.0	<22.0	<24.0	<32.2	<238	<21.2	<157	<22.8	<95.6	<2,260
U4-E-03D	4/19/2023	N	EM08	UMCf	95.1 - 110.1	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-E-03D	5/11/2023	N	EM09	UMCf	95.1 - 110.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	50.0	<0.106	<0.787	<0.114	<0.478	164
U4-E-03D	6/12/2023	N	EM10	UMCf	95.1 - 110.1	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	46.8	<0.106	<0.787 UJ	<0.114	<0.478	233
U4-E-03D	7/11/2023	N	EM11	UMCf	95.1 - 110.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	18.4	<0.106	<0.787	<0.114	<0.478	195
U4-E-04D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-04D	3/14/2023	N	EM07	UMCf	95.0 - 110.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-04I	4/18/2022	N	BL02	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-04I	3/14/2023	N	EM07	UMCf	75.0 - 90.0	<11.5	<11.9	<24.1	<16.1	<13.8	<6.30	<5.35	<4.09	<7.45	<5.20	<5.50	<5.50	<6.00	<8.05	<59.5	<5.30	<39.4	<5.70	<23.9	<565
U4-E-05D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.86 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-05D	3/16/2023	N	EM07	UMCf	95.0 - 110.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-05I	4/19/2022	N	BL02	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	4.61 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-05I	3/15/2023	N	EM07	UMCf	75.0 - 90.0	<0.230 UJ	<0.237 UJ	<0.481 UJ	<0.322 UJ	<0.276 UJ	<0.126 UJ	<0.107 UJ	<0.0819 UJ	<0.149 UJ	<0.104 UJ	<0.110 UJ	<0.110 UJ	<0.120 UJ	<0.161 UJ	110 J-	<0.106 UJ	<0.787 UJ	<0.114 UJ	<0.478 UJ	98.1 J
U4-E-06D	4/11/2022	N	BL02	UMCf	95.1 - 110.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-06I	4/11/2022	N	BL02	UMCf	73.2 - 88.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-06I	4/11/2022	FD	BL02	UMCf	73.2 - 88.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-06I	10/12/2022	N	EM02	UMCf	73.2 - 88.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	8.89 J	<0.106	<0.787	<0.114	<0.478	33.8 J
U4-E-06I	11/3/2022	N	EM03	UMCf	73.2 - 88.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	10.5	<0.106	<0.787	<0.114	<0.478	39.8 J
U4-E-06I	12/6/2022	N	EM04	UMCf	73.2 - 88.2	<2.30 UJ	<2.37 UJ	<4.81 UJ	<3.22 UJ	<2.76 UJ	<1.26 UJ	<1.07 UJ	<0.819 UJ	<1.49 UJ	<1.04 UJ	<1.10 UJ	<1.10 UJ	<1.20 UJ	<1.61 UJ	36.1 J	<1.06 UJ	<7.87 UJ	<1.14 UJ	<4.78 UJ	<113 UJ
U4-E-06I	1/9/2023	N	EM05	UMCf	73.2 - 88.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	16.0 J+	<0.106	<0.787	<0.114	<0.478	32.8 J
U4-E-06I	2/13/2023	N	EM06	UMCf	73.2 - 88.2	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-E-06I	3/13/2023	N	EM07	UMCf	73.2 - 88.2	<4.60	<4.74	<9.62	<6.44	<5.52	<2.52	<2.14	<1.64	<2.98	<2.08	<2.20	<2.20	<2.40	<3.22	<23.8	<2.12	<15.7	<2.28	<9.56	<226
U4-E-06I	4/17/2023	N	EM08	UMCf	73.2 - 88.2	<4.60	<4.74	<9.62	<6.44	<5.52	<2.52	<2.14	<1.64	<2.98	<2.08	<2.20	<2.20	<2.40	<3.22	26.1 J	<2.12	<15.7	<2.28	<9.56	<226
U4-E-06I	5/15/2023	N	EM09	UMCf	73.2 - 88.2	<5.75	<5.93	<12.0	<8.05	<6.90	<3.15	<2.68	<2.05	<3.73	<2.60	<2.75	<2.75	<3.00	<4.03	<29.8	<2.65	<19.7	<2.85	<12.0	<282
U4-E-06I	6/12/2023	N	EM10	UMCf	73.2 - 88.2	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	7.09 J	<0.106	<0.787 UJ	<0.114	<0.478	21.0 J
U4-E-06I	7/11/2023	N	EM11	UMCf	73.2 - 88.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	14.1	<0.106	<0.787	<0.114	<0.478	52.8
U4-E-07D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	<0.230	0.393 J	<0.481	<0.322	<0.276	<0.126	<0.107	0.205 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-07I	4/12/2022	N	BL02	UMCf	74.7 - 89.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.138 J	0.191 J	<0.104	<0.110	<0.110	<0.120	<0.161	1.25 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-07I	10/11/2022	N	EM02	UMCf	74.7 - 89.7	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	<113
U4-E-07I	11/3/2022	N	EM03	UMCf	74.7 - 89.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.17 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-07I	12/6/2022	N	EM04	UMCf	74.7 - 89.7	<5.75 UJ	<5.93 UJ	<12.0 UJ	<8.05 UJ	<6.90 UJ	<3.15 UJ	<2.68 UJ	<2.05 UJ	<3.73 UJ	<2.60 UJ	<2.75 UJ	<2.75 UJ	<3.00 UJ	<4.03 UJ	<29.8 UJ	<2.65 UJ	<19.7 UJ	<2.85 UJ	<12.0 UJ	<282 UJ
U4-E-07I	1/9/2023	N	EM05	UMCf	74.7 - 89.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.137 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-07I	2/13/2023	N	EM06	UMCf	74.7 - 89.7	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-E-07I	3/13/2023	N	EM07	UMCf	74.7 - 89.7	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-E-07I	4/19/2023	N	EM08	UMCf	74.7 - 89.7	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						1,2,3-Trichloro-benzene	1,2,3-Trichloro-propane	1,2,4-Trichloro-benzene	1,2,4-Trimethyl-benzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromo-ethane	1,2-Dichlorob-enzene	1,2-Dichloro-ethane	1,2-Dichloro-propane	1,3,5-Trimethyl-benzene (Mesitylene)	1,3-Dichloro-benzene	1,3-Dichloro-propane	1,4-Dichloro-benzene	2,2-Dichloro-propane	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-Pentanone	Acetone
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-E-07I	5/15/2023	N	EM09	UMCf	74.7 - 89.7	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-E-07I	6/12/2023	N	EM10	UMCf	74.7 - 89.7	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787 UJ	<0.114	<0.478	<11.3
U4-E-07I	7/11/2023	N	EM11	UMCf	74.7 - 89.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-08D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	<0.230	0.429 J	<0.481	<0.322	<0.276	<0.126	<0.107	0.240 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-08D	10/11/2022	N	EM02	UMCf	94.6 - 109.6	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	<113
U4-E-08D	11/3/2022	N	EM03	UMCf	94.6 - 109.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.32 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-08D	12/6/2022	N	EM04	UMCf	94.6 - 109.6	<5.75 UJ	<5.93 UJ	<12.0 UJ	<8.05 UJ	<6.90 UJ	<3.15 UJ	<2.68 UJ	<2.05 UJ	<3.73 UJ	<2.60 UJ	<2.75 UJ	<2.75 UJ	<3.00 UJ	<4.03 UJ	<29.8 UJ	<2.65 UJ	<19.7 UJ	<2.85 UJ	<12.0 UJ	<282 UJ
U4-E-08D	1/9/2023	N	EM05	UMCf	94.6 - 109.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.131 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.81 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-08D	2/13/2023	N	EM06	UMCf	94.6 - 109.6	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-E-08D	3/13/2023	N	EM07	UMCf	94.6 - 109.6	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-E-08D	4/19/2023	N	EM08	UMCf	94.6 - 109.6	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-E-08D	5/17/2023	N	EM09	UMCf	94.6 - 109.6	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-E-08D	6/12/2023	N	EM10	UMCf	94.6 - 109.6	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787 UJ	<0.114	<0.478	<11.3
U4-E-08D	7/11/2023	N	EM11	UMCf	94.6 - 109.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-09D	4/15/2022	N	BL02	UMCf	94.5 - 109.5	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-09I	4/14/2022	N	BL02	UMCf	74.9 - 89.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.118 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.24 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-10D	4/13/2022	N	BL02	UMCf	94.5 - 109.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.132 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-E-10I	4/13/2022	N	BL02	UMCf	74.2 - 89.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.120 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01D	4/19/2022	N	BL02	UMCf	96.7 - 106.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	3.67 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01D	2/16/2023	N	EM06	UMCf	96.7 - 106.7	<2.30	<2.37	<4.81	<3.22 UJ	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	<113
U4-MW-01D	3/20/2023	N	EM07	UMCf	96.7 - 106.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.37 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01D	6/13/2023	N	EM10	UMCf	96.7 - 106.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01DD	4/19/2022	N	BL02	UMCf	119.9 - 129.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	5.15 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01DD	4/19/2022	FD	BL02	UMCf	119.9 - 129.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	5.81 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01DD	3/15/2023	N	EM07	UMCf	119.9 - 129.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01DD	6/13/2023	N	EM10	UMCf	119.9 - 129.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.36 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01I	4/19/2022	N	BL02	UMCf	76.7 - 86.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01I	3/20/2023	N	EM07	UMCf	76.7 - 86.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01I	6/12/2023	N	EM10	UMCf	76.7 - 86.7	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787 UJ	<0.114	<0.478	<11.3
U4-MW-01S	4/18/2022	N	BL02	UMCf	54.7 - 64.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01S	3/15/2023	N	EM07	UMCf	54.7 - 64.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-01S	6/13/2023	N	EM10	UMCf	54.7 - 64.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-02D	4/14/2022	N	BL02	UMCf	95.0 - 110.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.322 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-02D	10/11/2022	N	EM02	UMCf	95.0 - 110.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-02D	11/1/2022	N	EM03	UMCf	95.0 - 110.0	<11.5	<11.9	<24.1	<16.1	<13.8	<6.30	<5.35	<4.09	<7.45	<5.20	<5.50	<5.50	<6.00	<8.05	<59.5	<5.30	<39.4	<5.70	<23.9	<565
U4-MW-02D	12/7/2022	N	EM04	UMCf	95.0 - 110.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.360 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-02D	1/10/2023	N	EM05	UMCf	95.0 - 110.0	<0.230 UJ	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	0.872 J	<1,130
U4-MW-02D	2/13/2023	N	EM06	UMCf	95.0 - 110.0	<0.230	0.363 J	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-02D	3/17/2023	N	EM07	UMCf	95.0 - 110.0	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-MW-02D	4/19/2023	N	EM08	UMCf	95.0 - 110.0	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-MW-02D	5/9/2023	N	EM09	UMCf	95.0 - 110.0	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	0.515 J	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-MW-02D	6/13/2023	N	EM10	UMCf	95.0 - 110.0	<0.230	0.266 J	<0.481	<0.322	<0.276	<0.126	<0.107	0.199 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-02D	7/18/2023	N	EM11	UMCf	95.0 - 110.0	<0.230	<0.237	<0.481	0.391 J	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-02I	4/14/2022	N	BL02	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.102 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-02I	10/11/2022	N	EM02	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	11.9 J
U4-MW-02I	11/2/2022	N	EM03	UMCf	75.0 - 90.0	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	<113
U4-MW-02I	11/2/2022	FD	EM03	UMCf	75.0 - 90.0	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	<113
U4-MW-02I	12/8/2022	N	EM04	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19 UJ	<0.106	<0.787	<0.114	<0.478	32.3 J
U4-MW-02I	12/8/2022	FD	EM04	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	34.2 J	<0.106	<0.787	<0.114	<0.478	61.2
U4-MW-02I	1/13/2023	N	EM05	UMCf	75.0 - 90.0	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	176 J
U4-MW-02I	1/13/2023	FD	EM05	UMCf	75.0 - 90.0	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	190 J
U4-MW-02I	2/15/2023	N	EM06	UMCf	75.0 - 90.0	<2.30 UJ	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	<113
U4-MW-02I	2/15/2023	FD	EM06	UMCf	75.0 - 90.0	<2.30 UJ	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	<113
U4-MW-02I	3/17/2023	N	EM07	UMCf	75.0 - 90.0	<46.0	<47.4	<96.2	<64.4	<55.2	<25.2	<21.4	<16.4	<29.8	<20.8	<22.0	<22.0	<24.0	<32.2	<238	<21.2	<157	<22.8	<95.6	<2,260
U4-MW-02I	3/17/2023	FD	EM07	UMCf	75.0 - 90.0	<46.0	<47.4	<96.2	<64.4	<55.2	<25.2	<21.4	<16.4	<29.8	<20.8	<22.0	<22.0	<24.0	<32.2	<238	<21.2	<157	<22.8	<95.6	<2,260
U4-MW-02I	4/20/2023	N	EM08	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	26.0	<0.106	<0.787	<0.114	<0.478	39.3 J
U4-MW-02I	4/20/2023	FD	EM08	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	28.7	<0.106	<0.787	<0.114	<0.478	46.3 J
U4-MW-02I	5/9/2023	N	EM09	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	21.7 J+	<0.106	<0.787	<0.114	<0.478	46.0 J
U4-MW-02I	5/9/2023	FD	EM09	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	19.6 J+	<0.106	<0.787	<0.114	<0.478	47.8 J
U4-MW-02I	6/12/2023	N	EM10	UMCf	75.0 - 90.0	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	6.47 J	<0.106	<0.787 UJ	<0.114	<0.478	49.2 J
U4-MW-02I	6/12/2023	FD	EM10	UMCf	75.0 - 90.0	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	7.53 J	<0.106	<0.787 UJ	<0.114	<0.478	48.9 J
U4-MW-02I	7/18/2023	N	EM11	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	24.0	<0.106	<0.787	<0.114	<0.478	32.7 J
U4-MW-02I	7/18/2023	FD	EM11	UMCf	75.0 - 90.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	26.0	<0.106	<0.787	<0.114	<0.478	35.3 J
U4-MW-03D	4/20/2022	N	BL02	UMCf	96.6 - 106.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-03D	2/16/2023	N	EM06	UMCf	96.6 - 106.6	<1.15	<1.19	<2.41	<1.61 UJ	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-MW-03D	3/16/2023	N	EM07	UMCf	96.6 - 106.6	<4.60	<4.74	<9.62	<6.44	<5.52	<2.52	<2.14	<1.64	<2.98	<2.08	<2.20	<2.20	<2.40	<3.22	<23.8	<2.12	<15.7	<2.28	<9.56	<226
U4-MW-03D	3/16/2023	FD	EM07	UMCf	96.6 - 106.6	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520 UJ	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-MW-03D	6/15/2023	N	EM10	UMCf	96.6 - 106.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-03DD	4/20/2022	N	BL02	UMCf	119.7 - 129.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	3.03 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-03DD	3/15/2023	N	EM07	UMCf	119.7 - 129.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-03DD	6/15/2023	N	EM10	UMCf	119.7 - 129.7	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-03I	4/19/2022	N	BL02	UMCf	76.6 - 86.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	17.3	<0.106	1.71 J	<0.114	<0.478	<11.3
U4-MW-03I	3/15/2023	N	EM07	UMCf	76.6 - 86.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	9.75 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-03I	6/14/2023	N	EM10	UMCf	76.6 - 86.6	<4.60	<4.74	<9.62	<6.44	<5.52	<2.52	<2.14	<1.64	<2.98	<2.08	<2.20	<2.20	<2.40	<3.22	<23.8	<2.12	<15.7	<2.28	<9.56	<226
U4-MW-03I	6/14/2023	FD	EM10	UMCf	76.6 - 86.6	<5.75	<5.93	<12.0	<8.05	<6.90	<3.15	<2.68	<2.05	<3.73	<2.60	<2.75	<2.75	<3.00	<4.03	<29.8	<2.65	<19.7	<2.85	<12.0	<282
U4-MW-03S	4/18/2022	N	BL02	UMCf	54.5 - 64.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-03S	4/18/2022	FD	BL02	UMCf	54.5 - 64.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-03S	3/15/2023	N	EM07	UMCf	54.5 - 64.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-03S	6/15/2023	N	EM10	UMCf	54.5 - 64.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						1,2,3-Trichloro-benzene	1,2,3-Trichloro-propane	1,2,4-Trichloro-benzene	1,2,4-Trimethyl-benzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromo-ethane	1,2-Dichlorob-enzene	1,2-Dichloro-ethane	1,2-Dichloro-propane	1,3,5-Trimethyl-benzene (Mesitylene)	1,3-Dichloro-benzene	1,3-Dichloro-propane	1,4-Dichloro-benzene	2,2-Dichloro-propane	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-Pentanone	Acetone
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-04D	4/19/2022	N	BL02	UMCf	97.0 - 107.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.900 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-04D	2/16/2023	N	EM06	UMCf	97.0 - 107.0	<11.5	<11.9	<24.1	<16.1 UJ	<13.8	<6.30	<5.35	<4.09	<7.45	<5.20	<5.50	<5.50	<6.00	<8.05	<59.5	<5.30	<39.4	<5.70	<23.9	<565
U4-MW-04D	3/21/2023	N	EM07	UMCf	97.0 - 107.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.95 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-04D	6/14/2023	N	EM10	UMCf	97.0 - 107.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	20.6	<0.106	<0.787	<0.114	<0.478	86.7 J+
U4-MW-04I	4/19/2022	N	BL02	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.71 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-04I	3/20/2023	N	EM07	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-04I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	23.3 J	<0.530	<3.94	<0.570	<2.39	87.0 J
U4-MW-05D	4/15/2022	N	BL02	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-05D	10/13/2022	N	EM02	UMCf	98.2 - 108.2	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-MW-05D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-05D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.186 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-05D	1/11/2023	N	EM05	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	16.9 J
U4-MW-05D	2/14/2023	N	EM06	UMCf	98.2 - 108.2	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-MW-05D	3/16/2023	N	EM07	UMCf	98.2 - 108.2	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-MW-05D	4/20/2023	N	EM08	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-05D	5/10/2023	N	EM09	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	35.3	<0.106	<0.787	<0.114	<0.478	80.9
U4-MW-05D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	103
U4-MW-05D	7/18/2023	N	EM11	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.80 J	<0.106	<0.787	<0.114	<0.478	50.4
U4-MW-05I	4/15/2022	N	BL02	UMCf	76.6 - 86.6	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-05I	10/13/2022	N	EM02	UMCf	76.6 - 86.6	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-MW-05I	11/3/2023	N	EM03	UMCf	76.6 - 86.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-05I	12/8/2022	N	EM04	UMCf	76.6 - 86.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.531 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-05I	1/11/2023	N	EM05	UMCf	76.6 - 86.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-05I	2/14/2023	N	EM06	UMCf	76.6 - 86.6	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-MW-05I	3/14/2023	N	EM07	UMCf	76.6 - 86.6	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-MW-05I	4/21/2023	N	EM08	UMCf	76.6 - 86.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	14.3	<0.106	<0.787	<0.114	<0.478	23.4 J
U4-MW-05I	5/10/2023	N	EM09	UMCf	76.6 - 86.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	89.2	<0.106	<0.787	<0.114	<0.478	44.0 J
U4-MW-05I	6/15/2023	N	EM10	UMCf	76.6 - 86.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	78.9	<0.106	<0.787	<0.114	<0.478	76.6
U4-MW-05I	7/17/2023	N	EM11	UMCf	76.6 - 86.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	212	<0.106	<0.787	<0.114	<0.478	51.1
U4-MW-06D	4/19/2022	N	BL02	UMCf	97.1 - 107.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.785 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	4.05 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-06D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	<11.5	<11.9	<24.1	<16.1	<13.8	<6.30	<5.35	<4.09	<7.45	<5.20	<5.50	<5.50	<6.00	<8.05	<59.5	<5.30	<39.4	<5.70	<23.9	<565
U4-MW-06D	3/21/2023	N	EM07	UMCf	97.1 - 107.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-06D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-06I	4/19/2022	N	BL02	UMCf	76.5 - 86.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-06I	3/14/2023	N	EM07	UMCf	76.5 - 86.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.117 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-06I	6/16/2023	N	EM10	UMCf	76.5 - 86.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07D	4/15/2022	N	BL02	UMCf	96.8 - 106.5	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07D	10/12/2022	N	EM02	UMCf	96.8 - 106.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.20 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07D	10/12/2022	FD	EM02	UMCf	96.8 - 106.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07D	11/3/2022	N	EM03	UMCf	96.8 - 106.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07D	12/7/2022	N	EM04	UMCf	96.8 - 106.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07D	1/11/2023	N	EM05	UMCf	96.8 - 106.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07D	2/14/2023	N	EM06	UMCf	96.8 - 106.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07D	3/16/2023	N	EM07	UMCf	96.8 - 106.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07D	4/21/2023	N	EM08	UMCf	96.8 - 106.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	18.5	<0.106	<0.787	<0.114	<0.478	23.4 J
U4-MW-07D	5/11/2023	N	EM09	UMCf	96.8 - 106.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	142	<0.106	<0.787	<0.114	<0.478	314
U4-MW-07D	6/13/2023	N	EM10	UMCf	96.8 - 106.5	<0.230 UJ	<0.237 UJ	<0.481 UJ	<0.322 UJ	<0.276 UJ	<0.126 UJ	<0.107 UJ	<0.0819 UJ	<0.149 UJ	<0.104 UJ	<0.110 UJ	<0.110 UJ	<0.120 UJ	<0.161 UJ	85.0 J	<0.106 UJ	<0.787 UJ	<0.114 UJ	<0.478 UJ	176 J
U4-MW-07D	7/17/2023	N	EM11	UMCf	96.8 - 106.5	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	16.0	<0.106	<0.787	<0.114	<0.478	77.4
U4-MW-07I	4/15/2022	N	BL02	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07I	11/3/2022	N	EM03	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07I	1/11/2023	N	EM05	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-07I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-MW-07I	4/21/2023	N	EM08	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	17.3	<0.106	<0.787	<0.114	<0.478	62.0
U4-MW-07I	5/11/2023	N	EM09	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	5.24 J	<0.106	<0.787	<0.114	<0.478	12.2 J
U4-MW-07I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	14.9 J	<0.530	<3.94	<0.570	<2.39	<56.5
U4-MW-07I	7/17/2023	N	EM11	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	14.7	<0.106	<0.787	<0.114	<0.478	15.2 J
U4-MW-08D	4/13/2022	N	BL02	UMCf	98.6 - 108.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08D	12/7/2022	N	EM04	UMCf	98.6 - 108.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	11.7 J+	<0.106	<0.787	<0.114	<0.478	39.5 J
U4-MW-08D	3/17/2023	N	EM07	UMCf	98.6 - 108.6	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-MW-08D	6/13/2023	N	EM10	UMCf	98.6 - 108.6	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08DD	4/20/2022	N	BL02	UMCf	119.8 - 129.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	18.7 J	<0.106	3.03 J	<0.114	<0.478	<11.3
U4-MW-08DD	4/20/2022	FD	BL02	UMCf	119.8 - 129.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	5.79 J	<0.106	1.23 J	<0.114	<0.478	<11.3
U4-MW-08DD	12/8/2022	N	EM04	UMCf	119.8 - 129.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08DD	3/15/2023	N	EM07	UMCf	119.8 - 129.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08DD	6/14/2023	N	EM10	UMCf	119.8 - 129.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08I	4/13/2022	N	BL02	UMCf	78.0 - 88.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.345 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08I	12/7/2022	N	EM04	UMCf	78.0 - 88.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08I	12/7/2022	FD	EM04	UMCf	78.0 - 88.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08I	3/17/2023	N	EM07	UMCf	78.0 - 88.0	<11.5	<11.9	<24.1	<16.1	<13.8	<6.30	<5.35	<4.09	<7.45	<5.20	<5.50	<5.50	<6.00	<8.05	<59.5	<5.30	<39.4	<5.70	<23.9	<565
U4-MW-08I	6/13/2023	N	EM10	UMCf	78.0 - 88.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08S	4/15/2022	N	BL02	UMCf	54.9 - 64.9	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.31 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08S	12/7/2022	N	EM04	UMCf	54.9 - 64.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08S	12/7/2022	FD	EM04	UMCf	54.9 - 64.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08S	3/13/2023	N	EM07	UMCf	54.9 - 64.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08S	3/13/2023	FD	EM07	UMCf	54.9 - 64.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.44 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-08S	6/13/2023	N	EM10	UMCf	54.9 - 64.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	17.6	<0.106	<0.787	<0.114	<0.478	23.2 J

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						1,2,3-Trichloro-benzene	1,2,3-Trichloro-propane	1,2,4-Trichloro-benzene	1,2,4-Trimethyl-benzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromo-ethane	1,2-Dichlorob-enzene	1,2-Dichloro-ethane	1,2-Dichloro-propane	1,3,5-Trimethyl-benzene (Mesitylene)	1,3-Dichloro-benzene	1,3-Dichloro-propane	1,4-Dichloro-benzene	2,2-Dichloro-propane	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-Pentanone	Acetone
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-08S	6/13/2023	FD	EM10	UMCf	54.9 - 64.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	16.5	<0.106	<0.787	<0.114	<0.478	21.4 J
U4-MW-09D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.239 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-09D	12/6/2022	N	EM04	UMCf	96.9 - 106.9	<2.30 UJ	<2.37 UJ	<4.81 UJ	<3.22 UJ	<2.76 UJ	<1.26 UJ	<1.07 UJ	<0.819 UJ	<1.49 UJ	<1.04 UJ	<1.10 UJ	<1.10 UJ	<1.20 UJ	<1.61 UJ	<11.9 UJ	<1.06 UJ	<7.87 UJ	<1.14 UJ	<4.78 UJ	<113 UJ
U4-MW-09D	3/16/2023	N	EM07	UMCf	96.9 - 106.9	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	38.2 J	<1.06	<7.87	<1.14	<4.78	287 J
U4-MW-09D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	39.7	<0.106	<0.787	<0.114	<0.478	126 J+
U4-MW-09DD	4/14/2022	N	BL02	UMCf	119.8 - 129.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-09DD	12/6/2022	N	EM04	UMCf	119.8 - 129.8	<0.230 UJ	<0.237 UJ	<0.481 UJ	<0.322 UJ	<0.276 UJ	<0.126 UJ	<0.107 UJ	<0.0819 UJ	<0.149 UJ	<0.104 UJ	<0.110 UJ	<0.110 UJ	<0.120 UJ	<0.161 UJ	<1.19 UJ	<0.106 UJ	<0.787 UJ	<0.114 UJ	<0.478 UJ	<11.3 UJ
U4-MW-09DD	3/21/2023	N	EM07	UMCf	119.8 - 129.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478 UJ	<11.3
U4-MW-09DD	6/15/2023	N	EM10	UMCf	119.8 - 129.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-09I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-09I	12/6/2022	N	EM04	UMCf	76.8 - 86.8	<2.30 UJ	<2.37 UJ	<4.81 UJ	<3.22 UJ	<2.76 UJ	<1.26 UJ	<1.07 UJ	<0.819 UJ	<1.49 UJ	<1.04 UJ	<1.10 UJ	<1.10 UJ	<1.20 UJ	<1.61 UJ	<11.9 UJ	<1.06 UJ	<7.87 UJ	<1.14 UJ	<4.78 UJ	<113 UJ
U4-MW-09I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	17.2 J	<1.06	<7.87	<1.14	<4.78	<113
U4-MW-09I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	3.02 J	<0.106	<0.787	<0.114	<0.478	22.0 J
U4-MW-09S	4/14/2022	N	BL02	UMCf	55.3 - 65.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-09S	12/6/2022	N	EM04	UMCf	55.3 - 65.3	<0.230 UJ	<0.237 UJ	<0.481 UJ	<0.322 UJ	<0.276 UJ	<0.126 UJ	<0.107 UJ	<0.0819 UJ	<0.149 UJ	<0.104 UJ	<0.110 UJ	<0.110 UJ	<0.120 UJ	<0.161 UJ	<1.19 UJ	<0.106 UJ	<0.787 UJ	<0.114 UJ	<0.478 UJ	<11.3 UJ
U4-MW-09S	3/17/2023	N	EM07	UMCf	55.3 - 65.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-09S	6/15/2023	N	EM10	UMCf	55.3 - 65.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	151	<0.106	<0.787	<0.114	<0.478	26.0 J
U4-MW-10D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-10D	12/5/2022	N	EM04	UMCf	96.9 - 106.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-10D	3/17/2023	N	EM07	UMCf	96.9 - 106.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	27.8	<0.106	<0.787	<0.114	<0.478	45.7 J
U4-MW-10D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	20.5	<0.106	<0.787	<0.114	<0.478	74.4 J+
U4-MW-10I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.115 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-10I	12/5/2022	N	EM04	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-10I	3/17/2023	N	EM07	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-10I	6/14/2023	N	EM10	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	61.6	<0.106	<0.787	<0.114	<0.478	90.1 J+
U4-MW-11D	4/15/2022	N	BL02	UMCf	97.4 - 107.4	<0.230	0.334 J	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-11D	9/26/2022	N	EM01	UMCf	97.4 - 107.4	<11.5	<11.9	<24.1	<16.1	<13.8	<6.30	<5.35	<4.09	<7.45	<5.20	<5.50	<5.50	<6.00	<8.05	<59.5	<5.30	<39.4	<5.70	<23.9	<565
U4-MW-11D	10/11/2022	N	EM02	UMCf	97.4 - 107.4	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	<113
U4-MW-11D	11/1/2022	N	EM03	UMCf	97.4 - 107.4	<11.5	<11.9	<24.1	<16.1	<13.8	<6.30	<5.35	<4.09	<7.45	<5.20	<5.50	<5.50	<6.00	<8.05	<59.5	<5.30	<39.4	<5.70	<23.9	<565
U4-MW-11D	12/6/2022	N	EM04	UMCf	97.4 - 107.4	<5.75 UJ	<5.93 UJ	<12.0 UJ	<8.05 UJ	<6.90 UJ	<3.15 UJ	<2.68 UJ	<2.05 UJ	<3.73 UJ	<2.60 UJ	<2.75 UJ	<2.75 UJ	<3.00 UJ	<4.03 UJ	88.4 J	<2.65 UJ	<19.7 UJ	<2.85 UJ	<12.0 UJ	<282 UJ
U4-MW-11D	1/12/2023	N	EM05	UMCf	97.4 - 107.4	<46.0	<47.4	<96.2	<64.4	<55.2	<25.2	<21.4	<16.4	<29.8	<20.8	<22.0	<22.0	<24.0	<32.2	<238	<21.2	<157	<22.8	<95.6	<2,260
U4-MW-11D	2/14/2023	N	EM06	UMCf	97.4 - 107.4	<46.0	<47.4	<96.2	<64.4	<55.2	<25.2	<21.4	<16.4	<29.8	<20.8	<22.0	<22.0	<24.0	<32.2	<238	<21.2	<157	<22.8	<95.6	<2,260
U4-MW-11D	3/16/2023	N	EM07	UMCf	97.4 - 107.4	<46.0	<47.4	<96.2	<64.4	<55.2	<25.2	<21.4	<16.4	<29.8	<20.8	<22.0	<22.0	<24.0	<32.2	<238	<21.2	<157	<22.8	<95.6	<2,260
U4-MW-11D	4/18/2023	N	EM08	UMCf	97.4 - 107.4	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-MW-11D	5/17/2023	N	EM09	UMCf	97.4 - 107.4	<4.60 UJ	<4.74 UJ	<9.62 UJ	<6.44 UJ	<5.52 UJ	<2.52 UJ	<2.14 UJ	<1.64 UJ	<2.98 UJ	<2.08 UJ	<2.20 UJ	<2.20 UJ	<2.40 UJ	<3.22 UJ	<23.8 UJ	<2.12 UJ	<15.7 UJ	<2.28 UJ	<9.56 UJ	<226 UJ
U4-MW-11D	6/16/2023	N	EM10	UMCf	97.4 - 107.4	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.0940 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.53 J	<0.106	<0.787	<0.114	<0.478	16.9 J
U4-MW-11D	7/14/2023	N	EM11	UMCf	97.4 - 107.4	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.106 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.58 J	<0.106	<0.787	<0.114	<0.478	11.4 J
U4-MW-11I	4/14/2022	N	BL02	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104 UJ	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-11I	9/26/2022	N	EM01	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	20.1	<0.106	<0.787	<0.114	<0.478	184
U4-MW-11I	9/26/2022	FD	EM01	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	20.5	<0.106	<0.787	<0.114	<0.478	176
U4-MW-11I	10/10/2022	N	EM02	UMCf	77.0 - 87.0	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	16.0 J	<1.06	<7.87	<1.14	<4.78	<113
U4-MW-11I	10/10/2022	FD	EM02	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	24.1	<0.106	<0.787	<0.114	<0.478	18.3 J
U4-MW-11I	10/31/2022	N	EM03	UMCf	77.0 - 87.0	<1.15	<1.19	<2.41 UJ	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	62.2	<0.530	<3.94	<0.570	<2.39	<56.5
U4-MW-11I	10/31/2022	FD	EM03	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	70.6	<0.106	<0.787	<0.114	<0.478	44.2 J
U4-MW-11I	12/6/2022	N	EM04	UMCf	77.0 - 87.0	<0.230 UJ	<0.237 UJ	<0.481 UJ	<0.322 UJ	<0.276 UJ	<0.126 UJ	<0.107 UJ	<0.0819 UJ	<0.149 UJ	<0.104 UJ	<0.110 UJ	<0.110 UJ	<0.120 UJ	<0.161 UJ	57.4 J+	<0.106 UJ	<0.787 UJ	<0.114 UJ	<0.478 UJ	57.7 J+
U4-MW-11I	12/6/2022	FD	EM04	UMCf	77.0 - 87.0	<0.230 UJ	<0.237 UJ	<0.481 UJ	<0.322 UJ	<0.276 UJ	<0.126 UJ	<0.107 UJ	<0.0819 UJ	<0.149 UJ	<0.104 UJ	<0.110 UJ	<0.110 UJ	<0.120 UJ	<0.161 UJ	57.2 J+	<0.106 UJ	<0.787 UJ	<0.114 UJ	<0.478 UJ	57.8 J+
U4-MW-11I	1/12/2023	N	EM05	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	44.0	<0.106	<0.787	<0.114	<0.478	54.7 J+
U4-MW-11I	1/12/2023	FD	EM05	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	43.9	<0.106	<0.787	<0.114	<0.478	52.3 J+
U4-MW-11I	2/14/2023	N	EM06	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	20.8 J+	<0.106	<0.787	<0.114	<0.478	22.1 J
U4-MW-11I	2/14/2023	FD	EM06	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	19.3 J+	<0.106	<0.787	<0.114	<0.478	20.6 J
U4-MW-11I	3/16/2023	N	EM07	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	44.6	<0.106	<0.787	<0.114	<0.478	44.6 J
U4-MW-11I	3/16/2023	FD	EM07	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	42.2	<0.106	<0.787	<0.114	<0.478	43.6 J
U4-MW-11I	4/18/2023	N	EM08	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	34.4	<0.106	<0.787	<0.114	<0.478	45.3 J
U4-MW-11I	4/18/2023	FD	EM08	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	33.9	<0.106	<0.787	<0.114	<0.478	42.6 J
U4-MW-11I	5/19/2023	N	EM09	UMCf	77.0 - 87.0	<0.230 UJ	<0.237 UJ	<0.481 UJ	<0.322 UJ	<0.276 UJ	<0.126 UJ	<0.107 UJ	<0.0819 UJ	<0.149 UJ	<0.104 UJ	<0.110 UJ	<0.110 UJ	<0.120 UJ	<0.161 UJ	31.4 J-	<0.106 UJ	<0.787 UJ	<0.114 UJ	<0.478 UJ	43.6 J
U4-MW-11I	5/19/2023	FD	EM09	UMCf	77.0 - 87.0	<0.230 UJ	<0.237 UJ	<0.481 UJ	<0.322 UJ	<0.276 UJ	<0.126 UJ	<0.107 UJ	<0.0819 UJ	<0.149 UJ	<0.104 UJ	<0.110 UJ	<0.110 UJ	<0.120 UJ	<0.161 UJ	30.9 J-	<0.106 UJ	<0.787 UJ	<0.114 UJ	<0.478 UJ	45.1 J
U4-MW-11I	6/15/2023	N	EM10	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	22.2	<0.106	<0.787	<0.114	<0.478	30.9 J
U4-MW-11I	6/15/2023	FD	EM10	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	21.8	<0.106	<0.787	<0.114	<0.478	29.7 J
U4-MW-11I	7/13/2023	N	EM11	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	13.7	<0.106	<0.787	<0.114	<0.478	24.5 J
U4-MW-11I	7/13/2023	FD	EM11	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	14.9	<0.106	<0.787	<0.114	<0.478	24.2 J
U4-MW-12D	4/15/2022	N	BL02	UMCf	97.1 - 107.1	<0.230	<0.237	<0.481 UJ	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.23 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-12D	9/27/2022	N	EM01	UMCf	97.1 - 107.1	<4.60	<4.74	<9.62	<6.44	<5.52	<2.52	<2.14	<1.64	<2.98	<2.08	<2.20	<2.20	<2.40	<3.22	<23.8	<2.12	<15.7	<2.28	<9.56	<226
U4-MW-12D	10/12/2022	N	EM02	UMCf	97.1 - 107.1	<0.230	0.325 J	<0.481	<0.322	<0.276	<0.126	<0.107	0.157 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-12D	11/2/2022	N	EM03	UMCf	97.1 - 107.1	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	<113
U4-MW-12D	12/7/2022	N	EM04	UMCf	97.1 - 107.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.196 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-12D	1/12/2023	N	EM05	UMCf	97.1 - 107.1	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-MW-12D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-MW-12D	3/14/2023	N	EM07	UMCf	97.1 - 107.1	<11.5	<11.9	<24.1	<16.1	<13.8	<6.30	<5.35	<4.09	<7.45	<5.20	<5.50	<5.50	<6.00	<8.05	<59.5	<5.30	<39.4	<5.70	<23.9	<565
U4-MW-12D	4/17/2023	N	EM08	UMCf	97.1 - 107.1	<1.15 UJ	<1.19 UJ	<2.41 UJ	<1.61 UJ	<1.38 UJ	<0.630 UJ	<0.535 UJ	<0.409 UJ	<0.745 UJ	<0.520 UJ	<0.550 UJ	<0.550 UJ	<0.600 UJ	<0.805 UJ	<5.95 UJ	<0.530 UJ	<3.94 UJ	<0.570 UJ	<2.39 UJ	<56.5 UJ
U4-MW-12D	5/17/2023	N	EM09	UMCf	97.1 - 107.1	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-MW-12D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-12D	7/13/2023	N	EM11	UMCf	97.1 - 107.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	4.52 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-12I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.144 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.87 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-12I	4/14/2022	FD	BL02	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.146 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.86 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-12I	9/27/2022	N	EM01	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	13.7 J
U4-MW-12I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.0834 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-12I	11/2/2022	N	EM03	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-12I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	10.6 J+	<0.106	<0.787	<0.114	<0.478	16.9 J
U4-MW-12I	12/7/2022	FD	EM04	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	10.3 J+	<0.106	<0.787	<0.114	<0.478	16.1 J

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						1,2,3-Trichloro-benzene	1,2,3-Trichloro-propane	1,2,4-Trichloro-benzene	1,2,4-Trimethyl-benzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromo-ethane	1,2-Dichlorob-enzene	1,2-Dichloro-ethane	1,2-Dichloro-propane	1,3,5-Trimethyl-benzene (Mesitylene)	1,3-Dichloro-benzene	1,3-Dichloro-propane	1,4-Dichloro-benzene	2,2-Dichloro-propane	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-Pentanone	Acetone
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-12I	1/13/2023	N	EM05	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	9.72 J	<0.106	<0.787	<0.114	<0.478	30.3 J
U4-MW-12I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	24.7 J+	<0.106	<0.787	<0.114	<0.478	23.4 J
U4-MW-12I	3/13/2023	N	EM07	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	14.6	<0.106	<0.787	<0.114	<0.478	19.6 J
U4-MW-12I	4/17/2023	N	EM08	UMCf	76.8 - 86.8	<0.230 UJ	<0.237 UJ	<0.481 UJ	<0.322 UJ	<0.276 UJ	<0.126 UJ	<0.107 UJ	<0.0819 UJ	<0.149 UJ	<0.104 UJ	<0.110 UJ	<0.110 UJ	<0.120 UJ	<0.161 UJ	22.4 J-	<0.106 UJ	<0.787 UJ	<0.114 UJ	<0.478 UJ	32.0 J
U4-MW-12I	5/17/2023	N	EM09	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	26.4	<0.106	<0.787	<0.114	<0.478	43.1 J
U4-MW-12I	6/16/2023	N	EM10	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	30.4	<0.106	<0.787	<0.114	<0.478	63.2
U4-MW-12I	7/11/2023	N	EM11	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	57.2	<0.106	5.56 J	<0.114	<0.478	63.6
U4-MW-13D	4/14/2022	N	BL02	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.200 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-13D	9/28/2022	N	EM01	UMCf	98.2 - 108.2	<2.30	<2.37	<4.81	<3.22	<2.76	<1.26	<1.07	<0.819	<1.49	<1.04	<1.10	<1.10	<1.20	<1.61	<11.9	<1.06	<7.87	<1.14	<4.78	<113
U4-MW-13D	10/11/2022	N	EM02	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	14.7	<0.106	<0.787	<0.114	<0.478	66.9
U4-MW-13D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.69 J	<0.106	<0.787	<0.114	<0.478	15.0 J
U4-MW-13D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-13D	1/12/2023	N	EM05	UMCf	98.2 - 108.2	<4.60	<4.74	<9.62	<6.44	<5.52	<2.52	<2.14	<1.64	<2.98	<2.08	<2.20	<2.20	<2.40	<3.22	<23.8	<2.12	<15.7	<2.28	<9.56	<226
U4-MW-13D	2/15/2023	N	EM06	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-13D	3/17/2023	N	EM07	UMCf	98.2 - 108.2	<4.60	<4.74	<9.62	<6.44	<5.52	<2.52	<2.14	<1.64	<2.98	<2.08	<2.20	<2.20	<2.40	<3.22	<23.8	<2.12	<15.7	<2.28	<9.56	<226
U4-MW-13D	4/18/2023	N	EM08	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-13D	5/17/2023	N	EM09	UMCf	98.2 - 108.2	<4.60	<4.74	<9.62	<6.44	<5.52	<2.52	<2.14	<1.64	<2.98	<2.08	<2.20	<2.20	<2.40	<3.22	<23.8	<2.12	<15.7	<2.28	<9.56	<226
U4-MW-13D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-13D	7/12/2023	N	EM11	UMCf	98.2 - 108.2	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-13I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.133 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-13I	9/28/2022	N	EM01	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-13I	10/10/2022	N	EM02	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.81 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-13I	11/3/2022	N	EM03	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-13I	12/6/2022	N	EM04	UMCf	77.1 - 87.1	<1.15 UJ	<1.19 UJ	<2.41 UJ	<1.61 UJ	<1.38 UJ	<0.630 UJ	<0.535 UJ	<0.409 UJ	<0.745 UJ	<0.520 UJ	<0.550 UJ	<0.550 UJ	<0.600 UJ	<0.805 UJ	19.1 J	<0.530 UJ	<3.94 UJ	<0.570 UJ	<2.39 UJ	<56.5 UJ
U4-MW-13I	1/12/2023	N	EM05	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	20.5 J+	<0.106	<0.787	<0.114	<0.478	16.9 J
U4-MW-13I	2/14/2023	N	EM06	UMCf	77.1 - 87.1	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	17.5 J	<0.530	<3.94	<0.570	<2.39	<56.5
U4-MW-13I	3/16/2023	N	EM07	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	25.9	<0.106	<0.787	<0.114	<0.478	11.3 J
U4-MW-13I	4/19/2023	N	EM08	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	25.2	<0.106	<0.787	<0.114	<0.478	16.5 J
U4-MW-13I	5/17/2023	N	EM09	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	18.3 J
U4-MW-13I	6/15/2023	N	EM10	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-13I	7/12/2023	N	EM11	UMCf	77.1 - 87.1	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-14D	4/13/2022	N	BL02	UMCf	97.3 - 107.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.134 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-14D	12/6/2022	N	EM04	UMCf	97.3 - 107.3	<1.15 UJ	<1.19 UJ	<2.41 UJ	<1.61 UJ	<1.38 UJ	<0.630 UJ	<0.535 UJ	<0.409 UJ	<0.745 UJ	<0.520 UJ	<0.550 UJ	<0.550 UJ	<0.600 UJ	<0.805 UJ	<5.95 UJ	<0.530 UJ	<3.94 UJ	<0.570 UJ	<2.39 UJ	<56.5 UJ
U4-MW-14D	3/16/2023	N	EM07	UMCf	97.3 - 107.3	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-MW-14D	6/15/2023	N	EM10	UMCf	97.3 - 107.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-14I	4/14/2022	N	BL02	UMCf	77.3 - 87.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-14I	12/6/2022	N	EM04	UMCf	77.3 - 87.3	<1.15 UJ	<1.19 UJ	<2.41 UJ	<1.61 UJ	<1.38 UJ	<0.630 UJ	<0.535 UJ	<0.409 UJ	<0.745 UJ	<0.520 UJ	<0.550 UJ	<0.550 UJ	<0.600 UJ	<0.805 UJ	<5.95 UJ	<0.530 UJ	<3.94 UJ	<0.570 UJ	<2.39 UJ	<56.5 UJ
U4-MW-14I	3/16/2023	N	EM07	UMCf	77.3 - 87.3	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520 UJ	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-MW-14I	6/15/2023	N	EM10	UMCf	77.3 - 87.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-15D	4/13/2022	N	BL02	UMCf	96.0 - 106.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-15D	12/5/2022	N	EM04	UMCf	96.0 - 106.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-15D	3/20/2023	N	EM07	UMCf	96.0 - 106.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-15D	6/14/2023	N	EM10	UMCf	96.0 - 106.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-15DD	4/13/2022	N	BL02	UMCf	120.3 - 130.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-15DD	12/5/2022	N	EM04	UMCf	120.3 - 130.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	14.4 J
U4-MW-15DD	3/15/2023	N	EM07	UMCf	120.3 - 130.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-15DD	6/13/2023	N	EM10	UMCf	120.3 - 130.3	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-15I	4/12/2022	N	BL02	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-15I	12/5/2022	N	EM04	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	20.3 J+	<0.106	<0.787	<0.114	<0.478	37.2 J
U4-MW-15I	3/17/2023	N	EM07	UMCf	76.8 - 86.8	<4.60	<4.74	<9.62	<6.44	<5.52	<2.52	<2.14	<1.64	<2.98	<2.08	<2.20	<2.20	<2.40	<3.22	<23.8	<2.12	<15.7	<2.28	<9.56	<226
U4-MW-15I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	51.5	<0.106	<0.787	<0.114	<0.478	103 J+
U4-MW-15S	4/13/2022	N	BL02	UMCf	54.8 - 64.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-15S	12/5/2022	N	EM04	UMCf	54.8 - 64.8	<5.75	<5.93	<12.0	<8.05	<6.90	<3.15	<2.68	<2.05	<3.73	<2.60	<2.75	<2.75	<3.00	<4.03	<29.8	<2.65	<19.7	<2.85	<12.0	<282
U4-MW-15S	3/13/2023	N	EM07	UMCf	54.8 - 64.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	14.5	<0.106	<0.787	<0.114	<0.478	22.3 J
U4-MW-15S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	19.5	<0.106	<0.787	<0.114	<0.478	32.1 J
U4-MW-16D	4/11/2022	N	BL02	UMCf	96.8 - 106.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-16D	12/5/2022	N	EM04	UMCf	96.8 - 106.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-16D	3/14/2023	N	EM07	UMCf	96.8 - 106.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	31.3	<0.106	<0.787	<0.114	<0.478	644
U4-MW-16D	6/13/2023	N	EM10	UMCf	96.8 - 106.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-16DD	4/12/2022	N	BL02	UMCf	120.8 - 130.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-16DD	12/5/2022	N	EM04	UMCf	120.8 - 130.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-16DD	3/15/2023	N	EM07	UMCf	120.8 - 130.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-16DD	6/13/2023	N	EM10	UMCf	120.8 - 130.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.54 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-16I	4/11/2022	N	BL02	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-16I	12/5/2022	N	EM04	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	36.1 J+	<0.106	<0.787	<0.114	<0.478	20.0 J
U4-MW-16I	12/5/2022	FD	EM04	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	34.3 J+	<0.106	<0.787	<0.114	<0.478	18.7 J
U4-MW-16I	3/13/2023	N	EM07	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	23.8	<0.106	<0.787	<0.114	<0.478	37.6 J
U4-MW-16I	3/13/2023	FD	EM07	UMCf	77.0 - 87.0	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	22.0	<0.106	<0.787	<0.114	<0.478	34.6 J
U4-MW-16I	6/12/2023	N	EM10	UMCf	77.0 - 87.0	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	39.0	<0.106	<0.787 UJ	<0.114	<0.478	46.3 J
U4-MW-16I	6/12/2023	FD	EM10	UMCf	77.0 - 87.0	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	37.3	<0.106	<0.787 UJ	<0.114	<0.478	44.5 J
U4-MW-16S	4/12/2022	N	BL02	UMCf	54.8 - 64.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	1.22 J	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-16S	4/12/2022	FD	BL02	UMCf	54.8 - 64.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	<11.3
U4-MW-16S	12/6/2022	N	EM04	UMCf	54.8 - 64.8	<0.230 UJ	<0.237 UJ	<0.481 UJ	<0.322 UJ	<0.276 UJ	<0.126 UJ	<0.107 UJ	<0.0819 UJ	<0.149 UJ	<0.104 UJ	<0.110 UJ	<0.110 UJ	<0.120 UJ	<0.161 UJ	<1.19 UJ	<0.106 UJ	<0.787 UJ	<0.114 UJ	<0.478 UJ	<11.3 UJ
U4-MW-16S	3/15/2023	N	EM07	UMCf	54.8 - 64.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	42.6	<0.106	<0.787	<0.114	<0.478	38.0 J
U4-MW-16S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	47.0	<0.106	<0.787	<0.114	<0.478	54.0
U4-SLMW	11/10/2022	N	EM03	N/A	-	<1.15	<1.19	<2.41	<1.61	<1.38	<0.630	<0.535	<0.409	<0.745	<0.520	<0.550	<0.550	<0.600	<0.805	<5.95	<0.530	<3.94	<0.570	<2.39	<56.5
U4-T3	10/13/2022	N	EM02	N/A	-	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	22.8 J
U4-T3	11/3/2022	N	EM03	N/A	-	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	3.43 J	<0.106	<0.787	<0.114	<0.478	12.3 J
U4-T3	12/6/2022	N	EM04	N/A	-	<4.60 UJ	<4.74 UJ	<9.62 UJ	<6.44 UJ	<5.52 UJ	<2.52 UJ	<2.14 UJ	<1.64 UJ	<2.98 UJ	<2.08 UJ	<2.20 UJ	<2.20 UJ	<2.40 UJ	<3.22 UJ	<23.8 UJ	<2.12 UJ	<15.7 UJ	<2.28 UJ	<9.56 UJ	<226 UJ

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						1,2,3-Trichloro-benzene	1,2,3-Trichloro-propane	1,2,4-Trichloro-benzene	1,2,4-Trimethyl-benzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromo-ethane	1,2-Dichlorob-enzene	1,2-Dichloro-ethane	1,2-Dichloro-propane	1,3,5-Trimethyl-benzene (Mesitylene)	1,3-Dichloro-benzene	1,3-Dichloro-propane	1,4-Dichloro-benzene	2,2-Dichloro-propane	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-Pentanone	Acetone
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-T3	1/9/2023	N	EM05	N/A	-	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	0.0844 J	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.47 J	<0.106	<0.787	<0.114	<0.478	11.4 J
U4-T3	2/13/2023	N	EM06	N/A	-	<23.0	<23.7	<48.1	<32.2	<27.6	<12.6	<10.7	<8.19	<14.9	<10.4	<11.0	<11.0	<12.0	<16.1	<119	<10.6	<78.7	<11.4	<47.8	<1,130
U4-T3	3/13/2023	N	EM07	N/A	-	<5.75	<5.93	<12.0	<8.05	<6.90	<3.15	<2.68	<2.05	<3.73	<2.60	<2.75	<2.75	<3.00	<4.03	<29.8	<2.65	<19.7	<2.85	<12.0	<282
U4-T3	4/19/2023	N	EM08	N/A	-	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	2.01 J	<0.106	<0.787	<0.114	<0.478	12.8 J
U4-T3	5/18/2023	N	EM09	N/A	-	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	26.1 J+	<0.106	<0.787	<0.114	<0.478	121
U4-T3	6/12/2023	N	EM10	N/A	-	<0.230 UJ	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	25.8	<0.106	<0.787 UJ	<0.114	<0.478	96.7 J+
U4-T3	7/11/2023	N	EM11	N/A	-	<0.230	<0.237	<0.481	<0.322	<0.276	<0.126	<0.107	<0.0819	<0.149	<0.104	<0.110	<0.110	<0.120	<0.161	<1.19	<0.106	<0.787	<0.114	<0.478	90.2

Notes:
FD - Field duplicate
E - Field instrument error.
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 low.
J+ - The result is an estimated quantity, but the result may be biased high.
N/A - Not Applicable
mg/L - milligrams per liter
µg/L - micrograms per liter
N - Normal field sample

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.

UMCf- Upper Muddy Creek Formation
< - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
-- Not tested.
M-252 damaged/obstructed when checked on June 14, 2023 for EM10.

DRAFT

Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						Benzene	Bromobenzene	Bromochloro-methane	Bromodichloro methane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromochloro methane	Dibromo-methane	Dichlorodi-fluoromethane	Diisopropyl Ether (DIPE)	Ethyl Tert-Butyl Ether (ETBE)	Ethylbenzene	Hexachloro-butadiene
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
M-247-100	4/20/2022	N	BL02	UMCf	100.5 - 110.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-249-100	4/20/2022	N	BL02	UMCf	99.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-251-100	4/19/2022	N	BL02	UMCf	92.5 - 102.5	<0.0941	<0.118	<0.128	13.1	8.80	<0.605	<0.128	<0.116	<0.192	8,010	<0.960	<0.126	<0.111	6.51	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
M-251-100	10/13/2022	N	EM02	UMCf	92.5 - 102.5	<0.0941	<0.118	<0.128	6.92	3.40	<0.605	<0.128	<0.116	<0.192	3,950	<0.960	<0.126	<0.111	3.91	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
M-251-100	11/2/2022	N	EM03	UMCf	92.5 - 102.5	<0.941	<1.18	<1.28	5.61 J	<1.29	<6.05	<1.28	<1.16	<1.92	2,420	<9.60	<1.26	<1.11	2.27 J	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
M-251-100	12/8/2022	N	EM04	UMCf	92.5 - 102.5	<0.0941	<0.118	<0.128	4.81	1.77	<0.605	1.55	<0.116	<0.192	2,240	<0.960	<0.126	<0.111	2.75	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
M-251-100	1/11/2023	N	EM05	UMCf	92.5 - 102.5	<0.0941	<0.118	<0.128	4.88	1.80	<0.605	<0.128	<0.116	<0.192	2,680	<0.960	<0.126	<0.111	2.88	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
M-251-100	2/13/2023	N	EM06	UMCf	92.5 - 102.5	<0.0941	<0.118	<0.128	4.13	1.02	<0.605	1.37	<0.116	<0.192	1,480	<0.960	<0.126	<0.111	2.53	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337 UJ
M-251-100	3/17/2023	N	EM07	UMCf	92.5 - 102.5	<4.71	<5.90	<6.40	<6.80	<6.45	<30.3	<6.40	<5.80	<9.60	1,630	<48.0	<6.30	<5.55	<7.00	<6.10	<18.7	<5.25	<5.05	<6.85	<16.9
M-251-100	4/21/2023	N	EM08	UMCf	92.5 - 102.5	<0.0941	<0.118	<0.128	4.56	1.33	<0.605	1.65	<0.116	<0.192	1,950 J+	<0.960	<0.126	<0.111	1.95	<0.122	<0.374	<0.105	<0.101	<0.137 UJ	<0.337
M-251-100	5/9/2023	N	EM09	UMCf	92.5 - 102.5	<0.0941	<0.118	<0.128	5.11	2.19	<0.605	1.58	<0.116	<0.192	2,200	<0.960	<0.126	<0.111	2.31	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
M-251-100	6/14/2023	N	EM10	UMCf	92.5 - 102.5	<4.71	<5.90	<6.40	<6.80	<6.45	<30.3	<6.40	<5.80	<9.60	2,240	<48.0	<6.30	<5.55	<7.00	<6.10	<18.7	<5.25	<5.05	<6.85	<16.9
M-251-100	7/14/2023	N	EM11	UMCf	92.5 - 102.5	<0.0941	<0.118	<0.128	4.24	2.14	<0.605	1.90	<0.116	<0.192	2,600	<0.960	<0.126	<0.111	2.44	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
M-251-60	4/18/2022	N	BL02	UMCf	52.3 - 62.3	0.132 J	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	13.5	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
M-251-60	3/15/2023	N	EM07	UMCf	52.3 - 62.3	<0.0941	<0.118	<0.128	<0.136	0.212 J	<0.605	<0.128	<0.116	<0.192	14.5 J+	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
M-251-60	6/14/2023	N	EM10	UMCf	52.3 - 62.3	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	19.9	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
M-252	4/21/2022	N	BL02	UMCf	132.3 - 142.3	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.192 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
M-252	3/15/2023	N	EM07	UMCf	132.3 - 142.3	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	17.8 J+	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
M-253-100	4/20/2022	N	BL02	UMCf	100.8 - 110.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-255-100	4/20/2022	N	BL02	UMCf	100.2 - 110.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-01D	4/18/2022	N	BL02	UMCf	94.7 - 109.7	<0.471	<0.590	<0.640	5.46	9.81 J-	<3.03	<0.640	<0.580	<0.960	6,650	<4.80	<0.630	<0.555	4.26 J	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-E-01D	3/14/2023	N	EM07	UMCf	94.7 - 109.7	<0.0941	<0.118	<0.128	3.04	0.458 J	<0.605	<0.128	<0.116	<0.192	5.08	<0.960	<0.126	<0.111	2.59	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-01I	4/19/2022	N	BL02	UMCf	74.6 - 89.6	<0.0941	<0.118	<0.128	0.521 J	0.388 J	<0.605	<0.128	<0.116	<0.192	186 J	<0.960	<0.126	<0.111	0.328 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-01I	4/19/2022	FD	BL02	UMCf	74.6 - 89.6	<0.0941	<0.118	<0.128	0.509 J	<0.129	<0.605	<0.128	<0.116	<0.192	280 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-01I	3/14/2023	N	EM07	UMCf	74.6 - 89.6	<0.0941	<0.118	<0.128	2.27	0.446 J	<0.605	0.646 J	<0.116	<0.192	1,300	<0.960	<0.126	<0.111	0.871 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-01I	4/20/2023	N	EM08	UMCf	74.6 - 89.6	<0.0941	<0.118	<0.128	0.887 J	<0.129	<0.605	0.439 J	<0.116	<0.192	477 J+	<0.960	<0.126	<0.111	0.207 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-01I	5/10/2023	N	EM09	UMCf	74.6 - 89.6	<0.0941	<0.118	<0.128	0.980 J	0.189 J	<0.605	<0.128	<0.116	<0.192	553	<0.960	<0.126	<0.111	0.280 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-01I	6/12/2023	N	EM10	UMCf	74.6 - 89.6	<0.0941	<0.118	<0.128	1.63	0.383 J	<0.605	0.814 J	<0.116	<0.192	1,530	<0.960	<0.126	<0.111	0.341 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-01I	7/11/2023	N	EM11	UMCf	74.6 - 89.6	<0.471	<0.590	<0.640	0.904 J	<0.645	<3.03	<0.640	<0.580	<0.960	381	<4.80	<0.630	<0.555	<0.700	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-E-02D	4/20/2022	N	BL02	UMCf	94.4 - 109.4	<0.0941	<0.118	<0.128	3.33 J+	1.82	<0.605	<0.128	<0.116	<0.192	1,660	<0.960	<0.126	<0.111	1.39	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-02D	3/14/2023	N	EM07	UMCf	94.4 - 109.4	<0.0941	<0.118	<0.128	3.21	0.376 J	<0.605	<0.128	<0.116	<0.192	6.95	<0.960	<0.126	<0.111	2.36	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-02I	4/18/2022	N	BL02	UMCf	74.4 - 89.4	<0.0941	<0.118 UJ	<0.128	1.65	1.65	<0.605	<0.128	<0.116	<0.192	727	<0.960	<0.126	<0.111	0.956 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-02I	3/14/2023	N	EM07	UMCf	74.4 - 89.4	<0.0941	<0.118	<0.128	2.11	0.378 J	<0.605	0.176 J	<0.116	<0.192	165	<0.960	<0.126	<0.111	1.15	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-02I	4/20/2023	N	EM08	UMCf	74.4 - 89.4	<0.0941	<0.118	<0.128	1.66	<0.129	<0.605	0.401 J	<0.116	<0.192	503 J+	<0.960	<0.126	<0.111	0.761 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-02I	5/11/2023	N	EM09	UMCf	74.4 - 89.4	<0.0941	<0.118	<0.128	1.19	0.412 J	<0.605	0.376 J	<0.116	<0.192	477	<0.960	<0.126	<0.111	0.499 J	<0.122 UJ	<0.374	<0.105	3.56	<0.137	<0.337
U4-E-02I	6/12/2023	N	EM10	UMCf	74.4 - 89.4	<0.0941	<0.118	<0.128	0.953 J	0.197 J	<0.605	0.180 J	<0.116	<0.192	398	<0.960	<0.126	<0.111	0.297 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-02I	7/11/2023	N	EM11	UMCf	74.4 - 89.4	<0.0941	<0.118	<0.128	0.630 J	<0.129	<0.605	0.336 J	<0.116	<0.192	321	<0.960	<0.126	<0.111	0.232 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-03D	4/19/2022	N	BL02	UMCf	95.1 - 110.1	<0.0941	<0.118	<0.128	10.9	6.45	<0.605	<0.128	<0.116	<0.192	6,390	<0.960	<0.126	<0.111	4.96	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-03D	10/13/2022	N	EM02	UMCf	95.1 - 110.1	<18.8	<23.6	<25.6	<27.2	<25.8	<121	<25.6	<23.2	<38.4	4,280	<192	<25.2	<22.2	<28.0	<24.4	<74.8	<21.0	<20.2	<27.4	<67.4
U4-E-03D	11/3/2022	N	EM03	UMCf	95.1 - 110.1	<0.0941	<0.118	<0.128	9.37	4.31	<0.605	2.75	<0.116	<0.192	4,350	<0.960	<0.126	<0.111	5.14 J+	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-03D	12/6/2022	N	EM04	UMCf	95.1 - 110.1	<1.88 UJ	<2.36 UJ	<2.56 UJ	7.65 J	3.37 J	<12.1 UJ	6.86 J	<2.32 UJ	<3.84 UJ	3,470	<19.2 UJ	<2.52 UJ	<2.22 UJ	3.45 J	<2.44 UJ	<7.48 UJ	<2.10 UJ	<2.02 UJ	<2.74 UJ	<6.74 UJ
U4-E-03D	1/9/2023	N	EM05	UMCf	95.1 - 110.1	<0.0941	<0.118	<0.128	7.40	2.90	<0.605	2.25	<0.116	<0.192	3,520	<0.960	<0.126	<0.111	3.66	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-03D	2/13/2023	N	EM06	UMCf	95.1 - 110.1	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	3,130	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-E-03D	3/13/2023	N	EM07	UMCf	95.1 - 110.1	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	3,070	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-E-03D	3/14/2023	N	EM07	UMCf	95.1 - 110.1	<18.8	<23.6	<25.6	<27.2	<25.8	<121	<25.6	<23.2	<38.4	12,200	<192	<25.2	<22.2	<28.0	<24.4	<74.8	<21.0	<20.2	<27.4	<67.4
U4-E-03D	4/19/2023	N	EM08	UMCf	95.1 - 110.1	<0.471	<0.590	<0.640	4.48 J	2.05 J	<3.03	1.47 J	<0.580	<0.960	3,360 J+	<4.80	<0.630	<0.555	1.97 J	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-E-03D	5/11/2023	N	EM09	UMCf	95.1 - 110.1	<0.0941	<0.118	0.159 J	4.02	1.58	<0.605	<0.128	<0.116	<0.192	2,640	<0.960	<0.126	<0.111	1.55 J-	<0.122 UJ	<0.374	<0.105	0.730 J	<0.137	<0.337
U4-E-03D	6/12/2023	N	EM10	UMCf	95.1 - 110.1	<0.0941	<0.118	<0.128	5.66	2.26	<0.605	2.20	<0.116	<0.192	3,700	<0.960	<0.126	<0.111	2.21	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-03D	7/11/2023	N	EM11	UMCf	95.1 - 110.1	<0.0941	<0.118	<0.128	5.08	2.45	<0.605	1.56	<0.116	<0.192	3,470	<0.960	<0.126	<0.111	2.15	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-04D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	<0.0941	<0.118	<0.128	2.28	0.947 J	<0.605	<0.128	<0.116	<0.192	2,980	<0.960	<0.126	<0.111	0.812 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-04D	3/14/2023	N	EM07	UMCf	95.0 - 110.0	<0.0941	<0.118	<0.128	3.30	0.484 J	<0.605	<0.128	<0.116	<0.192	4.96 J	<0.960	<0.126	<0.111	2.85	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-04I	4/18/2022	N	BL02	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	0.591 J	<0.129	<0.605	<0.128	<0.116	<0.192	433	<0.960	<0.126	<0.111	0.141 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-04I	3/14/2023	N	EM07	UMCf	75.0 - 90.0	<4.71	<5.90	<6.40	<6.80	<6.45	<30.3	12.3 J	<5.80	<9.60	5,600	<48.0	<6.30	<5.55	<7.00	<6.10	<18.7	<5.25	<5.05	<6.85	<16.9
U4-E-05D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	<0.0941	<0.118	<0.128	4.11	3.20	<0.605	<0.128	<0.116	<0.192	3,780	<0.960	<0.126	<0.111	2.06	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-05D	3/16/2023	N	EM07	UMCf	95.0 - 110.0	<0.0941	<0.118	<0.128	0.727 J	<0.129	<0.605	<0.128	<0.116	<0.192	5.23 J+	<0.960	<0.126	<0.111	0.449 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-05I	4/19/2022	N	BL02	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	1.41	1.99	<0.605	<0.128	<0.116	<0.192	516	<0.960	<0.126	<0.111	0.948 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-05I	3/15/2023	N	EM07	UMCf	75.0 - 90.0	<0.0941 UJ	<0.118 UJ	<0.128 UJ	3.94 J-	1.44 J-	<0.605 UJ	0.706 J	<0.116 UJ	<0.192 UJ	459 J	<0.960 UJ	<0.126 UJ	<0.111 UJ	1.53 J-	<0.122 UJ	<0.374 UJ	<0.105 UJ	<0.101 UJ	<0.137 UJ	<0.337 UJ
U4-E-06D	4/11/2022	N	BL02	UMCf	95.1 - 110.1	0.186 J	<0.118	<0.128	0.502 J	0.185 J	<0.605	<0.128	<0.116	<0.192	819	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-06I	4/11/2022	N	BL02	UMCf	73.2 - 88.2	0.166 J	<0.118	<0.128	0.679 J	<0.129	<0.605	<0.128	<0.116	<0.192	218	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-06I	4/11/2022	FD	BL02	UMCf	73.2 - 88.2	0.153 J	<0.118	<0.128	0.605 J	<0.129	<0.605	<0.128	<0.116	<0.192	215	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-06I	10/12/2022	N	EM02	UMCf	73.2 - 88.2	<0.0941	<0.118	0.445 J	1.58	0.258 J	<0.605	1.14	<0.116	<0.192	<0.111	<0.960	<0.126	<0.111	0.447 J	<0.122	<0.374	<0.105	4.56	<0.137	<0.337
U4-E-06I	11/3/2022	N	EM03	UMCf	73.2 - 88.2	<0.0941	<0.118	<0.128	1.16 J+	0.235 J	<0.605	0.654 J	<0.116	<0.192	1,740	<0.960	<0.126	<0.111	0.414 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-06I	12/6/2022	N	EM04	UMCf	73.2 - 88.2	<0.941 UJ	<1.18 UJ	<1.28 UJ	<1.36 UJ	<1.29 UJ	<6.05 UJ	2.80 J	<1.16 UJ	<1.92 UJ	1,080	<9.60 UJ	<1.26 UJ	<1.11 UJ	<1.40 UJ	<1.22 UJ	<3.74 UJ	<1.05 UJ	<1.01 UJ	<1.37 UJ	<3.37 UJ
U4-E-06I	1/9/2023	N	EM05	UMCf	73.2 - 88.2	<0.0941	<0.118	<0.128	1.18	0.386 J	<0.605	0.877 J	<0.116	<0.192	2,050	<0.960	<0.126	<0.111	0.412 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-06I	2/13/2023	N	EM06	UMCf	73.2 - 88.2	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	1,730	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-E-06I	3/13/2023	N	EM07	UMCf	73.2 - 88.2	<1.88	<2.36	<2.56	<2.72	<2.58	<12.1	<2.56	<2.32	<3.84	923	<19.2	<2.52	<2.22	<2.80	<2.44	<7.48	<2.10	7.88 J	<2.74	<6.74
U4-E-06I	4/17/2023	N	EM08	UMCf	73.2 - 88.2	<1.88	<2.36	<2.56	<2.72	<2.58	<12.1	<2.56	<2.32	<3.84	1,080	<19.2	<2.52	<2.22	<2.80	<2.44	<7.48	<2.10	<2.02	<2.74	<6.74
U4-E-06I	5/15/2023	N	EM09	UMCf	73.2 - 88.2	<2.35	<2.95	<3.20	<3.40	<3.22	<15.1	<3.20	<2.90	<4.80	1,840	<24.0	<3.15	<2.78	<3.50	<3.05	<9.35	<2.63	<2.53	<3.43	<8.43
U4-E-06I	6/12/2023	N	EM10	UMCf	73.2 - 88.2	<0.0941	<0.118	<0.128	1.99	0.446 J	<0.605	1.54	<0.116	<0.192	3,080	<0.960	<0.126	<0.111	0.486 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-06I	7/11/2023	N	EM11	UMCf	73.2 - 88.2	<0.0941	<0.118	<0.128	1.55	<0.129	<0.605	1.00 J	<0.116	<0.192	2,820	<0.960	<0.126	<0.111	0.449 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-07D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	<0.0941	<0.118	<0.128	3.05	1.20	<0.605	2.62	<0.116	<0.192	5,980	<0.960	<0.126	<0.111	1.08	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-07I	4/12/2022	N	BL02	UMCf	74.7 - 89.7	<0.0941	<0.118	<0.128	1.21	0.866 J	<0.605	1.03	<0.116	<0.192	1,140	<0.960	<0.126	<0.111	0.715 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-07I	10/11/2022	N	EM02	UMCf	74.7 - 89.7	<0.941	<1.18	<1.28	2.84 J	<1.29	<6.05	5.80 J	<1.16	<1.92	3,920	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-E-07I	11/3/2022	N	EM03	UMCf	74.7 - 89.7	0.186 J	<0.118	<0.128	4.41	1.98 J+	<0.605	1.58	<0.116	<0.192	3,510	<0.960	<0.126	<0.111	2.14 J+	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-07I	12/6/2022	N	EM04	UMCf	74.7 - 89.7	<2.35 UJ	<2.95 UJ	<3.20 UJ	4.68 J	<3.22 UJ	<15.1 UJ	8.58 J	<2.90 UJ	<4.80 UJ	4,200	<24.0 UJ	<3.15 UJ	<2.78 UJ	<3.50 UJ	<3.05 UJ	<9.35 UJ	<2.63 UJ	<2.53 UJ	<3.43 UJ	<8.43 UJ
U4-E-07I	1/9/2023	N	EM05	UMCf	74.7 - 89.7	<0.0941	<0.118	<0.128	4.48	1.88	<0.605	1.92	<0.116	<0.192	3,840	<0.960	<0.126	<0.111	2.24	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-07I	2/13/2023	N	EM06	UMCf	74.7 - 89.7	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	3,670	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-E-07I	3/13/2023	N	EM07	UMCf	74.7 - 89.7	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	3,520	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-E-07I	4/19/2023	N	EM08	UMCf	74.7 - 89.7	<0.471	<0.590	<0.640	4.35 J	1.69 J	<3.03	1.59 J	<0.580	<0.960	3,410 J+	<4.80	<0.630	<0.555	1.67 J	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						Benzene	Bromobenzene	Bromochloro-methane	Bromodichloro methane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromochloro methane	Dibromo-methane	Dichlorodi-fluoromethane	Diisopropyl Ether (DIPE)	Ethyl Tert-Butyl Ether (ETBE)	Ethylbenzene	Hexachloro-butadiene
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-E-07I	5/15/2023	N	EM09	UMCf	74.7 - 89.7	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	2,910	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-E-07I	6/12/2023	N	EM10	UMCf	74.7 - 89.7	<0.0941	<0.118	<0.128	3.88	1.06	<0.605	1.69	<0.116	<0.192	2,840	<0.960	<0.126	<0.111	1.15	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-07I	7/11/2023	N	EM11	UMCf	74.7 - 89.7	<0.0941	<0.118	<0.128	2.96	1.12	<0.605	1.07	<0.116	<0.192	2,850	<0.960	<0.126	<0.111	1.07	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-08D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	<0.0941	<0.118	0.298 J	2.74	0.954 J	<0.605	2.96	<0.116	<0.192	7,120	<0.960	<0.126	<0.111	1.00 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-08D	10/11/2022	N	EM02	UMCf	94.6 - 109.6	<0.941	<1.18	<1.28	<1.36	<1.29	<6.05	5.96 J	<1.16	<1.92	4,850	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-E-08D	11/3/2022	N	EM03	UMCf	94.6 - 109.6	<0.0941	<0.118	<0.128	2.56 J+	0.740 J	<0.605	2.84	<0.116	<0.192	5,020	<0.960	<0.126	<0.111	0.768 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-08D	12/6/2022	N	EM04	UMCf	94.6 - 109.6	<2.35 UJ	<2.95 UJ	<3.20 UJ	<3.40 UJ	<3.22 UJ	<15.1 UJ	8.37 J	<2.90 UJ	<4.80 UJ	4,090	<24.0 UJ	<3.15 UJ	<2.78 UJ	<3.50 UJ	<3.05 UJ	<9.35 UJ	<2.63 UJ	<2.53 UJ	<3.43 UJ	<8.43 UJ
U4-E-08D	1/9/2023	N	EM05	UMCf	94.6 - 109.6	<0.0941	<0.118	<0.128	1.99	0.639 J	<0.605	1.73	<0.116	<0.192	4,300	<0.960	<0.126	<0.111	0.743 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-08D	2/13/2023	N	EM06	UMCf	94.6 - 109.6	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	3,920	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-E-08D	3/13/2023	N	EM07	UMCf	94.6 - 109.6	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	3,480	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-E-08D	4/19/2023	N	EM08	UMCf	94.6 - 109.6	<0.471	<0.590	<0.640	1.92 J	<0.645	<3.03	1.54 J	<0.580	<0.960	3,410 J+	<4.80	<0.630	<0.555	<0.700	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-E-08D	5/17/2023	N	EM09	UMCf	94.6 - 109.6	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	2,880	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-E-08D	6/12/2023	N	EM10	UMCf	94.6 - 109.6	<0.0941	<0.118	<0.128	1.54	0.321 J	<0.605	1.44	<0.116	<0.192	2,820	<0.960	<0.126	<0.111	0.399 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-08D	7/11/2023	N	EM11	UMCf	94.6 - 109.6	<0.0941	<0.118	<0.128	1.61	<0.129	<0.605	1.06	<0.116	<0.192	2,620	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-09D	4/15/2022	N	BL02	UMCf	94.5 - 109.5	<0.0941	<0.118	<0.128	0.642 J	0.461 J	<0.605	0.533 J	<0.116	<0.192	1,450	<0.960	<0.126	<0.111	0.209 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-09I	4/14/2022	N	BL02	UMCf	74.9 - 89.9	0.188 J	<0.118	<0.128	1.00 J	0.618 J	<0.605	0.610 J	<0.116	<0.192	1,240	<0.960	<0.126	<0.111	0.576 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-10D	4/13/2022	N	BL02	UMCf	94.5 - 109.5	<0.0941	<0.118	<0.128	1.14	0.707 J	<0.605	0.717 J	<0.116	<0.192	704 J+	<0.960	<0.126	<0.111	0.612 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-E-10I	4/13/2022	N	BL02	UMCf	74.2 - 89.2	<0.0941	<0.118	<0.128	0.478 J	0.509 J	<0.605	0.585 J	<0.116	<0.192	1,330	<0.960	<0.126	<0.111	0.441 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01D	4/19/2022	N	BL02	UMCf	96.7 - 106.7	<0.0941	<0.118	<0.128	0.564 J	0.346 J	<0.605	<0.128	<0.116	<0.192	608	<0.960	<0.126	<0.111	0.274 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01D	2/16/2023	N	EM06	UMCf	96.7 - 106.7	<0.941	<1.18	<1.28	<1.36	<1.29	<6.05	<1.28	<1.16	<1.92	857	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-01D	3/20/2023	N	EM07	UMCf	96.7 - 106.7	<0.0941	<0.118	<0.128	2.14	0.356 J	<0.605	0.863 J	<0.116	<0.192	1,100	<0.960	<0.126	<0.111	1.08	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01D	6/13/2023	N	EM10	UMCf	96.7 - 106.7	<0.0941	<0.118	<0.128	1.89	0.216 J	<0.605	0.652 J	<0.116	<0.192	871	<0.960	<0.126	<0.111	0.948 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01DD	4/19/2022	N	BL02	UMCf	119.9 - 129.9	<0.0941	<0.118	<0.128	0.170 J	<0.129	<0.605	<0.128	<0.116	<0.192	21.2	<0.960	<0.126	<0.111	0.190 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01DD	4/19/2022	FD	BL02	UMCf	119.9 - 129.9	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	20.3	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01DD	3/15/2023	N	EM07	UMCf	119.9 - 129.9	<0.0941	<0.118	<0.128	0.644 J	<0.129	<0.605	0.471 J	<0.116	<0.192	363 J+	<0.960	<0.126	<0.111	0.307 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01DD	6/13/2023	N	EM10	UMCf	119.9 - 129.9	<0.0941	<0.118	<0.128	1.48	0.166 J	<0.605	0.178 J	<0.116	<0.192	374	<0.960	<0.126	<0.111	0.722 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01I	4/19/2022	N	BL02	UMCf	76.7 - 86.7	<0.0941	<0.118	<0.128	0.622 J	0.371 J	<0.605	<0.128	<0.116	<0.192	395	<0.960	<0.126	<0.111	0.259 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01I	3/20/2023	N	EM07	UMCf	76.7 - 86.7	<0.0941	<0.118	<0.128	1.99	0.431 J	<0.605	0.789 J	<0.116	<0.192	1,060	<0.960	<0.126	<0.111	1.10	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01I	6/12/2023	N	EM10	UMCf	76.7 - 86.7	<0.0941	<0.118	<0.128	2.08	0.203 J	<0.605	0.793 J	<0.116	<0.192	908	<0.960	<0.126	<0.111	0.777 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01S	4/18/2022	N	BL02	UMCf	54.7 - 64.7	<0.0941	<0.118	<0.128	0.375 J	0.147 J	<0.605	<0.128	<0.116	<0.192	56.8	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01S	3/15/2023	N	EM07	UMCf	54.7 - 64.7	<0.0941	<0.118	<0.128	0.346 J	<0.129	<0.605	0.227 J	<0.116	<0.192	32.5 J+	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-01S	6/13/2023	N	EM10	UMCf	54.7 - 64.7	<0.0941	<0.118	<0.128	0.294 J	<0.129	<0.605	<0.128	<0.116	<0.192	31.2	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02D	4/14/2022	N	BL02	UMCf	95.0 - 110.0	<0.0941	<0.118	<0.128	9.08	5.28	<0.605	2.50	<0.116	<0.192	8,990	<0.960	<0.126	<0.111	3.00	0.473 J	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02D	10/11/2022	N	EM02	UMCf	95.0 - 110.0	<0.0941	<0.118	<0.128	13.2	6.19	<0.605	5.24	<0.116	<0.192	10,700	<0.960	<0.126	<0.111	4.51	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02D	11/1/2022	N	EM03	UMCf	95.0 - 110.0	<4.71	<5.90	<6.40	10.6 J	<6.45	<30.3	<6.40	<5.80	<9.60	4,950	<48.0	16.2 J	<5.55	<7.00	<6.10	<18.7	<5.25	<5.05	<6.85	<16.9
U4-MW-02D	12/7/2022	N	EM04	UMCf	95.0 - 110.0	<0.0941	<0.118	<0.128	12.1	5.74	<0.605	<0.128	<0.116	<0.192	11,200	<0.960	<0.126	<0.111	4.53	0.149 J	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02D	1/10/2023	N	EM05	UMCf	95.0 - 110.0	<0.0941	<0.118	<0.128	9.38	4.64	<0.605	<0.128	<0.116	<0.192	7,970	<0.960	<0.126	<0.111	3.70	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02D	2/13/2023	N	EM06	UMCf	95.0 - 110.0	<9.41	<0.118	<0.128	10.7	3.75	<0.605	4.15	<0.116	<0.192	7,230	<0.960	<0.126	<0.111	3.77	0.157 J	<0.374	<0.105	<0.101	<0.137	<0.337 UJ
U4-MW-02D	3/17/2023	N	EM07	UMCf	95.0 - 110.0	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	9,500	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-MW-02D	4/19/2023	N	EM08	UMCf	95.0 - 110.0	<0.471	<0.590	<0.640	9.38	3.77 J	<3.03	2.96 J	<0.580	<0.960	10,100 J+	<4.80	<0.630	<0.555	3.33 J	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-02D	5/9/2023	N	EM09	UMCf	95.0 - 110.0	<0.471	<0.590	<0.640	9.24	3.51 J	<3.03	8.04	<0.580	<0.960	10,300	<4.80	<0.630	<0.555	3.44 J	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-02D	6/13/2023	N	EM10	UMCf	95.0 - 110.0	<0.0941	<0.118	<0.128	7.28	3.82	<0.605	2.24	<0.116	<0.192	<0.111	<0.960	<0.126	<0.111	2.86	0.148 J	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02D	7/18/2023	N	EM11	UMCf	95.0 - 110.0	<0.0941	<0.118	<0.128	9.63	5.00	<0.605	<0.128	<0.116	<0.192	10,700	<0.960	<0.126	<0.111	4.13	0.170 J	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	4/14/2022	N	BL02	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	2.73	1.62	<0.605	0.809 J	<0.116	<0.192	1,380	<0.960	<0.126	<0.111	1.22	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	10/11/2022	N	EM02	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	4.87	2.46	<0.605	2.06	<0.116	<0.192	2,860	<0.960	<0.126	<0.111	1.94	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	11/2/2022	N	EM03	UMCf	75.0 - 90.0	<0.941	<1.18	<1.28	3.93 J	<1.29	<6.05	<1.28	<1.16	<1.92	3,760	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-02I	11/2/2022	FD	EM03	UMCf	75.0 - 90.0	<0.941	<1.18	<1.28	2.76 J	<1.29	<6.05	5.26 J	<1.16	<1.92	3,760	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-02I	12/8/2022	N	EM04	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	0.766 J	0.454 J	<0.605	0.173 J	<0.116	<0.192	474	<0.960	<0.126	<0.111	0.184 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	12/8/2022	FD	EM04	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	0.924 J	0.569 J	<0.605	0.214 J	<0.116	<0.192	462	<0.960	<0.126	<0.111	0.426 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	1/13/2023	N	EM05	UMCf	75.0 - 90.0	<0.941	<1.18	<1.28	2.62 J	<1.29	<6.05	<1.28	<1.16	<1.92	1,910	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-02I	1/13/2023	FD	EM05	UMCf	75.0 - 90.0	<0.941	<1.18	<1.28	3.20 J	<1.29	<6.05	<1.28	<1.16	<1.92	1,890	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-02I	2/15/2023	N	EM06	UMCf	75.0 - 90.0	<0.941	<1.18	<1.28	8.86 J	5.67 J	<6.05	<1.28	<1.16	<1.92	6,040	<9.60	<1.26	<1.11	4.74 J	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-02I	2/15/2023	FD	EM06	UMCf	75.0 - 90.0	<0.941	<1.18	<1.28	8.84 J	6.04 J	<6.05	<1.28	<1.16	<1.92	6,030	<9.60	<1.26	<1.11	4.62 J	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-02I	3/17/2023	N	EM07	UMCf	75.0 - 90.0	<18.8	<23.6	<25.6	<27.2	<25.8	<121	<25.6	<23.2	<38.4	7,070	<192	<25.2	<22.2	<28.0	<24.4	<74.8	<21.0	<20.2	<27.4	<67.4
U4-MW-02I	3/17/2023	FD	EM07	UMCf	75.0 - 90.0	<18.8	<23.6	<25.6	<27.2	<25.8	<121	<25.6	<23.2	<38.4	7,210	<192	<25.2	<22.2	<28.0	<24.4	<74.8	<21.0	<20.2	<27.4	<67.4
U4-MW-02I	4/20/2023	N	EM08	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	0.189 J	<0.129	<0.605	<0.128	<0.116	<0.192	128	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	4/20/2023	FD	EM08	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	0.188 J	<0.129	<0.605	<0.128	<0.116	<0.192	134	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	5/9/2023	N	EM09	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	0.204 J	<0.129	<0.605	<0.128	<0.116	<0.192	313	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	5/9/2023	FD	EM09	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	0.228 J	<0.129	<0.605	<0.128	<0.116	<0.192	301 J+	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	6/12/2023	N	EM10	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	0.371 J	<0.129	<0.605	<0.128	<0.116	<0.192	390	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	6/12/2023	FD	EM10	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	0.294 J	<0.129	<0.605	<0.128	<0.116	<0.192	385	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	7/18/2023	N	EM11	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	118	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-02I	7/18/2023	FD	EM11	UMCf	75.0 - 90.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	143	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-03D	4/20/2022	N	BL02	UMCf	96.6 - 106.6	<0.0941	<0.118	<0.128	1.81 J+	0.629 J	<0.605	<0.128	<0.116	<0.192	2,270	<0.960	<0.126	<0.111	0.605 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-03D	2/16/2023	N	EM06	UMCf	96.6 - 106.6	<4.71	<0.590	<0.640	1.71 J	<0.645	<3.03	0.835 J	<0.580	<0.960	1,350	<4.80	<0.630	<0.555	<0.700	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-03D	3/16/2023	N	EM07	UMCf	96.6 - 106.6	4.74 J	<2.36	<2.56	<2.72	<2.58	<12.1	<2.56	<2.32	<3.84	1,670	<19.2	<2.52	<2.22	<2.80	<2.44	<7.48	<2.10	<2.02	<2.74	<6.74
U4-MW-03D	3/16/2023	FD	EM07	UMCf	96.6 - 106.6	<2.35 UJ	<0.590	<0.640	<0.680	<0.645	<3.03	<0.640	<0.580	<0.960	1,620	<4.80	<0.630	<0.555	<0.700	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-03D	6/15/2023	N	EM10	UMCf	96.6 - 106.6	<0.0941	<0.118	<0.128	1.13	<0.129	<0.605	<0.128	<0.116	<0.192	1,130 J+	<0.960	<0.126	<0.111	<0.140	<0.122 UJ	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-03DD	4/20/2022	N	BL02	UMCf	119.7 - 129.7	<0.0941	<0.118	<0.128	0.152 J	<0.129	<0.605	<0.128	<0.116	<0.192	173	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-03DD	3/15/2023	N	EM07	UMCf	119.7 - 129.7	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	4.62 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-03DD	6/15/2023	N	EM10	UMCf	119.7 - 129.7	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	1.95 J	<0.960	<0.126	<0.111	<0.140	<0.122 UJ	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-03I	4/19/2022	N	BL02	UMCf	76.6 - 86.6	<0.0941	<0.118	<0.128	0.846 J	0.580 J	<0.605	<0.128	<0.116	<0.192	277	<0.960	<0.126	<0.111	0.457 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-03I	3/15/2023	N	EM07	UMCf	76.6 - 86.6	<0.0941	<0.118	<0.128	2.03	0.539 J	<0.605	0.737 J	<0.116	<0.192	1,210 J+	<0.960	<0.126	<0.111	1.01	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-03I	6/14/2023	N	EM10	UMCf	76.6 - 86.6	<1.88	<2.36	<2.56	<2.72	<2.58	<12.1	<2.56	<2.32	<3.84	884 J	<19.2	<2.52	<2.22	<2.80	<2.44	<7.48	<2.10	<2.02	<2.74	<6.74
U4-MW-03I	6/14/2023	FD	EM10	UMCf	76.6 - 86.6	<2.35	<2.95	<3.20	<3.40	<3.22	<15.1	<3.20	<2.90	<4.80	1,220 J	<24.0	<3.15	<2.78	<3.50	<3.05	<9.35	<2.63	<2.53	<3.43	<8.43
U4-MW-03S	4/18/2022	N	BL02	UMCf	54.5 - 64.5	<0.0941	<0.118 UJ	<0.128	0.176 J	<0.129	<0.605	<0.128	<0.116	<0.192	45.1	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-03S	4/18/2022	FD	BL02	UMCf	54.5 - 64.5	<0.0941	<0.118 UJ	<0.128	0.182 J	<0.129	<0.605	<0.128	<0.116	<0.192	44.1	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-03S	3/15/2023	N	EM07	UMCf	54.5 - 64.5	<0.0941	<0.118	<0.128	0.383 J	0.218 J	<0.605	0.312 J	<0.116	<0.192	76.3	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-03S	6/15/2023	N	EM10	UMCf	54.5 - 64.5	<0.0941	<0.118	<0.128	0.259 J	<0.129	<0.605	<0.128	<0.116	<0.192	59.9	<0.960	<0.126	<0.111	<0.140	<0.122 UJ	<0.374	<0.105	<0.101	<0.137	<0.337

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						Benzene	Bromobenzene	Bromochloro-methane	Bromodichloro methane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromochloro methane	Dibromo-methane	Dichlorodi-fluoromethane	Diisopropyl Ether (DIPE)	Ethyl Tert-Butyl Ether (ETBE)	Ethylbenzene	Hexachloro-butadiene
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-04D	4/19/2022	N	BL02	UMCf	97.0 - 107.0	<0.0941	<0.118	<0.128	4.27	1.46	<0.605	<0.128	<0.116	<0.192	6,140	<0.960	<0.126	<0.111	1.42	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-04D	2/16/2023	N	EM06	UMCf	97.0 - 107.0	<4.71	<5.90	<6.40	<6.80	<6.45	<30.3	<6.40	<5.80	<9.60	1,240	<48.0	<6.30	<5.55	<7.00	<6.10	<18.7	<5.25	<5.05	<6.85	<16.9
U4-MW-04D	3/21/2023	N	EM07	UMCf	97.0 - 107.0	<0.0941	<0.118	<0.128	2.44	<0.129	<0.605	<0.128	<0.116	<0.192	1,160	<0.960	<0.126	<0.111	0.946 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-04D	6/14/2023	N	EM10	UMCf	97.0 - 107.0	<0.0941	<0.118	<0.128	1.56	0.221 J	<0.605	<0.128	<0.116	<0.192	891	<0.960	<0.126	<0.111	0.643 J	<0.122	<0.374	<0.105	0.126 J	<0.137	<0.337
U4-MW-04I	4/19/2022	N	BL02	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	1.86	0.968 J	<0.605	<0.128	<0.116	<0.192	1,830	<0.960	<0.126	<0.111	0.749 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-04I	3/20/2023	N	EM07	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	2.91	0.558 J	<0.605	1.26	<0.116	<0.192	2,350	<0.960	<0.126	<0.111	1.06	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-04I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.471	<0.590	<0.640	1.90 J	<0.645	<3.03	1.01 J	<0.580	<0.960	2,250	<4.80	<0.630	<0.555	0.810 J	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-05D	4/15/2022	N	BL02	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	14.8	8.45 J-	<0.605	3.80	<0.116	<0.192	6,320	<0.960	<0.126	<0.111	7.16	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05D	10/13/2022	N	EM02	UMCf	98.2 - 108.2	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	5,350	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-MW-05D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	11.3	5.15	<0.605	1.89	<0.116	<0.192	3,790	<0.960	<0.126	<0.111	6.10	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	12.9	6.25	<0.605	<0.128	<0.116	<0.192	3,950	<0.960	<0.126	<0.111	6.85	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05D	1/11/2023	N	EM05	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	11.2	5.71	<0.605	<0.128	<0.116	<0.192	3,990	<0.960	<0.126	<0.111	5.60	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05D	2/14/2023	N	EM06	UMCf	98.2 - 108.2	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	2,590	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-MW-05D	3/16/2023	N	EM07	UMCf	98.2 - 108.2	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	2,710 J+	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-MW-05D	4/20/2023	N	EM08	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	5.26	1.92	<0.605	0.960 J	<0.116	<0.192	1,950	<0.960	<0.126	<0.111	2.41	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05D	5/10/2023	N	EM09	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	4.76	1.58	<0.605	<0.128	<0.116	<0.192	1,630	<0.960	<0.126	<0.111	1.81	0.311 J	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	2.36	0.972 J	<0.605	<0.128	<0.116	<0.192	1,510 J+	<0.960	<0.126	<0.111	1.13	<0.122 UJ	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05D	7/18/2023	N	EM11	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	2.89	1.40	<0.605	<0.128	<0.116	<0.192	1,950	<0.960	<0.126	<0.111	1.41	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05I	4/15/2022	N	BL02	UMCf	76.6 - 86.6	<0.0941	<0.118	<0.128	9.46	5.71 J-	<0.605	2.53	<0.116	<0.192	3,530	<0.960	<0.126	<0.111	4.75	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05I	10/13/2022	N	EM02	UMCf	76.6 - 86.6	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	5,930	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-MW-05I	11/3/2022	N	EM03	UMCf	76.6 - 86.6	<0.0941	<0.118	<0.128	15.2	8.95	<0.605	3.70	<0.116	<0.192	5,800	<0.960	<0.126	<0.111	7.90	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05I	12/8/2022	N	EM04	UMCf	76.6 - 86.6	<0.0941	<0.118	<0.128	14.5	8.16	<0.605	3.07	<0.116	<0.192	3,970	<0.960	<0.126	<0.111	6.57	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05I	1/11/2023	N	EM05	UMCf	76.6 - 86.6	<0.0941	<0.118	<0.128	12.4	6.41	<0.605	2.70	<0.116	<0.192	4,040	<96.0	<0.126	<0.111	6.99	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05I	2/14/2023	N	EM06	UMCf	76.6 - 86.6	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	3,270	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-MW-05I	3/14/2023	N	EM07	UMCf	76.6 - 86.6	<9.41	<11.8	<12.8	20.3 J	<12.9	<60.5	<12.8	<11.6	<19.2	6,720	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-MW-05I	4/21/2023	N	EM08	UMCf	76.6 - 86.6	<0.0941	<0.118	<0.128	2.29	0.809 J	<0.605	0.368 J	<0.116	<0.192	646 J+	<0.960	<0.126	<0.111	0.942 J	0.197 J	<0.374	<0.105	<0.101	<0.137 UJ	<0.337
U4-MW-05I	5/10/2023	N	EM09	UMCf	76.6 - 86.6	<0.0941	<0.118	<0.128	0.375 J	<0.129	<0.605	<0.128	<0.116	<0.192	531	<0.960	<0.126	<0.111	<0.140	0.447 J	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05I	6/15/2023	N	EM10	UMCf	76.6 - 86.6	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	415 J+	<0.960	<0.126	<0.111	<0.140	<0.122 UJ	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-05I	7/17/2023	N	EM11	UMCf	76.6 - 86.6	<0.0941	<0.118	<0.128	3.26	1.21	<0.605	0.471 J	<0.116	<0.192	1,830	<0.960	<0.126	<0.111	1.27	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-06D	4/19/2022	N	BL02	UMCf	97.1 - 107.1	<0.0941	<0.118	<0.128	10.0	5.10	<0.605	<0.128	<0.116	<0.192	4,840	<0.960	<0.126	<0.111	3.82	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-06D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	<4.71	<5.90	<6.40	<6.80	<6.45	<30.3	<6.40	<5.80	<9.60	2,110	<48.0	<6.30	<5.55	<7.00	<6.10	<18.7	<5.25	<5.05	<6.85	<16.9
U4-MW-06D	3/21/2023	N	EM07	UMCf	97.1 - 107.1	<0.0941	<0.118	<0.128	6.74	1.89	<0.605	<0.128	<0.116	<0.192	2,440 J+	<0.960	<0.126	<0.111	2.77	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-06D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	<0.0941	<0.118	<0.128	4.96	1.48	<0.605	1.13	<0.116	<0.192	1,920	<0.960	<0.126	<0.111	2.12	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-06I	4/19/2022	N	BL02	UMCf	76.5 - 86.5	0.128 J	<0.118	<0.128	0.674 J	0.297 J	<0.605	<0.128	<0.116	<0.192	217	<0.960	<0.126	<0.111	0.273 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-06I	3/14/2023	N	EM07	UMCf	76.5 - 86.5	<0.0941	<0.118	<0.128	7.41	4.03	<0.605	1.67	<0.116	<0.192	3,220	<0.960	<0.126	<0.111	3.44	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-06I	6/16/2023	N	EM10	UMCf	76.5 - 86.5	<0.0941	<0.118	<0.128	6.36	2.39	<0.605	1.75	<0.116	<0.192	2,420	<0.960	<0.126	<0.111	2.69	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07D	4/15/2022	N	BL02	UMCf	96.8 - 106.5	<0.0941	<0.118	<0.128	1.13	0.515 J	<0.605	0.461 J	0.137 J	<0.192	1,330	<0.960	<0.126	<0.111	0.410 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07D	10/12/2022	N	EM02	UMCf	96.8 - 106.5	<0.0941	<0.118	<0.128	3.77	0.211 J	<0.605	0.373 J	<0.116	<0.192	113	<0.960	<0.126	<0.111	2.38	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07D	10/12/2022	FD	EM02	UMCf	96.8 - 106.5	<0.0941	<0.118	<0.128	2.98	0.201 J	<0.605	<0.128	<0.116	<0.192	95.5	<0.960	<0.126	<0.111	1.83	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07D	11/3/2022	N	EM03	UMCf	96.8 - 106.5	<0.0941	<0.118	<0.128	3.76	0.280 J	<0.605	<0.128	<0.116	<0.192	146	<0.960	<0.126	<0.111	2.53 J+	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07D	12/7/2022	N	EM04	UMCf	96.8 - 106.5	<0.0941	<0.118	<0.128	3.77	0.338 J	<0.605	<0.128	<0.116	<0.192	101	<0.960	<0.126	<0.111	2.25	0.240 J	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07D	1/11/2023	N	EM05	UMCf	96.8 - 106.5	<0.0941	<0.118	<0.128	2.84	<0.129	<0.605	<0.128	<0.116	<0.192	119	<0.960	<0.126	<0.111	1.21	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07D	2/14/2023	N	EM06	UMCf	96.8 - 106.5	<0.0941	<0.118	<0.128	1.38	<0.129	<0.605	<0.128	<0.116	<0.192	92.3	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07D	3/16/2023	N	EM07	UMCf	96.8 - 106.5	<0.0941	<0.118	<0.128	1.21	<0.129	<0.605	<0.128	<0.116	<0.192	75.1	<0.960	<0.126	<0.111	0.211 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07D	4/21/2023	N	EM08	UMCf	96.8 - 106.5	<0.0941	<0.118	<0.128	0.461 J	<0.129	<0.605	<0.128	<0.116	<0.192	267 J+	<0.960	<0.126	<0.111	0.146 J	0.125 J	<0.374	<0.105	<0.101	<0.137 UJ	<0.337
U4-MW-07D	5/11/2023	N	EM09	UMCf	96.8 - 106.5	<0.0941	<0.118	0.361 J	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	98.3	<0.960	<0.126	<0.111	<0.140 UJ	<0.122 UJ	<0.374	<0.105	1.69	<0.137	<0.337
U4-MW-07D	6/13/2023	N	EM10	UMCf	96.8 - 106.5	<0.0941 UJ	<0.118 UJ	<0.128 UJ	0.363 J	0.563 J	<0.605 UJ	<0.128 UJ	<0.116 UJ	<0.192 UJ	205 J	<0.960 UJ	<0.126 UJ	<0.111 UJ	0.295 J	<0.122 UJ	<0.374 UJ	<0.105 UJ	<0.101 UJ	<0.137 UJ	<0.337 UJ
U4-MW-07D	7/17/2023	N	EM11	UMCf	96.8 - 106.5	<0.0941	<0.118	<0.128	3.88	1.52	<0.605	1.31	<0.116	<0.192	2,740	<0.960	<0.126	<0.111	1.57	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07I	4/15/2022	N	BL02	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	0.676 J	0.206 J	<0.605	0.313 J	<0.116	<0.192	373	<0.960	<0.126	<0.111	0.189 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	5.11	0.403 J	<0.605	0.425 J	<0.116	<0.192	164	<0.960	<0.126	<0.111	3.22	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07I	11/3/2022	N	EM03	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	3.61	0.321 J	<0.605	<0.128	<0.116	<0.192	153	<0.960	<0.126	<0.111	2.52 J+	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	4.08	0.353 J	<0.605	<0.128	<0.116	<0.192	129	<0.960	<0.126	<0.111	2.47	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07I	1/11/2023	N	EM05	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	2.79	0.162 J	<0.605	<0.128	<0.116	<0.192	154	<4.80	<0.126	<0.111	1.11	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	1.57	0.149 J	<0.605	<0.128	<0.116	<0.192	180	<0.960	<0.126	<0.111	0.700 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-07I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	<0.471	<0.590	<0.640	1.40 J	<0.645	<3.03	<0.640	<0.580	<0.960	250	<4.80	<0.630	<0.555	<0.700	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-07I	4/21/2023	N	EM08	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	1.82	0.262 J	<0.605	0.333 J	<0.116	<0.192	578 J+	<0.960	<0.126	<0.111	0.559 J	<0.122	<0.374	<0.105	<0.101	<0.137 UJ	<0.337
U4-MW-07I	5/11/2023	N	EM09	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	344	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	7.26	<0.137	<0.337
U4-MW-07I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.471	<0.590	<0.640	<0.680	<0.645	<3.03	<0.640	<0.580	<0.960	131	<4.80	<0.630	<0.555	<0.700	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-07I	7/17/2023	N	EM11	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	2.26	0.574 J	<0.605	<0.128	<0.116	<0.192	2,180	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08D	4/13/2022	N	BL02	UMCf	98.6 - 108.6	<0.0941	<0.118	<0.128	<0.136	0.452 J	<0.605	<0.128	<0.116	<0.192	10,300 J+	<0.960	<0.126	<0.111	0.370 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08D	12/7/2022	N	EM04	UMCf	98.6 - 108.6	<0.0941	<0.118	<0.128	3.42	0.921 J	<0.605	1.85	<0.116	<0.192	4,240	<0.960	<0.126	<0.111	1.82	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08D	3/17/2023	N	EM07	UMCf	98.6 - 108.6	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	4,220	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-MW-08D	6/13/2023	N	EM10	UMCf	98.6 - 108.6	<0.0941	<0.118	<0.128	2.36	0.768 J	<0.605	<0.128	<0.116	<0.192	5,060	<0.960	<0.126	<0.111	0.778 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08DD	4/20/2022	N	BL02	UMCf	119.8 - 129.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	90.2	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08DD	4/20/2022	FD	BL02	UMCf	119.8 - 129.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	85.4	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08DD	12/8/2022	N	EM04	UMCf	119.8 - 129.8	0.870 J	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	28.1	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08DD	3/15/2023	N	EM07	UMCf	119.8 - 129.8	<0.0941	<0.118	<0.128	0.192 J	<0.129	<0.605	0.251 J	<0.116	<0.192	126	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08DD	6/14/2023	N	EM10	UMCf	119.8 - 129.8	<0.0941	<0.118	<0.128	0.148 J	<0.129	<0.605	<0.128	<0.116	<0.192	97.5	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08I	4/13/2022	N	BL02	UMCf	78.0 - 88.0	<0.0941	<0.118	<0.128	5.72	2.19	<0.605	2.14	<0.116	<0.192	1,100 J+	<0.960	<0.126	<0.111	1.76	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08I	12/7/2022	N	EM04	UMCf	78.0 - 88.0	<0.0941	<0.118	<0.128	2.33	1.08	<0.605	1.46	<0.116	<0.192	2,660	<0.960	<0.126	<0.111	1.02	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08I	12/7/2022	FD	EM04	UMCf	78.0 - 88.0	<0.0941	<0.118	<0.128	2.52	1.14	<0.605	1.40	<0.116	<0.192	2,560	<0.960	<0.126	<0.111	1.05	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08I	3/17/2023	N	EM07	UMCf	78.0 - 88.0	<4.71	<5.90	<6.40	<6.80	<6.45	<30.3	<6.40	<5.80	<9.60	5,210	<48.0	<6.30	<5.55	<7.00	<6.10	<18.7	<5.25	<5.05	<6.85	<16.9
U4-MW-08I	6/13/2023	N	EM10	UMCf	78.0 - 88.0	<0.0941	<0.118	<0.128	1.34	0.411 J	<0.605	<0.128	<0.116	<0.192	1,520	<0.960	<0.126	<0.111	0.497 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08S	4/15/2022	N	BL02	UMCf	54.9 - 64.9	<0.0941	<0.118	<0.128	0.213 J	<0.129 UJ	<0.605	<0.128	<0.116	<0.192	38.2	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08S	12/7/2022	N	EM04	UMCf	54.9 - 64.9	<0.0941	<0.118	<0.128	0.290 J	<0.129	<0.605	<0.128	<0.116	<0.192	15.0	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08S	12/7/2022	FD	EM04	UMCf	54.9 - 64.9	<0.0941	<0.118	<0.128	0.275 J	<0.129	<0.605	<0.128	<0.116	<0.192	15.4	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08S	3/13/2023	N	EM07	UMCf	54.9 - 64.9	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.792 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08S	3/13/2023	FD	EM07	UMCf	54.9 - 64.9	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.964 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-08S	6/13/2023	N	EM10	UMCf	54.9 - 64.9	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	2.78 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						Benzene	Bromobenzene	Bromochloro-methane	Bromodichloro methane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromochloro methane	Dibromo-methane	Dichlorodi-fluoromethane	Diisopropyl Ether (DIPE)	Ethyl Tert-Butyl Ether (ETBE)	Ethylbenzene	Hexachloro-butadiene
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-08S	6/13/2023	FD	EM10	UMCf	54.9 - 64.9	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	3.05 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-09D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	<0.0941	<0.118	<0.128	1.86	0.936 J	<0.605	0.488 J	<0.116	<0.192	2,940	<0.960	<0.126	<0.111	0.814 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-09D	12/6/2022	N	EM04	UMCf	96.9 - 106.9	<0.941 UJ	<1.18 UJ	<1.28 UJ	3.78 J	<1.29 UJ	<6.05 UJ	2.57 J	<1.16 UJ	<1.92 UJ	602	<9.60 UJ	<1.26 UJ	<1.11 UJ	2.99 J	<1.22 UJ	<3.74 UJ	<1.05 UJ	<1.01 UJ	<1.37 UJ	<3.37 UJ
U4-MW-09D	3/16/2023	N	EM07	UMCf	96.9 - 106.9	<0.941	<1.18	<1.28	<1.36	<1.29	<6.05	<1.28	<1.16	<1.92	525	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-09D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	<0.0941	<0.118	0.224 J	0.372 J	<0.129	<0.605	<0.128	<0.116	<0.192	360	<0.960	<0.126	<0.111	0.158 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-09DD	4/14/2022	N	BL02	UMCf	119.8 - 129.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	21.9	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-09DD	12/6/2022	N	EM04	UMCf	119.8 - 129.8	<0.0941 UJ	<0.118 UJ	<0.128 UJ	<0.136 UJ	<0.129 UJ	<0.605 UJ	<0.128 UJ	<0.116 UJ	<0.192 UJ	12.5	<0.960 UJ	<0.126 UJ	<0.111 UJ	<0.140 UJ	<0.122 UJ	<0.374 UJ	<0.105 UJ	<0.101 UJ	<0.137 UJ	<0.337 UJ
U4-MW-09DD	3/21/2023	N	EM07	UMCf	119.8 - 129.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	15.9 J+	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-09DD	6/15/2023	N	EM10	UMCf	119.8 - 129.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	12.8	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-09I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	2.49	<0.118	<0.128	0.516 J	0.526 J	<0.605	0.384 J	<0.116	<0.192	130	<0.960	<0.126	<0.111	0.509 J	<0.122	<0.374	<0.105	<0.101	0.232 J	<0.337
U4-MW-09I	12/6/2022	N	EM04	UMCf	76.8 - 86.8	<0.941 UJ	<1.18 UJ	<1.28 UJ	4.46 J	<1.29 UJ	<6.05 UJ	2.97 J	<1.16 UJ	<1.92 UJ	1,150	<9.60 UJ	<1.26 UJ	<1.11 UJ	2.89 J	<1.22 UJ	<3.74 UJ	<1.05 UJ	<1.01 UJ	<1.37 UJ	<3.37 UJ
U4-MW-09I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	<0.941	<1.18	<1.28	2.16 J	<1.29	<6.05	<1.28	<1.16	<1.92	767	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-09I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.941	<0.118	0.185 J	0.718 J	0.136 J	<0.605	<0.128	<0.116	<0.192	501	<0.960	<0.126	<0.111	0.270 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-09S	4/14/2022	N	BL02	UMCf	55.3 - 65.3	<0.0941	<0.118	<0.128	0.248 J	<0.129	<0.605	<0.128	<0.116	<0.192	20.3	<0.960	<0.126	<0.111	0.374 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-09S	12/6/2022	N	EM04	UMCf	55.3 - 65.3	<0.0941 UJ	<0.118 UJ	<0.128 UJ	0.450 J	<0.129 UJ	<0.605 UJ	0.464 J	<0.116 UJ	<0.192 UJ	135	<0.960 UJ	<0.126 UJ	<0.111 UJ	0.224 J	<0.122 UJ	<0.374 UJ	<0.105 UJ	<0.101 UJ	<0.137 UJ	<0.337 UJ
U4-MW-09S	3/17/2023	N	EM07	UMCf	55.3 - 65.3	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	148	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-09S	6/15/2023	N	EM10	UMCf	55.3 - 65.3	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	24.2	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-10D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	<0.0941	<0.118	<0.128	0.213 J	0.477 J	<0.605	<0.128	<0.116	<0.192	316	<0.960	<0.126	<0.111	0.400 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-10D	12/5/2022	N	EM04	UMCf	96.9 - 106.9	<0.0941	<0.118	<0.128	0.138 J	<0.129	<0.605	<0.128	<0.116	<0.192	153	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-10D	3/17/2023	N	EM07	UMCf	96.9 - 106.9	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	46.5	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	1.61	<0.137	<0.337
U4-MW-10D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.843 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-10I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	0.790 J	0.558 J	<0.605	0.491 J	<0.116	<0.192	695	<0.960	<0.126	<0.111	0.460 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-10I	12/5/2022	N	EM04	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	0.387 J	<0.129	<0.605	<0.128	<0.116	<0.192	33.1	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-10I	3/17/2023	N	EM07	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	180	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-10I	6/14/2023	N	EM10	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	18.0	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11D	4/15/2022	N	BL02	UMCf	97.4 - 107.4	<0.0941	<0.118	<0.128	2.44	0.612 J	<0.605	2.22	<0.116	<0.192	5,540	<0.960	<0.126	<0.111	0.584 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11D	9/26/2022	N	EM01	UMCf	97.4 - 107.4	<4.71	<5.90	<6.40	<6.80	<6.45	<30.3	<6.40	<5.80	<9.60	8,910	<48.0	<6.30	<5.55	<7.00	<6.10	<18.7	<5.25	<5.05	<6.85	<16.9
U4-MW-11D	10/11/2022	N	EM02	UMCf	97.4 - 107.4	<0.941	<1.18	<1.28	1.68 J	<1.29	<6.05	6.48 J	<1.16	<1.92	6,480	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-11D	11/1/2022	N	EM03	UMCf	97.4 - 107.4	<4.71	<5.90	<6.40	<6.80	<6.45	<30.3	<6.40	<5.80	<9.60	8,490	<48.0	<6.30	<5.55	<7.00	<6.10	<18.7	<5.25	<5.05	<6.85	<16.9
U4-MW-11D	12/6/2022	N	EM04	UMCf	97.4 - 107.4	<2.35 UJ	<2.95 UJ	<3.20 UJ	<3.40 UJ	<3.22 UJ	<15.1 UJ	7.62 J	<2.90 UJ	<4.80 UJ	5,290	<24.0 UJ	<3.15 UJ	<2.78 UJ	<3.50 UJ	<3.05 UJ	<9.35 UJ	<2.63 UJ	<2.53 UJ	<3.43 UJ	<8.43 UJ
U4-MW-11D	1/12/2023	N	EM05	UMCf	97.4 - 107.4	<18.8	<23.6	<25.6	<27.2	<25.8	<121	<25.6	<23.2	<38.4	6,580	<192	<25.2	<22.2	<28.0	<24.4	<74.8	<21.0	<20.2	<27.4	<67.4
U4-MW-11D	2/14/2023	N	EM06	UMCf	97.4 - 107.4	<18.8	<23.6	<25.6	<27.2	<25.8	<121	<25.6	<23.2	<38.4	7,100	<192	<25.2	<22.2	<28.0	<24.4	<74.8	<21.0	<20.2	<27.4	<67.4
U4-MW-11D	3/16/2023	N	EM07	UMCf	97.4 - 107.4	<18.8	<23.6	<25.6	<27.2	<25.8	<121	<25.6	<23.2	<38.4	5,710 J+	<192	<25.2	<22.2	<28.0	<24.4	<74.8	<21.0	<20.2	<27.4	<67.4
U4-MW-11D	4/18/2023	N	EM08	UMCf	97.4 - 107.4	<0.471	<0.590	<0.640	1.39 J	<0.645	<3.03	1.30 J	<0.580	<0.960	3,870	<4.80	<0.630	<0.555	<0.700	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-11D	5/17/2023	N	EM09	UMCf	97.4 - 107.4	<1.88 UJ	<2.36 UJ	<2.56 UJ	<2.72 UJ	<2.58 UJ	<12.1 UJ	<2.56 UJ	<2.32 UJ	<3.84 UJ	4,000 J-	<19.2 UJ	<2.52 UJ	<2.22 UJ	<2.80 UJ	<2.44 UJ	<7.48 UJ	<2.10 UJ	<2.02 UJ	<2.74 UJ	<6.74 UJ
U4-MW-11D	6/16/2023	N	EM10	UMCf	97.4 - 107.4	<0.0941	<0.118	<0.128	2.37	0.836 J	<0.605	5.26	<0.116	<0.192	6,060	<0.960	<0.126	<0.111	0.685 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11D	7/14/2023	N	EM11	UMCf	97.4 - 107.4	<0.0941	<0.118	<0.128	1.68	0.712 J	<0.605	1.98	<0.116	<0.192	5,610	<0.960	<0.126	<0.111	0.558 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	4/14/2022	N	BL02	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	0.588 J	0.503 J	<0.605	0.593 J	<0.116	<0.192	704	<0.960	<0.126	<0.111	0.462 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	9/26/2022	N	EM01	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	0.397 J	<0.129	<0.605	<0.128	<0.116	<0.192	287	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	4.90	<0.137	<0.337
U4-MW-11I	9/26/2022	FD	EM01	UMCf	77.0 - 87.0	<0.0941	<0.118	0.663 J	0.336 J	<0.129	<0.605	<0.128	<0.116	<0.192	273	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	5.43	<0.137	<0.337
U4-MW-11I	10/10/2022	N	EM02	UMCf	77.0 - 87.0	<0.941	<1.18	<1.28	<1.36	<1.29	<6.05	<1.28	<1.16	<1.92	203	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-11I	10/10/2022	FD	EM02	UMCf	77.0 - 87.0	<0.0941	<0.118	0.614 J	<0.136	<0.129	<0.605	2.85	<0.116	<0.192	214	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	3.02	<0.137	<0.337
U4-MW-11I	10/31/2022	N	EM03	UMCf	77.0 - 87.0	<0.471	<0.590	<0.640	<0.680	<0.645	<3.03	<0.640	<0.580	<0.960	125	<4.80	<0.630	<0.555	<0.700	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-11I	10/31/2022	FD	EM03	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	151	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	12/6/2022	N	EM04	UMCf	77.0 - 87.0	<0.0941 UJ	<0.118 UJ	<0.128 UJ	<0.136 UJ	<0.129 UJ	<0.605 UJ	<0.128 UJ	<0.116 UJ	<0.192 UJ	145	<0.960 UJ	<0.126 UJ	<0.111 UJ	<0.140 UJ	<0.122 UJ	<0.374 UJ	<0.105 UJ	<0.101 UJ	<0.137 UJ	<0.337 UJ
U4-MW-11I	12/6/2022	FD	EM04	UMCf	77.0 - 87.0	<0.0941 UJ	<0.118 UJ	<0.128 UJ	<0.136 UJ	<0.129 UJ	<0.605 UJ	<0.128 UJ	<0.116 UJ	<0.192 UJ	150	<0.960 UJ	<0.126 UJ	<0.111 UJ	<0.140 UJ	<0.122 UJ	<0.374 UJ	<0.105 UJ	<0.101 UJ	<0.137 UJ	<0.337 UJ
U4-MW-11I	1/12/2023	N	EM05	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	27.9	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	1/12/2023	FD	EM05	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	27.3	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	2/14/2023	N	EM06	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	0.752 J	0.309 J	<0.605	0.919 J	<0.116	<0.192	1,630	<0.960	<0.126	<0.111	0.217 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	2/14/2023	FD	EM06	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	0.915 J	0.348 J	<0.605	0.717 J	<0.116	<0.192	1,850	<0.960	<0.126	<0.111	0.214 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	3/16/2023	N	EM07	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.831 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	3/16/2023	FD	EM07	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.889 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	4/18/2023	N	EM08	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	11.5	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	4/18/2023	FD	EM08	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	11.7	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	5/19/2023	N	EM09	UMCf	77.0 - 87.0	<0.0941 UJ	<0.118 UJ	<0.128 UJ	<0.136 UJ	<0.129 UJ	<0.605 UJ	<0.128 UJ	<0.116 UJ	<0.192 UJ	16.3 J-	<0.960 UJ	<0.126 UJ	<0.111 UJ	<0.140 UJ	<0.122 UJ	<0.374 UJ	<0.105 UJ	<0.101 UJ	<0.137 UJ	<0.337 UJ
U4-MW-11I	5/19/2023	FD	EM09	UMCf	77.0 - 87.0	<0.0941 UJ	<0.118 UJ	<0.128 UJ	<0.136 UJ	<0.129 UJ	<0.605 UJ	<0.128 UJ	<0.116 UJ	<0.192 UJ	16.4 J-	<0.960 UJ	<0.126 UJ	<0.111 UJ	<0.140 UJ	<0.122 UJ	<0.374 UJ	<0.105 UJ	<0.101 UJ	<0.137 UJ	<0.337 UJ
U4-MW-11I	6/15/2023	N	EM10	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	2.45 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	6/15/2023	FD	EM10	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	2.43 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	7/13/2023	N	EM11	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	12.1	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-11I	7/13/2023	FD	EM11	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	12.2	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12D	4/15/2022	N	BL02	UMCf	97.1 - 107.1	<0.0941	<0.118	<0.128	2.15	0.934 J	<0.605	1.81	<0.116	<0.192	4,690	<0.960	<0.126	<0.111	0.664 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12D	9/27/2022	N	EM01	UMCf	97.1 - 107.1	<1.88	<2.36	<2.56	<2.72	<2.58	<12.1	<2.56	<2.32	<3.84	4,030 J	<19.2	<2.52	<2.22	<2.80	<2.44	<7.48	<2.10	<2.02	<2.74	<6.74
U4-MW-12D	10/12/2022	N	EM02	UMCf	97.1 - 107.1	<0.0941	<0.118	<0.128	1.59	0.380 J	<0.605	1.63	<0.116	<0.192	<0.111	<0.960	<0.126	<0.111	0.454 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12D	11/2/2022	N	EM03	UMCf	97.1 - 107.1	<0.941	<1.18	<1.28	<1.36	<1.29	<6.05	<1.28	<1.16	<1.92	3,140	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-12D	12/7/2022	N	EM04	UMCf	97.1 - 107.1	<0.0941	<0.118	<0.128	1.96	0.515 J	<0.605	<0.128	<0.116	<0.192	3,560	<0.960	<0.126	<0.111	0.535 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12D	1/12/2023	N	EM05	UMCf	97.1 - 107.1	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	3,260	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-MW-12D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	2,520	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-MW-12D	3/14/2023	N	EM07	UMCf	97.1 - 107.1	<4.71	<5.90	<6.40	<6.80	<6.45	<30.3	10.0 J	<5.80	<9.60	2,740	<48.0	<6.30	<5.55	<7.00	<6.10	<18.7	<5.25	<5.05	<6.85	<16.9
U4-MW-12D	4/17/2023	N	EM08	UMCf	97.1 - 107.1	<0.471 UJ	<0.590 UJ	<0.640 UJ	1.50 J	<0.645 UJ	<3.03 UJ	0.770 J	<0.580 UJ	<0.960 UJ	2,760 J-	<4.80 UJ	<0.630 UJ	<0.555 UJ	<0.700 UJ	<0.610 UJ	<1.87 UJ	<0.525 UJ	<0.505 UJ	<0.685 UJ	<1.69 UJ
U4-MW-12D	5/17/2023	N	EM09	UMCf	97.1 - 107.1	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	3,780	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-MW-12D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	<0.0941	<0.118	<0.128	1.03	0.258 J	<0.605	1.15	<0.116	<0.192	2,250	<0.960	<0.126	<0.111	0.297 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12D	7/13/2023	N	EM11	UMCf	97.1 - 107.1	<0.0941	<0.118	<0.128	0.552 J	0.170 J	<0.605	0.522 J	<0.116	<0.192	1,210	<0.960	<0.126	<0.111	0.176 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	1.28	0.688 J	<0.605	0.961 J	<0.116	<0.192	1,670	<0.960	<0.126	<0.111	0.610 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	4/14/2022	FD	BL02	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	1.16	0.609 J	<0.605	0.812 J	<0.116	<0.192	1,640	<0.960	<0.126	<0.111	0.573 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	9/27/2022	N	EM01	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	0.456 J	<0.129	<0.605	0.351 J	<0.116	<0.192	231	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	0.344 J	<0.129 UJ	<0.605	0.486 J	<0.116	<0.192	194	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	11/2/2022	N	EM03	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	0.236 J	<0.129	<0.605	<0.128	<0.116	<0.192	182	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	91.3	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	12/7/2022	FD	EM04	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	90.0	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						Benzene	Bromobenzene	Bromochloro-methane	Bromodichloro methane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromochloro methane	Dibromo-methane	Dichlorodi-fluoromethane	Diisopropyl Ether (DIPE)	Ethyl Tert-Butyl Ether (ETBE)	Ethylbenzene	Hexachloro-butadiene
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-12I	1/13/2023	N	EM05	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	36.5	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	36.5	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	3/13/2023	N	EM07	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	8.18	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	4/17/2023	N	EM08	UMCf	76.8 - 86.8	<0.0941 UJ	<0.118 UJ	<0.128 UJ	<0.136 UJ	<0.129 UJ	<0.605 UJ	<0.128 UJ	<0.116 UJ	<0.192 UJ	0.265 J	<0.960 UJ	<0.126 UJ	<0.111 UJ	<0.140 UJ	<0.122 UJ	<0.374 UJ	<0.105 UJ	<0.101 UJ	<0.137 UJ	<0.337 UJ
U4-MW-12I	5/17/2023	N	EM09	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.714 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	6/16/2023	N	EM10	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	<0.111	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-12I	7/11/2023	N	EM11	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.731 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13D	4/14/2022	N	BL02	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	1.63	0.706 J	<0.605	1.11	<0.116	<0.192	3,460	<0.960	<0.126	<0.111	0.639 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13D	9/28/2022	N	EM01	UMCf	98.2 - 108.2	<0.941	<1.18	<1.28	<1.36	<1.29	<6.05	<1.28	<1.16	<1.92	1,270	<9.60	<1.26	<1.11	<1.40	<1.22	<3.74	<1.05	<1.01	<1.37	<3.37
U4-MW-13D	10/11/2022	N	EM02	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	0.628 J	<0.129	<0.605	<0.128	<0.116	<0.192	983	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	1.01 J+	0.198 J	<0.605	0.415 J	<0.116	<0.192	1,060	<0.960	<0.126	<0.111	0.551 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	1.83	0.233 J	<0.605	<0.128	<0.116	<0.192	874	<0.960	<0.126	<0.111	1.04	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13D	1/12/2023	N	EM05	UMCf	98.2 - 108.2	<1.88	<2.36	<2.56	<2.72	<2.58	<12.1	<2.56	<2.32	<3.84	837	<19.2	<2.52	<2.22	<2.80	<2.44	<7.48	<2.10	<2.02	<2.74	<6.74
U4-MW-13D	2/15/2023	N	EM06	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	2.28	<0.129	<0.605	<0.128	<0.116	<0.192	729	<0.960	<0.126	<0.111	1.12	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13D	3/17/2023	N	EM07	UMCf	98.2 - 108.2	<1.88	<2.36	<2.56	<2.72	<2.58	<12.1	<2.56	<2.32	<3.84	687	<19.2	<2.52	<2.22	<2.80	<2.44	<7.48	<2.10	<2.02	<2.74	<6.74
U4-MW-13D	4/18/2023	N	EM08	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	1.62	0.134 J	<0.605	0.223 J	<0.116	<0.192	489	<0.960	<0.126	<0.111	0.572 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13D	5/17/2023	N	EM09	UMCf	98.2 - 108.2	<1.88	<2.36	<2.56	<2.72	<2.58	<12.1	<2.56	<2.32	<3.84	475	<19.2	<2.52	<2.22	<2.80	<2.44	<7.48	<2.10	<2.02	<2.74	<6.74
U4-MW-13D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	1.35	<0.129	<0.605	<0.128	<0.116	<0.192	473	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13D	7/12/2023	N	EM11	UMCf	98.2 - 108.2	<0.0941	<0.118	<0.128	1.12	<0.129	<0.605	0.271 J	<0.116	<0.192	447	<0.960	<0.126	<0.111	0.304 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	1.18	0.624 J	<0.605	0.865 J	<0.116	<0.192	1,350	<0.960	<0.126	<0.111	0.618 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13I	9/28/2022	N	EM01	UMCf	77.1 - 87.1	0.157 J	<0.118	<0.128	0.584 J	<0.129	<0.605	0.400 J	<0.116	<0.192	154 J-	<0.960	<0.126	<0.111	0.164 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13I	10/10/2022	N	EM02	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	0.505 J	<0.129	<0.605	0.759 J	<0.116	<0.192	451	<0.960	0.394 J	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13I	11/3/2022	N	EM03	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	0.580 J	<0.129	<0.605	0.426 J	<0.116	<0.192	441	<0.960	<0.126	<0.111	0.159 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13I	12/6/2022	N	EM04	UMCf	77.1 - 87.1	<0.471 UJ	<0.590 UJ	<0.640 UJ	<0.680 UJ	<0.645 UJ	<3.03 UJ	<0.640 UJ	<0.580 UJ	<0.960 UJ	305	<4.80 UJ	<0.630 UJ	<0.555 UJ	<0.700 UJ	<0.610 UJ	<1.87 UJ	<0.525 UJ	<0.505 UJ	<0.685 UJ	<1.69 UJ
U4-MW-13I	1/12/2023	N	EM05	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	236	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13I	2/14/2023	N	EM06	UMCf	77.1 - 87.1	0.558 J	<0.590	<0.640	<0.680	<0.645	<3.03	<0.640	<0.580	<0.960	373	<4.80	<0.630	<0.555	<0.700	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-13I	3/16/2023	N	EM07	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	133	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13I	4/19/2023	N	EM08	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	34.8 J+	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13I	5/17/2023	N	EM09	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	38.0	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13I	6/15/2023	N	EM10	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	46.7	<0.960	<0.126	<0.111	<0.140	<0.122 UJ	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-13I	7/12/2023	N	EM11	UMCf	77.1 - 87.1	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	44.3	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-14D	4/13/2022	N	BL02	UMCf	97.3 - 107.3	<0.0941	<0.118	<0.128	0.920 J	0.628 J	<0.605	0.805 J	<0.116	<0.192	110 J	<0.960	<0.126	<0.111	0.561 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-14D	12/6/2022	N	EM04	UMCf	97.3 - 107.3	<0.471 UJ	<0.590 UJ	<0.640 UJ	1.17 J	<0.645 UJ	<3.03 UJ	1.27 J	<0.580 UJ	<0.960 UJ	287	<4.80 UJ	<0.630 UJ	<0.555 UJ	0.751 J	<0.610 UJ	<1.87 UJ	<0.525 UJ	<0.505 UJ	<0.685 UJ	<1.69 UJ
U4-MW-14D	3/16/2023	N	EM07	UMCf	97.3 - 107.3	<0.471	<0.590	<0.640	<0.680	<0.645	<3.03	<0.640	<0.580	<0.960	217 J+	<4.80	<0.630	<0.555	<0.700	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-14D	6/15/2023	N	EM10	UMCf	97.3 - 107.3	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	147	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-14I	4/14/2022	N	BL02	UMCf	77.3 - 87.3	<0.0941	<0.118	<0.128	0.557 J	0.536 J	<0.605	0.537 J	<0.116	<0.192	157	<0.960	<0.126	<0.111	0.471 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-14I	12/6/2022	N	EM04	UMCf	77.3 - 87.3	<0.471 UJ	<0.590 UJ	<0.640 UJ	<0.680 UJ	<0.645 UJ	<3.03 UJ	1.27 J	<0.580 UJ	<0.960 UJ	212	<4.80 UJ	<0.630 UJ	<0.555 UJ	<0.700 UJ	<0.610 UJ	<1.87 UJ	<0.525 UJ	<0.505 UJ	<0.685 UJ	<1.69 UJ
U4-MW-14I	3/16/2023	N	EM07	UMCf	77.3 - 87.3	<0.471	<0.590	<0.640	<0.680	<0.645	<3.03	<0.640	<0.580	<0.960	229 J+	<4.80	<0.630	<0.555	<0.700	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-MW-14I	6/15/2023	N	EM10	UMCf	77.3 - 87.3	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	133	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15D	4/13/2022	N	BL02	UMCf	96.0 - 106.0	<0.0941	<0.118	<0.128	0.402 J	<0.129	<0.605	<0.128	<0.116	<0.192	407 J+	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15D	12/5/2022	N	EM04	UMCf	96.0 - 106.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	165	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15D	3/20/2023	N	EM07	UMCf	96.0 - 106.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	114	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15D	6/14/2023	N	EM10	UMCf	96.0 - 106.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	298	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15DD	4/13/2022	N	BL02	UMCf	120.3 - 130.3	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	13.2 J+	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15DD	12/5/2022	N	EM04	UMCf	120.3 - 130.3	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.237 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15DD	3/15/2023	N	EM07	UMCf	120.3 - 130.3	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.232 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15DD	6/13/2023	N	EM10	UMCf	120.3 - 130.3	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.336 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15I	4/12/2022	N	BL02	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	0.609 J	0.428 J	<0.605	0.809 J	<0.116	<0.192	705	<0.960	<0.126	<0.111	0.447 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15I	12/5/2022	N	EM04	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	0.582 J	<0.129	<0.605	0.371 J	<0.116	<0.192	758	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15I	3/17/2023	N	EM07	UMCf	76.8 - 86.8	<1.88	<2.36	<2.56	<2.72	<2.58	<12.1	<2.56	<2.32	<3.84	47.6 J	<19.2	<2.52	<2.22	<2.80	<2.44	<7.48	<2.10	<2.02	<2.74	<6.74
U4-MW-15I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	4.51 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15S	4/13/2022	N	BL02	UMCf	54.8 - 64.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	9.07 J+	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-15S	12/5/2022	N	EM04	UMCf	54.8 - 64.8	<2.35	<2.95	<3.20	<3.40	<3.22	<15.1	<3.20	<2.90	<4.80	8.04 J	<24.0	<3.15	<2.78	<3.50	<3.05	<9.35	<2.63	<2.53	<3.43	<8.43
U4-MW-15S	3/13/2023	N	EM07	UMCf	54.8 - 64.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	<0.111	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	0.321 J	<0.337
U4-MW-15S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	0.191 J	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16D	4/11/2022	N	BL02	UMCf	96.8 - 106.8	0.261 J	<0.118	<0.128	1.91	0.510 J	<0.605	<0.128	<0.116	<0.192	3,310	<0.960	<0.126	<0.111	0.533 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16D	12/5/2022	N	EM04	UMCf	96.8 - 106.8	<0.0941	<0.118	<0.128	0.840 J	0.281 J	<0.605	0.646 J	<0.116	<0.192	2,020	<0.960	<0.126	<0.111	0.216 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16D	3/14/2023	N	EM07	UMCf	96.8 - 106.8	<0.0941	<0.118	<0.128	0.443 J	<0.129	<0.605	<0.128	<0.116	<0.192	1,290	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16D	6/13/2023	N	EM10	UMCf	96.8 - 106.8	<0.0941	<0.118	<0.128	1.36	0.366 J	<0.605	<0.128	<0.116	<0.192	3,560	<0.960	<0.126	<0.111	0.315 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16DD	4/12/2022	N	BL02	UMCf	120.8 - 130.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	0.369 J	<0.116	<0.192	121	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16DD	12/5/2022	N	EM04	UMCf	120.8 - 130.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	43.7	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16DD	3/15/2023	N	EM07	UMCf	120.8 - 130.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	34.8 J+	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16DD	6/13/2023	N	EM10	UMCf	120.8 - 130.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	26.8	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16I	4/11/2022	N	BL02	UMCf	77.0 - 87.0	0.186 J	<0.118	<0.128	0.794 J	0.154 J	<0.605	<0.128	<0.116	<0.192	424	<0.960	<0.126	<0.111	0.256 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16I	12/5/2022	N	EM04	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	7.96	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16I	12/5/2022	FD	EM04	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	8.00	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16I	3/13/2023	N	EM07	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	<0.111	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16I	3/13/2023	FD	EM07	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	<0.111	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16I	6/12/2023	N	EM10	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	<0.111	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16I	6/12/2023	FD	EM10	UMCf	77.0 - 87.0	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	<0.111	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16S	4/12/2022	N	BL02	UMCf	54.8 - 64.8	<0.0941	<0.118	<0.128	0.323 J	<0.129	<0.605	0.365 J	<0.116	<0.192	12.8	<0.960	<0.126	<0.111	0.363 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16S	4/12/2022	FD	BL02	UMCf	54.8 - 64.8	<0.0941	<0.118	<0.128	0.308 J	<0.129	<0.605	0.346 J	<0.116	<0.192	12.3	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16S	12/6/2022	N	EM04	UMCf	54.8 - 64.8	<0.0941 UJ	<0.118 UJ	<0.128 UJ	0.193 J	<0.129 UJ	<0.605 UJ	<0.128 UJ	<0.116 UJ	<0.192 UJ	7.61	<0.960 UJ	<0.126 UJ	<0.111 UJ	<0.140 UJ	<0.122 UJ	<0.374 UJ	<0.105 UJ	<0.101 UJ	<0.137 UJ	<0.337 UJ
U4-MW-16S	3/15/2023	N	EM07	UMCf	54.8 - 64.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	<0.111	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-MW-16S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	<0.0941	<0.118	<0.128	<0.136	<0.129	<0.605	<0.128	<0.116	<0.192	<0.111	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-SLMW	11/10/2022	N	EM03	N/A	-	<0.471	<0.590	<0.640	1.60 J	<0.645	<3.03	<0.640	<0.580	<0.960	1.75 J	<4.80	<0.630	<0.555	1.52 J	<0.610	<1.87	<0.525	<0.505	<0.685	<1.69
U4-T3	10/13/2022	N	EM02	N/A	-	<0.0941	<0.118	<0.128	4.01	1.87	<0.605	<0.128	<0.116	<0.192	3,720	<0.960	<0.126	<0.111	2.05	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-T3	11/3/2022	N	EM03	N/A	-	<0.0941	<0.118	<0.128	5.54	2.33	<0.605	2.09	<0.116	<0.192	3,460	<0.960	<0.126	<0.111	3.01 J+	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-T3	12/6/2022	N	EM04	N/A	-	<1.88 UJ	<2.36 UJ	<2.56 UJ	3.81 J	<2.58 UJ	<12.1 UJ	6.19 J	<2.32 UJ	<3.84 UJ	2,520	<19.2 UJ	<2.52 UJ	<2.22 UJ	<2.80 UJ	<2.44 UJ	<7.48 UJ	<2.10 UJ	<2.02 UJ	<2.74 UJ	<6.74 UJ

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						Benzene	Bromobenzene	Bromochloro-methane	Bromodichloro methane	Bromoform	Bromomethane	Carbon Tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloro-ethene	cis-1,3-Dichloro-propene	Dibromochloro methane	Dibromo-methane	Dichlorodi-fluoromethane	Diisopropyl Ether (DIPE)	Ethyl Tert-Butyl Ether (ETBE)	Ethylbenzene	Hexachloro-butadiene
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-T3	1/9/2023	N	EM05	N/A	-	<0.0941	<0.118	<0.128	4.50	1.86	<0.605	1.63	<0.116	<0.192	3,390	<0.960	<0.126	<0.111	2.19	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-T3	2/13/2023	N	EM06	N/A	-	<9.41	<11.8	<12.8	<13.6	<12.9	<60.5	<12.8	<11.6	<19.2	3,210	<96.0	<12.6	<11.1	<14.0	<12.2	<37.4	<10.5	<10.1	<13.7	<33.7
U4-T3	3/13/2023	N	EM07	N/A	-	<2.35	<2.95	<3.20	<3.40	<3.22	<15.1	<3.20	<2.90	<4.80	1,410	<24.0	<3.15	<2.78	<3.50	<3.05	<9.35	<2.63	<2.53	<3.43	<8.43
U4-T3	4/19/2023	N	EM08	N/A	-	<0.0941	<0.118	<0.128	1.94	0.640 J	<0.605	0.658 J	<0.116	<0.192	1,150 J+	<0.960	<0.126	<0.111	0.810 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-T3	5/18/2023	N	EM09	N/A	-	<0.0941	<0.118	<0.128	1.87	0.557 J	<0.605	<0.128	<0.116	<0.192	1,750	<0.960	<0.126	<0.111	0.668 J	<0.122	<0.374	<0.105	0.962 J	<0.137	<0.337
U4-T3	6/12/2023	N	EM10	N/A	-	<0.0941	<0.118	<0.128	2.41	0.589 J	<0.605	1.13	<0.116	<0.192	1,720	<0.960	<0.126	<0.111	0.682 J	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337
U4-T3	7/11/2023	N	EM11	N/A	-	<0.0941	<0.118	<0.128	1.91	0.716 J	<0.605	0.657 J	<0.116	<0.192	1,490	<0.960	<0.126	<0.111	<0.140	<0.122	<0.374	<0.105	<0.101	<0.137	<0.337

Notes:
FD - Field duplicate
E - Field instrument error.
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 low.
J+ - The result is an estimated quantity, but the result may be biased high.
N/A - Not Applicable
mg/L - milligrams per liter
µg/L - micrograms per liter
N - Normal field sample

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.

UMCf- Upper Muddy Creek Formation
< - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
-- Not tested.
M-252 damaged/obstructed when checked on June 14, 2023 for EM10.

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						Isopropyl-benzene	m,p-Xylene (Sum of Isomers)	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Cymene (p-Isopropylto-luene)	sec-Butylbenzene	Styrene	tert-Amyl Methyl Ether	tert-Butyl Alcohol	tert-Butyl Methyl Ether (MTBE)	tert-Butylbenzene	Tetrachloroeth ene (PCE)	Toluene	trans-1,2-Dichloro-ethene	trans-1,3-Dichloro-propene	Trichloro-ethene (TCE)	Trichlorofluor-omethane
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
M-247-100	4/20/2022	N	BL02	UMCf	100.5 - 110.5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-249-100	4/20/2022	N	BL02	UMCf	99.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-251-100	4/19/2022	N	BL02	UMCf	92.5 - 102.5	<0.105	<0.430	1.11 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.907 J	<0.160
M-251-100	10/13/2022	N	EM02	UMCf	92.5 - 102.5	<0.105	<0.430	0.845 J	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	12.5 J+	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.557 J	<0.160
M-251-100	11/2/2022	N	EM03	UMCf	92.5 - 102.5	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
M-251-100	12/8/2022	N	EM04	UMCf	92.5 - 102.5	<0.105	<0.430	0.576 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.528 J	<0.160
M-251-100	1/11/2023	N	EM05	UMCf	92.5 - 102.5	<0.105	<0.430	0.536 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.462 J	<0.160
M-251-100	2/13/2023	N	EM06	UMCf	92.5 - 102.5	<0.105	<0.430	0.475 J	<1.00	<0.157 UJ	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.241 J	<0.160
M-251-100	3/17/2023	N	EM07	UMCf	92.5 - 102.5	<5.25	<21.5	<21.5	<50.0 UJ	<7.85	<4.97	<8.70	<6.00	<6.25	<5.90	<9.75	<203	<5.05	<6.35	<15.0	<13.9	<7.45	<5.90	<9.50	<8.00
M-251-100	4/21/2023	N	EM08	UMCf	92.5 - 102.5	<0.105	<0.430	0.506 J	<1.00	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.351 J	<0.160
M-251-100	5/9/2023	N	EM09	UMCf	92.5 - 102.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.356 J	<0.160
M-251-100	6/14/2023	N	EM10	UMCf	92.5 - 102.5	<5.25	<21.5	<21.5	<50.0	<7.85	<4.97	<8.70	<6.00	<6.25	<5.90	<9.75	<203	<5.05	<6.35	<15.0	<13.9	<7.45	<5.90	<9.50	<8.00
M-251-100	7/14/2023	N	EM11	UMCf	92.5 - 102.5	<0.105	<0.430	0.443 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	7.40	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.526 J	<0.160 UJ
M-251-60	4/18/2022	N	BL02	UMCf	52.3 - 62.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
M-251-60	3/15/2023	N	EM07	UMCf	52.3 - 62.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
M-251-60	6/14/2023	N	EM10	UMCf	52.3 - 62.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
M-252	4/21/2022	N	BL02	UMCf	132.3 - 142.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.292 J	<0.149	<0.118	<0.190	<0.160
M-252	3/15/2023	N	EM07	UMCf	132.3 - 142.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
M-253-100	4/20/2022	N	BL02	UMCf	100.8 - 110.8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
M-255-100	4/20/2022	N	BL02	UMCf	100.2 - 110.2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-01D	4/18/2022	N	BL02	UMCf	94.7 - 109.7	<0.525	<2.15	<2.15	<5.00	<0.785 UJ	<0.497	<0.870	<0.600	<0.625	<0.590 UJ	<0.975	<20.3 UJ	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-E-01D	3/14/2023	N	EM07	UMCf	94.7 - 109.7	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-01I	4/19/2022	N	BL02	UMCf	74.6 - 89.6	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	6.58	<0.101	<0.127	<0.300	0.471 J	<0.149	<0.118	<0.190	<0.160
U4-E-01I	4/19/2022	FD	BL02	UMCf	74.6 - 89.6	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.05	<0.101	<0.127	<0.300	0.330 J	<0.149	<0.118	<0.190	<0.160
U4-E-01I	3/14/2023	N	EM07	UMCf	74.6 - 89.6	<0.105	<0.430	0.461 J	<20.0	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-01I	4/20/2023	N	EM08	UMCf	74.6 - 89.6	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-01I	5/10/2023	N	EM09	UMCf	74.6 - 89.6	<0.105	<0.430	0.999 J	<1.00	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-01I	6/12/2023	N	EM10	UMCf	74.6 - 89.6	<0.105	<0.430	2.63 J	<25.0	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.307 J	<0.160
U4-E-01I	7/11/2023	N	EM11	UMCf	74.6 - 89.6	<0.525	<2.15	3.49 J	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	10.1	<1.39	<0.745	<0.590	<0.950	<0.800
U4-E-02D	4/20/2022	N	BL02	UMCf	94.4 - 109.4	<0.105	<0.430	0.478 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.644 J	<0.149	<0.118	<0.190	<0.160
U4-E-02D	3/14/2023	N	EM07	UMCf	94.4 - 109.4	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-02I	4/18/2022	N	BL02	UMCf	74.4 - 89.4	<0.105	<0.430 UJ	<0.430	<1.00 UJ	<0.157 UJ	<0.0993 UJ	<0.174 UJ	<0.120	<0.125 UJ	<0.118 R	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.260 J	<0.160
U4-E-02I	3/14/2023	N	EM07	UMCf	74.4 - 89.4	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-02I	4/20/2023	N	EM08	UMCf	74.4 - 89.4	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-02I	5/11/2023	N	EM09	UMCf	74.4 - 89.4	<0.105	<0.430	0.970 J	<1.00	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-02I	6/12/2023	N	EM10	UMCf	74.4 - 89.4	<0.105	<0.430	6.89	<10.0	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-02I	7/11/2023	N	EM11	UMCf	74.4 - 89.4	<0.105	<0.430	4.58 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-03D	4/19/2022	N	BL02	UMCf	95.1 - 110.1	<0.105	<0.430	0.797 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	6.74	<0.101	<0.127	<0.300	0.333 J	<0.149	<0.118	0.609 J	<0.160
U4-E-03D	10/13/2022	N	EM02	UMCf	95.1 - 110.1	<21.0	<86.0	<86.0	<200 UJ	<31.4	<19.9	<34.8	<24.0	<25.0	<23.6	<39.0	<812	<20.2	<25.4	<60.0	<55.6	<29.8	<23.6	<38.0	<32.0
U4-E-03D	11/3/2022	N	EM03	UMCf	95.1 - 110.1	<0.105	<0.430	0.543 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.494 J	<0.278	<0.149	<0.118	0.753 J	<0.160
U4-E-03D	12/6/2022	N	EM04	UMCf	95.1 - 110.1	<2.10 UJ	<8.60 UJ	<8.60 UJ	<20.0 UJ	<3.14 UJ	<1.99 UJ	<3.48 UJ	<2.40 UJ	<2.50 UJ	<2.36 UJ	<3.90 UJ	<81.2 UJ	<2.02 UJ	<2.54 UJ	<6.00 UJ	<5.56 UJ	<2.98 UJ	<2.36 UJ	<3.80 UJ	<3.20 UJ
U4-E-03D	1/9/2023	N	EM05	UMCf	95.1 - 110.1	<0.105	<0.430	0.516 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.342 J	<0.278	<0.149	<0.118	0.602 J	<0.160
U4-E-03D	2/13/2023	N	EM06	UMCf	95.1 - 110.1	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-E-03D	3/13/2023	N	EM07	UMCf	95.1 - 110.1	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-E-03D	3/14/2023	N	EM07	UMCf	95.1 - 110.1	<21.0	<86.0	<86.0	<200	<31.4	<19.9	<34.8	<24.0	<25.0	<23.6	<39.0	<812	<20.2	<25.4	<60.0	<55.6	<29.8	<23.6	<38.0	<32.0
U4-E-03D	4/19/2023	N	EM08	UMCf	95.1 - 110.1	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-E-03D	5/11/2023	N	EM09	UMCf	95.1 - 110.1	<0.105	<0.430	2.04 J	<1.00	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.384 J	<0.160
U4-E-03D	6/12/2023	N	EM10	UMCf	95.1 - 110.1	<0.105	<0.430	2.05 J	<100	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	4.43 J	<0.101	<0.127	0.379 J	<0.278	<0.149	<0.118	0.638 J	<0.160
U4-E-03D	7/11/2023	N	EM11	UMCf	95.1 - 110.1	<0.105	<0.430	2.69 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.607 J	<0.160
U4-E-04D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.71	<0.101	<0.127	<0.300	0.341 J	<0.149	<0.118	0.460 J	<0.160
U4-E-04D	3/14/2023	N	EM07	UMCf	95.0 - 110.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-04I	4/18/2022	N	BL02	UMCf	75.0 - 90.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	4.31 J	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-04I	3/14/2023	N	EM07	UMCf	75.0 - 90.0	<5.25	<21.5	<21.5	<50.0	<7.85	<4.97	<8.70	<6.00	<6.25	<5.90	<9.75	<203	<5.05	<6.35	<15.0	<13.9	<7.45	<5.90	<9.50	<8.00
U4-E-05D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.513 J	<0.149	<0.118	0.429 J	<0.160
U4-E-05D	3/16/2023	N	EM07	UMCf	95.0 - 110.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-05I	4/19/2022	N	BL02	UMCf	75.0 - 90.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-05I	3/15/2023	N	EM07	UMCf	75.0 - 90.0	<0.105 UJ	<0.430 UJ	<0.430 UJ	<1.00 UJ	<0.157 UJ	<0.0993 UJ	<0.174 UJ	<0.120 UJ	<0.125 UJ	<0.118 UJ	<0.195 UJ	<4.06 UJ	<0.101 UJ	<0.127 UJ	<0.300 UJ	<0.278 UJ	<0.149 UJ	<0.118 UJ	<0.190 UJ	<0.160 UJ
U4-E-06D	4/11/2022	N	BL02	UMCf	95.1 - 110.1	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118 R	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-06I	4/11/2022	N	BL02	UMCf	73.2 - 88.2	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-06I	4/11/2022	FD	BL02	UMCf	73.2 - 88.2	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-E-06I	10/12/2022	N	EM02	UMCf	73.2 - 88.2	<0.105	<0.430	0.976 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.450 J	<0.278	<0.149	<0.118	0.514 J	<0.160
U4-E-06I	11/3/2022	N	EM03	UMCf	73.2 - 88.2	<0.105	<0.430	2.60 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.389 J	<0.278	<0.149	<0.118	0.394 J	<0.160
U4-E-06I	12/6/2022	N	EM04	UMCf	73.2 - 88.2	<1.05 UJ	<4.30 UJ	6.34 J	<10.0 UJ	<1.57 UJ	<0.993 UJ	<1.74 UJ	<1.20 UJ	<1.25 UJ	<1.18 UJ	<1.95 UJ	<40.6 UJ	<1.01 UJ	<1.27 UJ	<3.00 UJ	<2.78 UJ	<1.49 UJ	<1.18 UJ	<1.90 UJ	<1.60 UJ
U4-E-06I	1/9/2023	N	EM05	UMCf	73.2 - 88.2	<0.105	<0.430	2.99 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.300 J	<0.278	<0.149	<0.118	0.429 J	<0.160
U4-E-06I	2/13/2023	N	EM06	UMCf	73.2 - 88.2	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-E-06I	3/13/2023	N	EM07	UMCf	73.2 - 88.2	<2.10	<8.60	<8.60	<20.0	<3.14	<1.99	<3.48	<2.40	<2.50	<2.36	<3.90	<81.2	<2.02	<2.54	<6.00	<5.56	<2.98	<2.36	<3.80	<3.20
U4-E-06I	4/17/2023	N	EM08	UMCf	73.2 - 88.2	<2.10	<8.60	<8.60	<20.0	<3.14	<1.99	<3.48	<2.40	<2.50	<2.36	<3.90	<81.2	<2.02	<2.54	<6.00	<5.56	<2.98	<2.36	<3.80	<3.20
U4-E-06I	5/15/2023	N	EM09	UMCf	73.2 - 88.2	<2.63	<10.7	<10.7	<25.0	<3.93	<2.48	<4.35	<3.00	<3.13	<2.95	<4.88	<102	<2.53	<3.18	<7.50	<6.95	<3.73	<2.95	<4.75	<4.00
U4-E-06I	6/12/2023	N	EM10	UMCf	73.2 - 88.2	<0.105	<0.430	1.87 J	<100	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	15.6 J+	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.629 J	<0.160
U4-E-06I	7/11/2023	N	EM11	UMCf	73.2 - 88.2	<0.105	<0.430	1.96 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.512 J	<0.160
U4-E-07D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	<0.105	<0.430	0.637 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	4.41 J	<0.101	<0.127	<0.300	3.53	<0.149	<0.118	0.745 J	<0.160
U4-E-07I	4/12/2022	N	BL02	UMCf	74.7 - 89.7	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	13.0	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.259 J	<0.160
U4-E-07I	10/11/2022	N	EM02	UMCf	74.7 - 89.7	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-E-07I	11/3/2022	N	EM03	UMCf	74.7 - 89.7	<0.105	<0.430	2.44 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.397 J	<0.278	<0.149	<0.118	0.652 J	<0.160
U4-E-07I	12/6/2022	N	EM04	UMCf	74.7 - 89.7	<2.63 UJ	<10.7 UJ	<10.7 UJ	<25.0 UJ	<3.93 UJ	<2.48 UJ	<4.35 UJ	<3.00 UJ	<3.13 UJ	<2.95 UJ	<4.88 UJ	<102 UJ	<2.53 UJ	<3.18 UJ	<7.50 UJ	<6.95 UJ	<3.73 UJ	<2.95 UJ	<4.75 UJ	<4.00 UJ
U4-E-07I	1/9/2023	N	EM05	UMCf	74.7 - 89.7	<0.105	<0.430	0.747 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.370 J	<0.278	<0.149	<0.118	0.819 J	<0.160
U4-E-07I	2/13/2023	N	EM06	UMCf	74.7 - 89.7	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-E-07I	3/13/2023	N	EM07	UMCf	74.7 - 89.7	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-E-07I	4/19/2023	N	EM08	UMCf	74.7 - 89.7	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						Isopropyl-benzene	m,p-Xylene (Sum of Isomers)	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Cymene (p-Isopropylto-luene)	sec-Butylbenzene	Styrene	tert-Amyl Methyl Ether	tert-Butyl Alcohol	tert-Butyl Methyl Ether (MTBE)	tert-Butylbenzene	Tetrachloroeth ene (PCE)	Toluene	trans-1,2-Dichloro-ethene	trans-1,3-Dichloro-propene	Trichloro-ethene (TCE)	Trichlorofluor-omethane
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-E-07I	5/15/2023	N	EM09	UMCf	74.7 - 89.7	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-E-07I	6/12/2023	N	EM10	UMCf	74.7 - 89.7	<0.105	<0.430	2.86 J	<100	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	26.7 J+	<0.101	<0.127	0.394 J	<0.278	<0.149	<0.118	0.666 J	<0.160
U4-E-07I	7/11/2023	N	EM11	UMCf	74.7 - 89.7	<0.105	<0.430	3.33 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.307 J	<0.278	<0.149	<0.118	0.512 J	<0.160
U4-E-08D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	<0.105	<0.430	0.819 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.12	<0.101	<0.127	<0.300	1.49	<0.149	<0.118	0.807 J	<0.160
U4-E-08D	10/11/2022	N	EM02	UMCf	94.6 - 109.6	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-E-08D	11/3/2022	N	EM03	UMCf	94.6 - 109.6	<0.105	<0.430	0.540 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.399 J	<0.278	<0.149	<0.118	1.13	<0.160
U4-E-08D	12/6/2022	N	EM04	UMCf	94.6 - 109.6	<2.63 UJ	<10.7 UJ	<10.7 UJ	<25.0 UJ	<3.93 UJ	<2.48 UJ	<4.35 UJ	<3.00 UJ	<3.13 UJ	<2.95 UJ	<4.88 UJ	<102 UJ	<2.53 UJ	<3.18 UJ	<7.50 UJ	<6.95 UJ	<3.73 UJ	<2.95 UJ	<4.75 UJ	<4.00 UJ
U4-E-08D	1/9/2023	N	EM05	UMCf	94.6 - 109.6	<0.105	<0.430	1.08 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.706 J	<0.160
U4-E-08D	2/13/2023	N	EM06	UMCf	94.6 - 109.6	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-E-08D	3/13/2023	N	EM07	UMCf	94.6 - 109.6	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-E-08D	4/19/2023	N	EM08	UMCf	94.6 - 109.6	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-E-08D	5/17/2023	N	EM09	UMCf	94.6 - 109.6	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-E-08D	6/12/2023	N	EM10	UMCf	94.6 - 109.6	<0.105	<0.430	1.40 J	<100	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	58.3 J+	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.522 J	<0.160
U4-E-08D	7/11/2023	N	EM11	UMCf	94.6 - 109.6	<0.105	<0.430	1.19 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.575 J	<0.160
U4-E-09D	4/15/2022	N	BL02	UMCf	94.5 - 109.5	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.672 J	<0.149	<0.118	0.211 J	<0.160
U4-E-09I	4/14/2022	N	BL02	UMCf	74.9 - 89.9	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	0.220 J	<0.120	<0.125	<0.118	<0.195	12.7	<0.101	<0.127	<0.300	0.454 J	<0.149	<0.118	0.223 J	<0.160
U4-E-10D	4/13/2022	N	BL02	UMCf	94.5 - 109.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.235 J	<0.160
U4-E-10I	4/13/2022	N	BL02	UMCf	74.2 - 89.2	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-01D	4/19/2022	N	BL02	UMCf	96.7 - 106.7	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	7.15	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-01D	2/16/2023	N	EM06	UMCf	96.7 - 106.7	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993 UJ	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-01D	3/20/2023	N	EM07	UMCf	96.7 - 106.7	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.204 J	<0.160
U4-MW-01D	6/13/2023	N	EM10	UMCf	96.7 - 106.7	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-01DD	4/19/2022	N	BL02	UMCf	119.9 - 129.9	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-01DD	4/19/2022	FD	BL02	UMCf	119.9 - 129.9	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-01DD	3/15/2023	N	EM07	UMCf	119.9 - 129.9	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-01DD	6/13/2023	N	EM10	UMCf	119.9 - 129.9	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-01I	4/19/2022	N	BL02	UMCf	76.7 - 86.7	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-01I	3/20/2023	N	EM07	UMCf	76.7 - 86.7	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.192 J	<0.160
U4-MW-01I	6/12/2023	N	EM10	UMCf	76.7 - 86.7	<0.105	<0.430	<0.430	<25.0	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	38.4 J+	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-01S	4/18/2022	N	BL02	UMCf	54.7 - 64.7	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-01S	3/15/2023	N	EM07	UMCf	54.7 - 64.7	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-01S	6/13/2023	N	EM10	UMCf	54.7 - 64.7	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-02D	4/14/2022	N	BL02	UMCf	95.0 - 110.0	<0.105	<0.430	1.47 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.42	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.883 J	<0.160
U4-MW-02D	10/11/2022	N	EM02	UMCf	95.0 - 110.0	<0.105	<0.430	1.47 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.459 J	<0.278	<0.149	<0.118	1.23	<0.160
U4-MW-02D	11/1/2022	N	EM03	UMCf	95.0 - 110.0	<5.25	<21.5	<21.5	<50.0	<7.85	<4.97	<8.70	<6.00	<6.25	<5.90	<9.75	<203	<5.05	<6.35	<15.0	<13.9	<7.45	<5.90	<95.0	<8.00
U4-MW-02D	12/7/2022	N	EM04	UMCf	95.0 - 110.0	<0.105	<0.430	1.73 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	14.9	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	1.28	<0.160
U4-MW-02D	1/10/2023	N	EM05	UMCf	95.0 - 110.0	<0.105	<0.430	1.33 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.93	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	1.07	<0.160
U4-MW-02D	2/13/2023	N	EM06	UMCf	95.0 - 110.0	<0.105	<0.430	1.36 J	<1.00	<0.157 UJ	<9.93	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.320 J	<0.278	<0.149	<0.118	1.30	<0.160
U4-MW-02D	3/17/2023	N	EM07	UMCf	95.0 - 110.0	<10.5	<43.0	<43.0	<100 UJ	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-MW-02D	4/19/2023	N	EM08	UMCf	95.0 - 110.0	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-MW-02D	5/9/2023	N	EM09	UMCf	95.0 - 110.0	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	1.21 J	<0.800
U4-MW-02D	6/13/2023	N	EM10	UMCf	95.0 - 110.0	<0.105	<0.430	0.831 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.767 J	<0.160
U4-MW-02D	7/18/2023	N	EM11	UMCf	95.0 - 110.0	<0.105	<0.430	1.16 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	1.02 J	<0.160
U4-MW-02I	4/14/2022	N	BL02	UMCf	75.0 - 90.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.222 J	<0.160
U4-MW-02I	10/11/2022	N	EM02	UMCf	75.0 - 90.0	<0.105	<0.430	0.571 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.429 J	<0.278	<0.149	<0.118	0.414 J	<0.160
U4-MW-02I	11/2/2022	N	EM03	UMCf	75.0 - 90.0	<1.05	<4.30	4.54 J	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-02I	11/2/2022	FD	EM03	UMCf	75.0 - 90.0	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-02I	12/8/2022	N	EM04	UMCf	75.0 - 90.0	0.335 J	<0.430	3.23 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-02I	12/8/2022	FD	EM04	UMCf	75.0 - 90.0	<0.105	<0.430	12.3 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-02I	1/13/2023	N	EM05	UMCf	75.0 - 90.0	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-02I	1/13/2023	FD	EM05	UMCf	75.0 - 90.0	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-02I	2/15/2023	N	EM06	UMCf	75.0 - 90.0	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-02I	2/15/2023	FD	EM06	UMCf	75.0 - 90.0	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-02I	3/17/2023	N	EM07	UMCf	75.0 - 90.0	<21.0	<86.0	<86.0	<200 UJ	<31.4	<19.9	<34.8	<24.0	<25.0	<23.6	<39.0	<812	<20.2	<25.4	<60.0	<55.6	<29.8	<23.6	<38.0	<32.0
U4-MW-02I	3/17/2023	FD	EM07	UMCf	75.0 - 90.0	<21.0	<86.0	<86.0	<200 UJ	<31.4	<19.9	<34.8	<24.0	<25.0	<23.6	<39.0	<812	<20.2	<25.4	<60.0	<55.6	<29.8	<23.6	<38.0	<32.0
U4-MW-02I	4/20/2023	N	EM08	UMCf	75.0 - 90.0	<0.105	<0.430	6.15	<1.00 UJ	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-02I	4/20/2023	FD	EM08	UMCf	75.0 - 90.0	<0.105	<0.430	6.54	<1.00 UJ	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-02I	5/9/2023	N	EM09	UMCf	75.0 - 90.0	<0.105	<0.430	9.93 J+	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-02I	5/9/2023	FD	EM09	UMCf	75.0 - 90.0	<0.105	<0.430	9.73 J+	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-02I	6/12/2023	N	EM10	UMCf	75.0 - 90.0	<0.105	<0.430	6.47	<10.0	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-02I	6/12/2023	FD	EM10	UMCf	75.0 - 90.0	<0.105	<0.430	6.42	<10.0	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-02I	7/18/2023	N	EM11	UMCf	75.0 - 90.0	<0.105	<0.430	1.55 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-02I	7/18/2023	FD	EM11	UMCf	75.0 - 90.0	<0.105	<0.430	2.01 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-03D	4/20/2022	N	BL02	UMCf	96.6 - 106.6	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.74 J	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.208 J	<0.160
U4-MW-03D	2/16/2023	N	EM06	UMCf	96.6 - 106.6	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497 UJ	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<13.9	<0.745	<0.590	<0.950	<0.800
U4-MW-03D	3/16/2023	N	EM07	UMCf	96.6 - 106.6	<2.10	<8.60	<8.60	<20.0	<3.14	<1.99	<3.48	<2.40	<2.50	<2.36	<3.90	<81.2	<2.02	<2.54	<6.00	<5.56	<2.98	<2.36	<3.80	<3.20
U4-MW-03D	3/16/2023	FD	EM07	UMCf	96.6 - 106.6	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-MW-03D	6/15/2023	N	EM10	UMCf	96.6 - 106.6	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118 UJ	<0.190	<0.160
U4-MW-03DD	4/20/2022	N	BL02	UMCf	119.7 - 129.7	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.285 J	<0.149	<0.118	<0.190	<0.160
U4-MW-03DD	3/15/2023	N	EM07	UMCf	119.7 - 129.7	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-03DD	6/15/2023	N	EM10	UMCf	119.7 - 129.7	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118 UJ	<0.190	<0.160
U4-MW-03I	4/19/2022	N	BL02	UMCf	76.6 - 86.6	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	4.28 J	<0.101	<0.127	<0.300	0.798 J	<0.149	<0.118	<0.190	<0.160
U4-MW-03I	3/15/2023	N	EM07	UMCf	76.6 - 86.6	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-03I	6/14/2023	N	EM10	UMCf	76.6 - 86.6	<2.10	<8.60	<8.60	<20.0	<3.14	<1.99	<3.48	<2.40	<2.50	<2.36	<3.90	<81.2	<2.02	<2.54	<6.00	<5.56	<2.98	<2.36	<3.80	<3.20
U4-MW-03I	6/14/2023	FD	EM10	UMCf	76.6 - 86.6	<2.63	<10.7	<10.7	<25.0	<3.93	<2.48	<4.35	<3.00	<3.13	<2.95	<4.88	<102	<2.53	<3.18	<7.50	<6.95	<3.73	<2.95	<4.75	<4.00
U4-MW-03S	4/18/2022	N	BL02	UMCf	54.5 - 64.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-03S	4/18/2022	FD	BL02	UMCf	54.5 - 64.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-03S	3/15/2023	N	EM07	UMCf	54.5 - 64.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-03S	6/15/2023	N	EM10	UMCf	54.5 - 64.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118 UJ	<0.190	<0.160

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																	
						Isopropyl-benzene	m,p-Xylene (Sum of Isomers)	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Cymene (p-Isopropylto-luene)	sec-Butylbenzene	Styrene	tert-Amyl Methyl Ether	tert-Butyl Alcohol	tert-Butyl Methyl Ether (MTBE)	tert-Butylbenzene	Tetrachloroeth ene (PCE)	Toluene	trans-1,2-Dichloro-ethene	trans-1,3-Dichloro-propene	Trichloro-ethene (TCE)	Trichlorofluor-omethane
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-04D	4/19/2022	N	BL02	UMCf	97.0 - 107.0	<0.105	<0.430	0.856 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.59	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.805 J	<0.160
U4-MW-04D	2/16/2023	N	EM06	UMCf	97.0 - 107.0	<5.25	<21.5	<21.5	<50.0	<7.85	<4.97 UJ	<8.70	<6.00	<6.25	<5.90	<9.75	<203	<5.05	<6.35	<15.0	<13.9	<7.45	<5.90	<9.50	<8.00
U4-MW-04D	3/21/2023	N	EM07	UMCf	97.0 - 107.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-04D	6/14/2023	N	EM10	UMCf	97.0 - 107.0	<0.105	<0.430	0.479 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-04I	4/19/2022	N	BL02	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	10.8	<0.101	<0.127	<0.300	0.375 J	<0.149	<0.118	0.225 J	<0.160
U4-MW-04I	3/20/2023	N	EM07	UMCf	76.8 - 86.8	<0.105	<0.430	0.491 J	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.315 J	<0.160
U4-MW-04I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-MW-05D	4/15/2022	N	BL02	UMCf	98.2 - 108.2	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.920 J	<0.160
U4-MW-05D	10/13/2022	N	EM02	UMCf	98.2 - 108.2	<10.5	<43.0	<43.0	<100 UJ	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-MW-05D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	<0.105	<0.430	0.767 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.421 J	<0.160
U4-MW-05D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	<0.105	<0.430	0.757 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	6.34	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.543 J	<0.160
U4-MW-05D	1/11/2023	N	EM05	UMCf	98.2 - 108.2	<0.105	<0.430	0.566 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.492 J	<0.160
U4-MW-05D	2/14/2023	N	EM06	UMCf	98.2 - 108.2	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-MW-05D	3/16/2023	N	EM07	UMCf	98.2 - 108.2	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-MW-05D	4/20/2023	N	EM08	UMCf	98.2 - 108.2	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.241 J	<0.160
U4-MW-05D	5/10/2023	N	EM09	UMCf	98.2 - 108.2	<0.105	<0.430	4.02 J	<1.00	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.216 J	<0.160
U4-MW-05D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	<0.105	<0.430	7.82	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118 UJ	<0.190	<0.160
U4-MW-05D	7/18/2023	N	EM11	UMCf	98.2 - 108.2	<0.105	<0.430	6.87	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-05I	4/15/2022	N	BL02	UMCf	76.6 - 86.6	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.500 J	<0.160
U4-MW-05I	10/13/2022	N	EM02	UMCf	76.6 - 86.6	<10.5	<43.0	<43.0	<100 UJ	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-MW-05I	11/3/2022	N	EM03	UMCf	76.6 - 86.6	<0.105	<0.430	0.570 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.354 J	<0.278	<0.149	<0.118	0.797 J	<0.160
U4-MW-05I	12/8/2022	N	EM04	UMCf	76.6 - 86.6	<0.105	<0.430	0.635 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.693 J	<0.160
U4-MW-05I	1/11/2023	N	EM05	UMCf	76.6 - 86.6	<0.105	<0.430	0.474 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.331 J	<0.278	<0.149	<0.118	0.592 J	<0.160
U4-MW-05I	2/14/2023	N	EM06	UMCf	76.6 - 86.6	<10.5	<43.0	<43.0	<100	<15.7	<9.93 UJ	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-MW-05I	3/14/2023	N	EM07	UMCf	76.6 - 86.6	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-MW-05I	4/21/2023	N	EM08	UMCf	76.6 - 86.6	<0.105	<0.430	0.722 J	<1.00	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-05I	5/10/2023	N	EM09	UMCf	76.6 - 86.6	<0.105	<0.430	32.9	<1.00	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-05I	6/15/2023	N	EM10	UMCf	76.6 - 86.6	<0.105	<0.430	17.1	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118 UJ	<0.190	<0.160
U4-MW-05I	7/17/2023	N	EM11	UMCf	76.6 - 86.6	<0.105	<0.430	10.5	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-06D	4/19/2022	N	BL02	UMCf	97.1 - 107.1	<0.105	<0.430	1.58 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.524 J	<0.160
U4-MW-06D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	<5.25	<21.5	<21.5	<50.0 UJ	<7.85	<4.97	<8.70	<6.00	<6.25	<5.90	<9.75 UJ	<203	<5.05	<6.35	<15.0	<13.9	<7.45	<5.90	<9.50	<8.00
U4-MW-06D	3/21/2023	N	EM07	UMCf	97.1 - 107.1	<0.105	<0.430	0.567 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-06D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	<0.105	<0.430	0.542 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<9.50	<0.160
U4-MW-06I	4/19/2022	N	BL02	UMCf	76.5 - 86.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.332 J	<0.149	<0.118	<0.190	<0.160
U4-MW-06I	3/14/2023	N	EM07	UMCf	76.5 - 86.5	<0.105	<0.430	0.560 J	<50.0	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.95 J+	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.369 J	<0.160
U4-MW-06I	6/16/2023	N	EM10	UMCf	76.5 - 86.5	<0.105	<0.430	1.28 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<9.50	<0.160
U4-MW-07D	4/15/2022	N	BL02	UMCf	96.8 - 106.5	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.04 J	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.191 J	<0.160
U4-MW-07D	10/12/2022	N	EM02	UMCf	96.8 - 106.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	0.181 J	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.557 J	<0.149	<0.118	<0.190	<0.160
U4-MW-07D	10/12/2022	FD	EM02	UMCf	96.8 - 106.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.576 J	<0.149	<0.118	<0.190	<0.160
U4-MW-07D	11/3/2022	N	EM03	UMCf	96.8 - 106.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07D	12/7/2022	N	EM04	UMCf	96.8 - 106.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07D	1/11/2023	N	EM05	UMCf	96.8 - 106.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07D	2/14/2023	N	EM06	UMCf	96.8 - 106.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07D	3/16/2023	N	EM07	UMCf	96.8 - 106.5	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07D	4/21/2023	N	EM08	UMCf	96.8 - 106.5	<0.105	<0.430	1.37 J	<1.00	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07D	5/11/2023	N	EM09	UMCf	96.8 - 106.5	<0.105	<0.430	11.0	<1.00	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07D	6/13/2023	N	EM10	UMCf	96.8 - 106.5	<0.105 UJ	<0.430 UJ	2.86 J	<1.00 UJ	<0.157 UJ	<0.0993 UJ	<0.174 UJ	<0.120 UJ	<0.125 UJ	<0.118 UJ	<0.195 UJ	<4.06 UJ	<0.101 UJ	<0.127 UJ	<0.300 UJ	<0.278 UJ	<0.149 UJ	<0.118 UJ	<0.190 UJ	<0.160 UJ
U4-MW-07D	7/17/2023	N	EM11	UMCf	96.8 - 106.5	<0.105	<0.430	3.05 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.288 J	<0.160
U4-MW-07I	4/15/2022	N	BL02	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	<0.105	<0.430	0.478 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.315 J	<0.149	<0.118	<0.190	<0.160
U4-MW-07I	11/3/2022	N	EM03	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07I	1/11/2023	N	EM05	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-MW-07I	4/21/2023	N	EM08	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174 UJ	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07I	5/11/2023	N	EM09	UMCf	76.8 - 86.8	<0.105	<0.430	2.67 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-07I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.525	<2.15	8.82 J	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-MW-07I	7/17/2023	N	EM11	UMCf	76.8 - 86.8	<0.105	<0.430	4.27 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-08D	4/13/2022	N	BL02	UMCf	98.6 - 108.6	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	8.05	<0.101	<0.127	2.63	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-08D	12/7/2022	N	EM04	UMCf	98.6 - 108.6	<0.105	<0.430	0.846 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.670 J	<0.160
U4-MW-08D	3/17/2023	N	EM07	UMCf	98.6 - 108.6	<10.5	<43.0	<43.0	<100 UJ	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-MW-08D	6/13/2023	N	EM10	UMCf	98.6 - 108.6	<0.105	<0.430	4.91 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.584 J	<0.160
U4-MW-08DD	4/20/2022	N	BL02	UMCf	119.8 - 129.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.486 J	<0.149	<0.118	<0.190	<0.160
U4-MW-08DD	4/20/2022	FD	BL02	UMCf	119.8 - 129.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.531 J	<0.149	<0.118	<0.190	<0.160
U4-MW-08DD	12/8/2022	N	EM04	UMCf	119.8 - 129.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-08DD	3/15/2023	N	EM07	UMCf	119.8 - 129.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-08DD	6/14/2023	N	EM10	UMCf	119.8 - 129.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-08I	4/13/2022	N	BL02	UMCf	78.0 - 88.0	<0.105	<0.430	1.14 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	6.37	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.904 J	<0.160
U4-MW-08I	12/7/2022	N	EM04	UMCf	78.0 - 88.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.48	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.466 J	<0.160
U4-MW-08I	12/7/2022	FD	EM04	UMCf	78.0 - 88.0	<0.105	<0.430	0.436 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.489 J	<0.160
U4-MW-08I	3/17/2023	N	EM07	UMCf	78.0 - 88.0	<5.25	<21.5	<21.5	<50.0 UJ	<7.85	<4.97	<8.70	<6.00	<6.25	<5.90	<9.75	<203	<5.05	<6.35	<15.0	<13.9	<7.45	<5.90	<9.50	<8.00
U4-MW-08I	6/13/2023	N	EM10	UMCf	78.0 - 88.0	<0.105	<0.430	1.94 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.329 J	<0.160
U4-MW-08S	4/15/2022	N	BL02	UMCf	54.9 - 64.9	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-08S	12/7/2022	N	EM04	UMCf	54.9 - 64.9	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-08S	12/7/2022	FD	EM04	UMCf	54.9 - 64.9	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-08S	3/13/2023	N	EM07	UMCf	54.9 - 64.9	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-08S	3/13/2023	FD	EM07	UMCf	54.9 - 64.9	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-08S	6/13/2023	N	EM10	UMCf	54.9 - 64.9	<0.105	<0.430	2.53 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																	
						Isopropyl-benzene	m,p-Xylene (Sum of Isomers)	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Cymene (p-Isopropylto-luene)	sec-Butylbenzene	Styrene	tert-Amyl Methyl Ether	tert-Butyl Alcohol	tert-Butyl Methyl Ether (MTBE)	tert-Butylbenzene	Tetrachloroeth ene (PCE)	Toluene	trans-1,2-Dichloro-ethene	trans-1,3-Dichloro-propene	Trichloro-ethene (TCE)	Trichlorofluor-omethane
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-08S	6/13/2023	FD	EM10	UMCf	54.9 - 64.9	<0.105	<0.430	2.59 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-09D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	<0.105	<0.430	0.520 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.195 J	<0.160
U4-MW-09D	12/6/2022	N	EM04	UMCf	96.9 - 106.9	<1.05 UJ	<4.30 UJ	<4.30 UJ	<10.0 UJ	<1.57 UJ	<0.993 UJ	<1.74 UJ	<1.20 UJ	<1.25 UJ	<1.18 UJ	<1.95 UJ	<40.6 UJ	<1.01 UJ	<1.27 UJ	<3.00 UJ	<2.78 UJ	<1.49 UJ	<1.18 UJ	<1.90 UJ	<1.60 UJ
U4-MW-09D	3/16/2023	N	EM07	UMCf	96.9 - 106.9	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-09D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	<0.105	<0.430	14.8	<1.00	<0.157	<0.993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-09DD	4/14/2022	N	BL02	UMCf	119.8 - 129.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-09DD	12/6/2022	N	EM04	UMCf	119.8 - 129.8	<0.105 UJ	<0.430 UJ	<0.430 UJ	<1.00 UJ	<0.157 UJ	<0.0993 UJ	<0.174 UJ	<0.120 UJ	<0.125 UJ	<0.118 UJ	<0.195 UJ	<4.06 UJ	<0.101 UJ	<0.127 UJ	<0.300 UJ	<0.278 UJ	<0.149 UJ	<0.118 UJ	<0.190 UJ	<0.160 UJ
U4-MW-09DD	3/21/2023	N	EM07	UMCf	119.8 - 129.8	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-09DD	6/15/2023	N	EM10	UMCf	119.8 - 129.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-09I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	0.326 J	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	3.30	<0.149	<0.118	<0.190	<0.160
U4-MW-09I	12/6/2022	N	EM04	UMCf	76.8 - 86.8	<1.05 UJ	<4.30 UJ	<4.30 UJ	<10.0 UJ	<1.57 UJ	<0.993 UJ	<1.74 UJ	<1.20 UJ	<1.25 UJ	<1.18 UJ	<1.95 UJ	<40.6 UJ	<1.01 UJ	<1.27 UJ	<3.00 UJ	<2.78 UJ	<1.49 UJ	<1.18 UJ	<1.90 UJ	<1.60 UJ
U4-MW-09I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-09I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.105	<0.430	6.76	<10.0	<0.157	<0.993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-09S	4/14/2022	N	BL02	UMCf	55.3 - 65.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-09S	12/6/2022	N	EM04	UMCf	55.3 - 65.3	<0.105 UJ	<0.430 UJ	<0.430 UJ	<1.00 UJ	<0.157 UJ	<0.0993 UJ	<0.174 UJ	<0.120 UJ	<0.125 UJ	<0.118 UJ	<0.195 UJ	<4.06 UJ	<0.101 UJ	<0.127 UJ	<0.300 UJ	<0.278 UJ	<0.149 UJ	<0.118 UJ	<0.190 UJ	<0.160 UJ
U4-MW-09S	3/17/2023	N	EM07	UMCf	55.3 - 65.3	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-09S	6/15/2023	N	EM10	UMCf	55.3 - 65.3	<0.105	<0.430	1.06 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-10D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-10D	12/5/2022	N	EM04	UMCf	96.9 - 106.9	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-10D	3/17/2023	N	EM07	UMCf	96.9 - 106.9	<0.105	<0.430	1.73 J	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-10D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	<0.105	<0.430	0.683 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-10I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-10I	12/5/2022	N	EM04	UMCf	77.1 - 87.1	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-10I	3/17/2023	N	EM07	UMCf	77.1 - 87.1	<0.105	<0.430	4.66 J	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-10I	6/14/2023	N	EM10	UMCf	77.1 - 87.1	<0.105	<0.430	0.757 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11D	4/15/2022	N	BL02	UMCf	97.4 - 107.4	<0.105	<0.430	0.565 J	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<406	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.873 J	<0.160
U4-MW-11D	9/26/2022	N	EM01	UMCf	97.4 - 107.4	<5.25	<21.5	<21.5	<50.0	<7.85	<4.97	<8.70	<6.00	<6.25	<5.90	<9.75	<203	<5.05	<6.35	<15.0	<13.9	<7.45	<5.90	<9.50	<8.00
U4-MW-11D	10/11/2022	N	EM02	UMCf	97.4 - 107.4	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-11D	11/1/2022	N	EM03	UMCf	97.4 - 107.4	<5.25	<21.5	<21.5	<50.0	<7.85	<4.97	<8.70	<6.00	<6.25	<5.90	<9.75	<203	<5.05	<6.35	<15.0	<13.9	<7.45	<5.90	<9.50	<8.00
U4-MW-11D	12/6/2022	N	EM04	UMCf	97.4 - 107.4	<2.63 UJ	<10.7 UJ	<10.7 UJ	<25.0 UJ	<3.93 UJ	<2.48 UJ	<4.35 UJ	<3.00 UJ	<3.13 UJ	<2.95 UJ	<4.88 UJ	<102 UJ	<2.53 UJ	<3.18 UJ	<7.50 UJ	<6.95 UJ	<3.73 UJ	<2.95 UJ	<4.75 UJ	<4.00 UJ
U4-MW-11D	1/12/2023	N	EM05	UMCf	97.4 - 107.4	<21.0	<86.0	<86.0	<200	<31.4	<19.9	<34.8	<24.0	<25.0	<23.6	<39.0	<812	<20.2	<25.4	<60.0	<55.6	<29.8	<23.6	<38.0	<32.0
U4-MW-11D	2/14/2023	N	EM06	UMCf	97.4 - 107.4	<21.0	<86.0	<86.0	<200	<31.4	<19.9 UJ	<34.8	<24.0	<25.0	<23.6	<39.0	<812	<20.2	<25.4	<60.0	<55.6	<29.8	<23.6	<38.0	<32.0
U4-MW-11D	3/16/2023	N	EM07	UMCf	97.4 - 107.4	<21.0	<86.0	<86.0	<200	<31.4	<19.9	<34.8	<24.0	<25.0	<23.6	<39.0	<812	<20.2	<25.4	<60.0	<55.6	<29.8	<23.6	<38.0	<32.0
U4-MW-11D	4/18/2023	N	EM08	UMCf	97.4 - 107.4	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-MW-11D	5/17/2023	N	EM09	UMCf	97.4 - 107.4	<2.10 UJ	<8.60 UJ	<8.60 UJ	<20.0 UJ	<3.14 UJ	<1.99 UJ	<3.48 UJ	<2.40 UJ	<2.50 UJ	<2.36 UJ	<3.90 UJ	<81.2 UJ	<2.02 UJ	<2.54 UJ	<6.00 UJ	<5.56 UJ	<2.98 UJ	<2.36 UJ	<3.80 UJ	<3.20 UJ
U4-MW-11D	6/16/2023	N	EM10	UMCf	97.4 - 107.4	<0.105	<0.430	1.39 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<9.50	<0.160
U4-MW-11D	7/14/2023	N	EM11	UMCf	97.4 - 107.4	<0.105	<0.430	1.81 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.22	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.875 J	<0.160 UJ
U4-MW-11I	4/14/2022	N	BL02	UMCf	77.0 - 87.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118 R	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.194 J	<0.160
U4-MW-11I	9/26/2022	N	EM01	UMCf	77.0 - 87.0	<0.105	<0.430	0.707 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	9/26/2022	FD	EM01	UMCf	77.0 - 87.0	<0.105	<0.430	0.866 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	10/10/2022	N	EM02	UMCf	77.0 - 87.0	<1.05	<4.30	5.54 J	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	95.7 J	3.30 J	<1.49	<1.18	<1.90	<1.60
U4-MW-11I	10/10/2022	FD	EM02	UMCf	77.0 - 87.0	<0.105	<0.430	2.44 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	1.82 J	<0.278	<0.149	<0.118	0.631 J	<0.160
U4-MW-11I	10/31/2022	N	EM03	UMCf	77.0 - 87.0	<0.525	<2.15	12.9 J	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-MW-11I	10/31/2022	FD	EM03	UMCf	77.0 - 87.0	<0.105	<0.430	14.6	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	12/6/2022	N	EM04	UMCf	77.0 - 87.0	<0.105 UJ	<0.430 UJ	5.79 J+	<1.00 UJ	<0.157 UJ	<0.0993 UJ	<0.174 UJ	<0.120 UJ	<0.125 UJ	<0.118 UJ	<0.195 UJ	<4.06 UJ	<0.101 UJ	<0.127 UJ	<0.300 UJ	<0.278 UJ	<0.149 UJ	<0.118 UJ	<0.190 UJ	<0.160 UJ
U4-MW-11I	12/6/2022	FD	EM04	UMCf	77.0 - 87.0	<0.105 UJ	<0.430 UJ	6.35	<1.00 UJ	<0.157 UJ	<0.0993 UJ	<0.174 UJ	<0.120 UJ	<0.125 UJ	<0.118 UJ	<0.195 UJ	<4.06 UJ	<0.101 UJ	<0.127 UJ	<0.300 UJ	<0.278 UJ	<0.149 UJ	<0.118 UJ	<0.190 UJ	<0.160 UJ
U4-MW-11I	1/12/2023	N	EM05	UMCf	77.0 - 87.0	<0.105	<0.430	0.544 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	1/12/2023	FD	EM05	UMCf	77.0 - 87.0	<0.105	<0.430	0.510 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	2/14/2023	N	EM06	UMCf	77.0 - 87.0	<0.105	<0.430	1.58 J	<1.00	<0.157	<0.0993 UJ	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.472 J	<0.160
U4-MW-11I	2/14/2023	FD	EM06	UMCf	77.0 - 87.0	<0.105	<0.430	1.64 J	<1.00	<0.157	<0.0993 UJ	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.478 J	<0.160
U4-MW-11I	3/16/2023	N	EM07	UMCf	77.0 - 87.0	<0.105	<0.430	2.13 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	3/16/2023	FD	EM07	UMCf	77.0 - 87.0	<0.105	<0.430	2.47 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	4/18/2023	N	EM08	UMCf	77.0 - 87.0	<0.105	<0.430	8.45	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	4/18/2023	FD	EM08	UMCf	77.0 - 87.0	<0.105	<0.430	8.69	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	5/19/2023	N	EM09	UMCf	77.0 - 87.0	<0.105 UJ	<0.430 UJ	3.38 J	<1.00 UJ	<0.157 UJ	<0.0993 UJ	<0.174 UJ	<0.120 UJ	<0.125 UJ	<0.118 UJ	<0.195 UJ	<4.06 UJ	<0.101 UJ	<0.127 UJ	<0.300 UJ	<0.278 UJ	<0.149 UJ	<0.118 UJ	<0.190 UJ	<0.160 UJ
U4-MW-11I	5/19/2023	FD	EM09	UMCf	77.0 - 87.0	<0.105 UJ	<0.430 UJ	3.38 J	<1.00 UJ	<0.157 UJ	<0.0993 UJ	<0.174 UJ	<0.120 UJ	<0.125 UJ	<0.118 UJ	<0.195 UJ	<4.06 UJ	<0.101 UJ	<0.127 UJ	<0.300 UJ	<0.278 UJ	<0.149 UJ	<0.118 UJ	<0.190 UJ	<0.160 UJ
U4-MW-11I	6/15/2023	N	EM10	UMCf	77.0 - 87.0	<0.105	<0.430	1.14 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	6/15/2023	FD	EM10	UMCf	77.0 - 87.0	<0.105	<0.430	1.32 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	7/13/2023	N	EM11	UMCf	77.0 - 87.0	<0.105	<0.430	0.555 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-11I	7/13/2023	FD	EM11	UMCf	77.0 - 87.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-12D	4/15/2022	N	BL02	UMCf	97.1 - 107.1	<0.105	<0.430	0.639 J	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.752 J	<0.160
U4-MW-12D	9/27/2022	N	EM01	UMCf	97.1 - 107.1	<2.10	<8.60	<8.60	<20.0	<3.14	<1.99	<3.48	<2.40	<2.50	<2.36	<3.90	<81.2	<2.02	<2.54	<6.00	<5.56	<2.98	<2.36	<3.80	<3.20
U4-MW-12D	10/12/2022	N	EM02	UMCf	97.1 - 107.1	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.684 J	<0.160
U4-MW-12D	11/2/2022	N	EM03	UMCf	97.1 - 107.1	<1.05	<4.30	<4.30	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-12D	12/7/2022	N	EM04	UMCf	97.1 - 107.1	<0.105	<0.430	1.31 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.741 J	<0.160
U4-MW-12D	1/12/2023	N	EM05	UMCf	97.1 - 107.1	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-MW-12D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	<10.5	<43.0	<43.0	<100 UJ	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5 UJ	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-MW-12D	3/14/2023	N	EM07	UMCf	97.1 - 107.1	<5.25	<21.5	<21.5	<50.0	<7.85	<4.97	<8.70	<6.00	<6.25	<5.90	<9.75	<203	<5.05	<6.35	<15.0	<13.9	<7.45	<5.90	<9.50	<8.00
U4-MW-12D	4/17/2023	N	EM08	UMCf	97.1 - 107.1	<0.525 UJ	<2.15 UJ	<2.15 UJ	<5.00 UJ	<0.785 UJ	<0.497 UJ	<0.870 UJ	<0.600 UJ	<0.625 UJ	<0.590 UJ	<0.975 UJ	<20.3 UJ	<0.505 UJ	<0.635 UJ	<1.50 UJ	<1.39 UJ	<0.745 UJ	<0.590 UJ	<0.950 UJ	<0.800 UJ
U4-MW-12D	5/17/2023	N	EM09	UMCf	97.1 - 107.1	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-MW-12D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	<0.105	<0.430	0.654 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<9.50	<0.160
U4-MW-12D	7/13/2023	N	EM11	UMCf	97.1 - 107.1	<0.105	<0.430	0.698 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.192 J	<0.160
U4-MW-12I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	5.31	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.363 J	<0.160
U4-MW-12I	4/14/2022	FD	BL02	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.314 J	<0.160
U4-MW-12I	9/27/2022	N	EM01	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118 UJ	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-12I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-12I	11/2/2022	N	EM03	UMCf	76.8 - 86.8	<0.105	<0.430	1.52 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-12I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	<0.105	<0.430	4.69 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-12I	12/7/2022	FD	EM04	UMCf	76.8 - 86.8	<0.105	<0.430	4.62 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																	
						Isopropyl-benzene	m,p-Xylene (Sum of Isomers)	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Cymene (p-Isopropylto-luene)	sec-Butylbenzene	Styrene	tert-Amyl Methyl Ether	tert-Butyl Alcohol	tert-Butyl Methyl Ether (MTBE)	tert-Butylbenzene	Tetrachloroeth ene (PCE)	Toluene	trans-1,2-Dichloro-ethene	trans-1,3-Dichloro-propene	Trichloro-ethene (TCE)	Trichlorofluor-omethane
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-MW-12I	1/13/2023	N	EM05	UMCf	76.8 - 86.8	<0.105	<0.430	1.37 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-12I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-12I	3/13/2023	N	EM07	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-12I	4/17/2023	N	EM08	UMCf	76.8 - 86.8	<0.105 UJ	<0.430 UJ	<0.430 UJ	<1.00 UJ	<0.157 UJ	<0.0993 UJ	<0.174 UJ	<0.120 UJ	<0.125 UJ	<0.118 UJ	<0.195 UJ	<4.06 UJ	<0.101 UJ	<0.127 UJ	<0.300 UJ	<0.278 UJ	<0.149 UJ	<0.118 UJ	<0.190 UJ	<0.160 UJ
U4-MW-12I	5/17/2023	N	EM09	UMCf	76.8 - 86.8	<0.105	<0.430	1.17 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-12I	6/16/2023	N	EM10	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-12I	7/11/2023	N	EM11	UMCf	76.8 - 86.8	<0.105	<0.430	1.11 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13D	4/14/2022	N	BL02	UMCf	98.2 - 108.2	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	7.16	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.456 J	<0.160
U4-MW-13D	9/28/2022	N	EM01	UMCf	98.2 - 108.2	<1.05	<4.30	5.02 J	<10.0	<1.57	<0.993	<1.74	<1.20	<1.25	<1.18	<1.95	<40.6	<1.01	<1.27	<3.00	<2.78	<1.49	<1.18	<1.90	<1.60
U4-MW-13D	10/11/2022	N	EM02	UMCf	98.2 - 108.2	<0.105	<0.430	0.543 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	<0.105	<0.430	0.508 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	<0.105	<0.430	0.439 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13D	1/12/2023	N	EM05	UMCf	98.2 - 108.2	<2.10	<8.60	<8.60	<20.0	<3.14	<1.99	<3.48	<2.40	<2.50	<2.36	<3.90	<81.2	<2.02	<2.54	<6.00	<5.56	<2.98	<2.36	<3.80	<3.20
U4-MW-13D	2/15/2023	N	EM06	UMCf	98.2 - 108.2	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195 UJ	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13D	3/17/2023	N	EM07	UMCf	98.2 - 108.2	<2.10	<8.60	<8.60	<20.0 UJ	<3.14	<1.99	<3.48	<2.40	<2.50	<2.36	<3.90	<81.2	<2.02	<2.54	<6.00	<5.56	<2.98	<2.36	<3.80	<3.20
U4-MW-13D	4/18/2023	N	EM08	UMCf	98.2 - 108.2	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13D	5/17/2023	N	EM09	UMCf	98.2 - 108.2	<2.10	<8.60	<8.60	<20.0	<3.14	<1.99	<3.48	<2.40	<2.50	<2.36	<3.90	<81.2	<2.02	<2.54	<6.00	<5.56	<2.98	<2.36	<3.80	<3.20
U4-MW-13D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	<0.105	<0.430	1.22 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13D	7/12/2023	N	EM11	UMCf	98.2 - 108.2	<0.105	<0.430	2.99 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	4.13 J	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.291 J	<0.160
U4-MW-13I	9/28/2022	N	EM01	UMCf	77.1 - 87.1	<0.105	<0.430	<0.430	2.01 J	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	0.395 J	<0.149	<0.118	<0.190	<0.160
U4-MW-13I	10/10/2022	N	EM02	UMCf	77.1 - 87.1	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	5.02	0.914 J	<0.149	<0.118	1.49	<0.160
U4-MW-13I	11/3/2022	N	EM03	UMCf	77.1 - 87.1	<0.105	<0.430	0.573 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13I	12/6/2022	N	EM04	UMCf	77.1 - 87.1	<0.525 UJ	<2.15 UJ	7.70 J	<5.00 UJ	<0.785 UJ	<0.497 UJ	<0.870 UJ	<0.600 UJ	<0.625 UJ	<0.590 UJ	<0.975 UJ	<20.3 UJ	<0.505 UJ	<0.635 UJ	<1.50 UJ	<1.39 UJ	<0.745 UJ	<0.590 UJ	<0.950 UJ	<0.800 UJ
U4-MW-13I	1/12/2023	N	EM05	UMCf	77.1 - 87.1	<0.105	<0.430	1.03 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13I	2/14/2023	N	EM06	UMCf	77.1 - 87.1	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497 UJ	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-MW-13I	3/16/2023	N	EM07	UMCf	77.1 - 87.1	<0.105	<0.430	0.861 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13I	4/19/2023	N	EM08	UMCf	77.1 - 87.1	<0.105	<0.430	0.905 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13I	5/17/2023	N	EM09	UMCf	77.1 - 87.1	<0.105	<0.430	0.645 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-13I	6/15/2023	N	EM10	UMCf	77.1 - 87.1	<0.105	<0.430	0.433 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118 UJ	<0.190	<0.160
U4-MW-13I	7/12/2023	N	EM11	UMCf	77.1 - 87.1	<0.105	<0.430	0.610 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-14D	4/13/2022	N	BL02	UMCf	97.3 - 107.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.295 J	<0.160
U4-MW-14D	12/6/2022	N	EM04	UMCf	97.3 - 107.3	<0.525 UJ	<2.15 UJ	<2.15 UJ	<5.00 UJ	<0.785 UJ	<0.497 UJ	<0.870 UJ	<0.600 UJ	<0.625 UJ	<0.590 UJ	<0.975 UJ	<20.3 UJ	<0.505 UJ	<0.635 UJ	<1.50 UJ	<1.39 UJ	<0.745 UJ	<0.590 UJ	<0.950 UJ	<0.800 UJ
U4-MW-14D	3/16/2023	N	EM07	UMCf	97.3 - 107.3	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-MW-14D	6/15/2023	N	EM10	UMCf	97.3 - 107.3	<0.105	<0.430	0.531 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-14I	4/14/2022	N	BL02	UMCf	77.3 - 87.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	6.75	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-14I	12/6/2022	N	EM04	UMCf	77.3 - 87.3	<0.525 UJ	<2.15 UJ	<2.15 UJ	<5.00 UJ	<0.785 UJ	<0.497 UJ	<0.870 UJ	<0.600 UJ	<0.625 UJ	<0.590 UJ	<0.975 UJ	<20.3 UJ	<0.505 UJ	<0.635 UJ	<1.50 UJ	<1.39 UJ	<0.745 UJ	<0.590 UJ	<0.950 UJ	<0.800 UJ
U4-MW-14I	3/16/2023	N	EM07	UMCf	77.3 - 87.3	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-MW-14I	6/15/2023	N	EM10	UMCf	77.3 - 87.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15D	4/13/2022	N	BL02	UMCf	96.0 - 106.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15D	12/5/2022	N	EM04	UMCf	96.0 - 106.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15D	3/20/2023	N	EM07	UMCf	96.0 - 106.0	<0.105	<0.430	<0.430	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15D	6/14/2023	N	EM10	UMCf	96.0 - 106.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15DD	4/13/2022	N	BL02	UMCf	120.3 - 130.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	4.48 J	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15DD	12/5/2022	N	EM04	UMCf	120.3 - 130.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15DD	3/15/2023	N	EM07	UMCf	120.3 - 130.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15DD	6/13/2023	N	EM10	UMCf	120.3 - 130.3	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15I	4/12/2022	N	BL02	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.215 J	<0.160
U4-MW-15I	12/5/2022	N	EM04	UMCf	76.8 - 86.8	<0.105	<0.430	1.81 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15I	3/17/2023	N	EM07	UMCf	76.8 - 86.8	<2.10	<8.60	<8.60	<20.0 UJ	<3.14	<1.99	<3.48	<2.40	<2.50	<2.36	<3.90	<81.2	<2.02	<2.54	<6.00	<5.56	<2.98	<2.36	<3.80	<3.20
U4-MW-15I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15S	4/13/2022	N	BL02	UMCf	54.8 - 64.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15S	12/5/2022	N	EM04	UMCf	54.8 - 64.8	<2.63	<10.7	<10.7	<25.0	<3.93	<2.48	<4.35	<3.00	<3.13	<2.95	<4.88	<102	<2.53	<3.18	<7.50	<6.95	<3.73	<2.95	<4.75	<4.00
U4-MW-15S	3/13/2023	N	EM07	UMCf	54.8 - 64.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-15S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16D	4/11/2022	N	BL02	UMCf	96.8 - 106.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.534 J	<0.160
U4-MW-16D	12/5/2022	N	EM04	UMCf	96.8 - 106.8	<0.105	<0.430	1.30 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.260 J	<0.160
U4-MW-16D	3/14/2023	N	EM07	UMCf	96.8 - 106.8	<0.105	<0.430	0.576 J	<20.0	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16D	6/13/2023	N	EM10	UMCf	96.8 - 106.8	<0.105	<0.430	0.627 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.418 J	<0.160
U4-MW-16DD	4/12/2022	N	BL02	UMCf	120.8 - 130.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16DD	12/5/2022	N	EM04	UMCf	120.8 - 130.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16DD	3/15/2023	N	EM07	UMCf	120.8 - 130.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16DD	6/13/2023	N	EM10	UMCf	120.8 - 130.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16I	4/11/2022	N	BL02	UMCf	77.0 - 87.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16I	12/5/2022	N	EM04	UMCf	77.0 - 87.0	<0.105	<0.430	5.10	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16I	12/5/2022	FD	EM04	UMCf	77.0 - 87.0	<0.105	<0.430	5.03	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16I	3/13/2023	N	EM07	UMCf	77.0 - 87.0	<0.105	<0.430	0.963 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16I	3/13/2023	FD	EM07	UMCf	77.0 - 87.0	<0.105	<0.430	0.963 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16I	6/12/2023	N	EM10	UMCf	77.0 - 87.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	6.66 J+	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16I	6/12/2023	FD	EM10	UMCf	77.0 - 87.0	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	4.56 J	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16S	4/12/2022	N	BL02	UMCf	54.8 - 64.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16S	4/12/2022	FD	BL02	UMCf	54.8 - 64.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16S	12/6/2022	N	EM04	UMCf	54.8 - 64.8	<0.105 UJ	<0.430 UJ	0.573 J	<1.00 UJ	<0.157 UJ	<0.0993 UJ	<0.174 UJ	<0.120 UJ	<0.125 UJ	<0.118 UJ	<0.195 UJ	<4.06 UJ	<0.101 UJ	<0.127 UJ	<0.300 UJ	<0.278 UJ	<0.149 UJ	<0.118 UJ	<0.190 UJ	<0.160 UJ
U4-MW-16S	3/15/2023	N	EM07	UMCf	54.8 - 64.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-MW-16S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	<0.190	<0.160
U4-SLMW	11/10/2022	N	EM03	N/A	-	<0.525	<2.15	<2.15	<5.00	<0.785	<0.497	<0.870	<0.600	<0.625	<0.590	<0.975	<20.3	<0.505	<0.635	<1.50	<1.39	<0.745	<0.590	<0.950	<0.800
U4-T3	10/13/2022	N	EM02	N/A	-	<0.105	<0.430	0.687 J	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	35.0 J+	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.525 J	<0.160
U4-T3	11/3/2022	N	EM03	N/A	-	<0.105	<0.430	0.879 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.440 J	<0.278	<0.149	<0.118	0.746 J	<0.160
U4-T3	12/6/2022	N	EM04	N/A	-	<2.10 UJ	<8.60 UJ	<8.60 UJ	<20.0 UJ	<3.14 UJ	<1.99 UJ	<3.48 UJ	<2.40 UJ	<2.50 UJ	<2.36 UJ	<3.90 UJ	<81.2 UJ	<2.02 UJ	<2.54 UJ	<6.00 UJ	<5.56 UJ	<2.98 UJ	<2.36 UJ	<3.80 UJ	<3.20 UJ

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B																		
						Isopropyl-benzene	m,p-Xylene (Sum of Isomers)	Methylene Chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Cymene (p-Isopropylto-luene)	sec-Butylbenzene	Styrene	tert-Amyl Methyl Ether	tert-Butyl Alcohol	tert-Butyl Methyl Ether (MTBE)	tert-Butylbenzene	Tetrachloroeth ene (PCE)	Toluene	trans-1,2-Dichloro-ethene	trans-1,3-Dichloro-propene	Trichloro-ethene (TCE)	Trichlorofluor-omethane
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
U4-T3	1/9/2023	N	EM05	N/A	-	<0.105	<0.430	0.864 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	0.353 J	<0.278	<0.149	<0.118	0.584 J	<0.160
U4-T3	2/13/2023	N	EM06	N/A	-	<10.5	<43.0	<43.0	<100	<15.7	<9.93	<17.4	<12.0	<12.5	<11.8	<19.5	<406	<10.1	<12.7	<30.0	<27.8	<14.9	<11.8	<19.0	<16.0
U4-T3	3/13/2023	N	EM07	N/A	-	<2.63	<10.7	<10.7	<25.0	<3.93	<2.48	<4.35	<3.00	<3.13	<2.95	<4.88	<102	<2.53	<3.18	<7.50	<6.95	<3.73	<2.95	<4.75	<4.00
U4-T3	4/19/2023	N	EM08	N/A	-	<0.105	<0.430	<0.430	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.210 J	<0.160
U4-T3	5/18/2023	N	EM09	N/A	-	<0.105	<0.430	1.96 J	<1.00 UJ	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.339 J	<0.160
U4-T3	6/12/2023	N	EM10	N/A	-	<0.105	<0.430	3.51 J	<50.0	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	7.68 J+	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.289 J	<0.160
U4-T3	7/11/2023	N	EM11	N/A	-	<0.105	<0.430	2.84 J	<1.00	<0.157	<0.0993	<0.174	<0.120	<0.125	<0.118	<0.195	<4.06	<0.101	<0.127	<0.300	<0.278	<0.149	<0.118	0.385 J	<0.160

Notes:
FD - Field duplicate
E - Field instrument error.
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 low.
J+ - The result is an estimated quantity, but the result may be biased high.
N/A - Not Applicable
mg/L - milligrams per liter
µg/L - micrograms per liter
N - Normal field sample

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.

UMCf- Upper Muddy Creek Formation
< - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
-- Not tested.
M-252 damaged/obstructed when checked on June 14, 2023 for EM10.

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B		Volatile Fatty Acids by AM23G									
						Vinyl Chloride	Xylenes, Total	3-Methylbutanoic Acid	Acetic Acid	Butyric Acid	Formic Acid	Hexanoic Acid	i-Hexanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid
						µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
M-247-100	4/20/2022	N	BL02	UMCf	100.5 - 110.5	----	----	----	----	----	----	----	----	----	----	----	----
M-249-100	4/20/2022	N	BL02	UMCf	99.6 - 109.6	----	----	----	----	----	----	----	----	----	----	----	----
M-251-100	4/19/2022	N	BL02	UMCf	92.5 - 102.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-251-100	10/13/2022	N	EM02	UMCf	92.5 - 102.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-251-100	11/2/2022	N	EM03	UMCf	92.5 - 102.5	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
M-251-100	12/8/2022	N	EM04	UMCf	92.5 - 102.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-251-100	1/11/2023	N	EM05	UMCf	92.5 - 102.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-251-100	2/13/2023	N	EM06	UMCf	92.5 - 102.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-251-100	3/17/2023	N	EM07	UMCf	92.5 - 102.5	<11.7	<8.70	<6.1 UJ	28 J	<5.8 UJ	630 J	<5.8 UJ	<5.6 UJ	<5.3 UJ	<5.6 UJ	5.6 J	<6.0 UJ
M-251-100	4/21/2023	N	EM08	UMCf	92.5 - 102.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-251-100	5/9/2023	N	EM09	UMCf	92.5 - 102.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-251-100	6/14/2023	N	EM10	UMCf	92.5 - 102.5	<11.7	<8.70	----	----	----	----	----	----	----	----	----	----
M-251-100	7/14/2023	N	EM11	UMCf	92.5 - 102.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-251-60	4/18/2022	N	BL02	UMCf	52.3 - 62.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-251-60	3/15/2023	N	EM07	UMCf	52.3 - 62.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-251-60	6/14/2023	N	EM10	UMCf	52.3 - 62.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-252	4/21/2022	N	BL02	UMCf	132.3 - 142.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-252	3/15/2023	N	EM07	UMCf	132.3 - 142.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
M-253-100	4/20/2022	N	BL02	UMCf	100.8 - 110.8	----	----	----	----	----	----	----	----	----	----	----	----
M-255-100	4/20/2022	N	BL02	UMCf	100.2 - 110.2	----	----	----	----	----	----	----	----	----	----	----	----
U4-E-01D	4/18/2022	N	BL02	UMCf	94.7 - 109.7	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-E-01D	3/14/2023	N	EM07	UMCf	94.7 - 109.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-01I	4/19/2022	N	BL02	UMCf	74.6 - 89.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-01I	4/19/2022	FD	BL02	UMCf	74.6 - 89.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-01I	3/14/2023	N	EM07	UMCf	74.6 - 89.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-01I	4/20/2023	N	EM08	UMCf	74.6 - 89.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-01I	5/10/2023	N	EM09	UMCf	74.6 - 89.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-01I	6/12/2023	N	EM10	UMCf	74.6 - 89.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-01I	7/11/2023	N	EM11	UMCf	74.6 - 89.6	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-E-02D	4/20/2022	N	BL02	UMCf	94.4 - 109.4	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-02D	3/14/2023	N	EM07	UMCf	94.4 - 109.4	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-02I	4/18/2022	N	BL02	UMCf	74.4 - 89.4	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-02I	3/14/2023	N	EM07	UMCf	74.4 - 89.4	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-02I	4/20/2023	N	EM08	UMCf	74.4 - 89.4	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-02I	5/11/2023	N	EM09	UMCf	74.4 - 89.4	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-02I	6/12/2023	N	EM10	UMCf	74.4 - 89.4	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-02I	7/11/2023	N	EM11	UMCf	74.4 - 89.4	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-03D	4/19/2022	N	BL02	UMCf	95.1 - 110.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-03D	10/13/2022	N	EM02	UMCf	95.1 - 110.1	<46.8	<34.8	----	----	----	----	----	----	----	----	----	----
U4-E-03D	11/3/2022	N	EM03	UMCf	95.1 - 110.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-03D	12/6/2022	N	EM04	UMCf	95.1 - 110.1	<4.68 UJ	<3.48 UJ	----	----	----	----	----	----	----	----	----	----
U4-E-03D	1/9/2023	N	EM05	UMCf	95.1 - 110.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-03D	2/13/2023	N	EM06	UMCf	95.1 - 110.1	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-E-03D	3/13/2023	N	EM07	UMCf	95.1 - 110.1	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-E-03D	3/14/2023	N	EM07	UMCf	95.1 - 110.1	<46.8	<34.8	----	----	----	----	----	----	----	----	----	----
U4-E-03D	4/19/2023	N	EM08	UMCf	95.1 - 110.1	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-E-03D	5/11/2023	N	EM09	UMCf	95.1 - 110.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-03D	6/12/2023	N	EM10	UMCf	95.1 - 110.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-03D	7/11/2023	N	EM11	UMCf	95.1 - 110.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-04D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-04D	3/14/2023	N	EM07	UMCf	95.0 - 110.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-04I	4/18/2022	N	BL02	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-04I	3/14/2023	N	EM07	UMCf	75.0 - 90.0	<11.7	<8.70	----	----	----	----	----	----	----	----	----	----
U4-E-05D	4/19/2022	N	BL02	UMCf	95.0 - 110.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-05D	3/16/2023	N	EM07	UMCf	95.0 - 110.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-05I	4/19/2022	N	BL02	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-05I	3/15/2023	N	EM07	UMCf	75.0 - 90.0	<0.234 UJ	<0.174 UJ	----	----	----	----	----	----	----	----	----	----
U4-E-06D	4/11/2022	N	BL02	UMCf	95.1 - 110.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-06I	4/11/2022	N	BL02	UMCf	73.2 - 88.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-06I	4/11/2022	FD	BL02	UMCf	73.2 - 88.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-06I	10/12/2022	N	EM02	UMCf	73.2 - 88.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-06I	11/3/2022	N	EM03	UMCf	73.2 - 88.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-06I	12/6/2022	N	EM04	UMCf	73.2 - 88.2	<2.34 UJ	<1.74 UJ	----	----	----	----	----	----	----	----	----	----
U4-E-06I	1/9/2023	N	EM05	UMCf	73.2 - 88.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-06I	2/13/2023	N	EM06	UMCf	73.2 - 88.2	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-E-06I	3/13/2023	N	EM07	UMCf	73.2 - 88.2	<4.68	<3.48	----	----	----	----	----	----	----	----	----	----
U4-E-06I	4/17/2023	N	EM08	UMCf	73.2 - 88.2	<4.68	<3.48	----	----	----	----	----	----	----	----	----	----
U4-E-06I	5/15/2023	N	EM09	UMCf	73.2 - 88.2	<5.85	<4.35	----	----	----	----	----	----	----	----	----	----
U4-E-06I	6/12/2023	N	EM10	UMCf	73.2 - 88.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-06I	7/11/2023	N	EM11	UMCf	73.2 - 88.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-07D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-07I	4/12/2022	N	BL02	UMCf	74.7 - 89.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-07I	10/11/2022	N	EM02	UMCf	74.7 - 89.7	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-E-07I	11/3/2022	N	EM03	UMCf	74.7 - 89.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-07I	12/6/2022	N	EM04	UMCf	74.7 - 89.7	<5.85 UJ	<4.35 UJ	----	----	----	----	----	----	----	----	----	----
U4-E-07I	1/9/2023	N	EM05	UMCf	74.7 - 89.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-07I	2/13/2023	N	EM06	UMCf	74.7 - 89.7	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-E-07I	3/13/2023	N	EM07	UMCf	74.7 - 89.7	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-E-07I	4/19/2023	N	EM08	UMCf	74.7 - 89.7	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B		Volatile Fatty Acids by AM23G									
						Vinyl Chloride	Xylenes, Total	3-Methylbutanoic Acid	Acetic Acid	Butyric Acid	Formic Acid	Hexanoic Acid	i-Hexanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid
						µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
U4-E-07I	5/15/2023	N	EM09	UMCf	74.7 - 89.7	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-E-07I	6/12/2023	N	EM10	UMCf	74.7 - 89.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-07I	7/11/2023	N	EM11	UMCf	74.7 - 89.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-08D	4/12/2022	N	BL02	UMCf	94.6 - 109.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-08D	10/11/2022	N	EM02	UMCf	94.6 - 109.6	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-E-08D	11/3/2022	N	EM03	UMCf	94.6 - 109.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-08D	12/6/2022	N	EM04	UMCf	94.6 - 109.6	<5.85 UJ	<4.35 UJ	----	----	----	----	----	----	----	----	----	----
U4-E-08D	1/9/2023	N	EM05	UMCf	94.6 - 109.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-08D	2/13/2023	N	EM06	UMCf	94.6 - 109.6	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-E-08D	3/13/2023	N	EM07	UMCf	94.6 - 109.6	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-E-08D	4/19/2023	N	EM08	UMCf	94.6 - 109.6	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-E-08D	5/17/2023	N	EM09	UMCf	94.6 - 109.6	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-E-08D	6/12/2023	N	EM10	UMCf	94.6 - 109.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-08D	7/11/2023	N	EM11	UMCf	94.6 - 109.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-09D	4/15/2022	N	BL02	UMCf	94.5 - 109.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-09I	4/14/2022	N	BL02	UMCf	74.9 - 89.9	<0.234	0.220 J	----	----	----	----	----	----	----	----	----	----
U4-E-10D	4/13/2022	N	BL02	UMCf	94.5 - 109.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-E-10I	4/13/2022	N	BL02	UMCf	74.2 - 89.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01D	4/19/2022	N	BL02	UMCf	96.7 - 106.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01D	2/16/2023	N	EM06	UMCf	96.7 - 106.7	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-01D	3/20/2023	N	EM07	UMCf	96.7 - 106.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01D	6/13/2023	N	EM10	UMCf	96.7 - 106.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01DD	4/19/2022	N	BL02	UMCf	119.9 - 129.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01DD	4/19/2022	FD	BL02	UMCf	119.9 - 129.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01DD	3/15/2023	N	EM07	UMCf	119.9 - 129.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01DD	6/13/2023	N	EM10	UMCf	119.9 - 129.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01I	4/19/2022	N	BL02	UMCf	76.7 - 86.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01I	3/20/2023	N	EM07	UMCf	76.7 - 86.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01I	6/12/2023	N	EM10	UMCf	76.7 - 86.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01S	4/18/2022	N	BL02	UMCf	54.7 - 64.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01S	3/15/2023	N	EM07	UMCf	54.7 - 64.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-01S	6/13/2023	N	EM10	UMCf	54.7 - 64.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	4/14/2022	N	BL02	UMCf	95.0 - 110.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	10/11/2022	N	EM02	UMCf	95.0 - 110.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	11/1/2022	N	EM03	UMCf	95.0 - 110.0	<11.7	<8.70	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	12/7/2022	N	EM04	UMCf	95.0 - 110.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	1/10/2023	N	EM05	UMCf	95.0 - 110.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	2/13/2023	N	EM06	UMCf	95.0 - 110.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	3/17/2023	N	EM07	UMCf	95.0 - 110.0	<23.4	<17.4	<12 UJ	49 J	<12 UJ	1,200 J	<12 UJ	<11 UJ	<11 UJ	<11 UJ	<11 UJ	<12 UJ
U4-MW-02D	4/19/2023	N	EM08	UMCf	95.0 - 110.0	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	5/9/2023	N	EM09	UMCf	95.0 - 110.0	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-MW-02D	6/13/2023	N	EM10	UMCf	95.0 - 110.0	<0.234	<0.174	<12	34 J	<12	1,100 J+	<12	<11	<11	<11	12 J	<12
U4-MW-02D	7/18/2023	N	EM11	UMCf	95.0 - 110.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	4/14/2022	N	BL02	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	10/11/2022	N	EM02	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	11/2/2022	N	EM03	UMCf	75.0 - 90.0	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	11/2/2022	FD	EM03	UMCf	75.0 - 90.0	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	12/8/2022	N	EM04	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	12/8/2022	FD	EM04	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	1/13/2023	N	EM05	UMCf	75.0 - 90.0	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	1/13/2023	FD	EM05	UMCf	75.0 - 90.0	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	2/15/2023	N	EM06	UMCf	75.0 - 90.0	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	2/15/2023	FD	EM06	UMCf	75.0 - 90.0	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	3/17/2023	N	EM07	UMCf	75.0 - 90.0	<46.8	<34.8	<12 UJ	60 J	<12 UJ	1,200 J	<12 UJ	<11 UJ	<11 UJ	<11 UJ	18 J	<12 UJ
U4-MW-02I	3/17/2023	FD	EM07	UMCf	75.0 - 90.0	<46.8	<34.8	<12 UJ	61 J	<12 UJ	1,200 J	<12 UJ	<11 UJ	<11 UJ	<11 UJ	17 J	<12 UJ
U4-MW-02I	4/20/2023	N	EM08	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	4/20/2023	FD	EM08	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	5/9/2023	N	EM09	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	5/9/2023	FD	EM09	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	6/12/2023	N	EM10	UMCf	75.0 - 90.0	<0.234	<0.174	<1.2	200	48	94	<1.2	<1.1	8.0 J	1.3 J	30	1.8 J
U4-MW-02I	6/12/2023	FD	EM10	UMCf	75.0 - 90.0	<0.234	<0.174	<1.2	190	46	98	<1.2	<1.1	8.2 J	<1.1	30	<1.2
U4-MW-02I	7/18/2023	N	EM11	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-02I	7/18/2023	FD	EM11	UMCf	75.0 - 90.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-03D	4/20/2022	N	BL02	UMCf	96.6 - 106.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-03D	2/16/2023	N	EM06	UMCf	96.6 - 106.6	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-MW-03D	3/16/2023	N	EM07	UMCf	96.6 - 106.6	<4.68	<3.48	----	----	----	----	----	----	----	----	----	----
U4-MW-03D	3/16/2023	FD	EM07	UMCf	96.6 - 106.6	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-MW-03D	6/15/2023	N	EM10	UMCf	96.6 - 106.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-03DD	4/20/2022	N	BL02	UMCf	119.7 - 129.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-03DD	3/15/2023	N	EM07	UMCf	119.7 - 129.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-03DD	6/15/2023	N	EM10	UMCf	119.7 - 129.7	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-03I	4/19/2022	N	BL02	UMCf	76.6 - 86.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-03I	3/15/2023	N	EM07	UMCf	76.6 - 86.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-03I	6/14/2023	N	EM10	UMCf	76.6 - 86.6	<4.68	<3.48	----	----	----	----	----	----	----	----	----	----
U4-MW-03I	6/14/2023	FD	EM10	UMCf	76.6 - 86.6	<5.85	<4.35	----	----	----	----	----	----	----	----	----	----
U4-MW-03S	4/18/2022	N	BL02	UMCf	54.5 - 64.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-03S	4/18/2022	FD	BL02	UMCf	54.5 - 64.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-03S	3/15/2023	N	EM07	UMCf	54.5 - 64.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-03S	6/15/2023	N	EM10	UMCf	54.5 - 64.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B		Volatile Fatty Acids by AM23G									
						Vinyl Chloride	Xylenes, Total	3-Methylbutanoic Acid	Acetic Acid	Butyric Acid	Formic Acid	Hexanoic Acid	i-Hexanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid
						µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
U4-MW-04D	4/19/2022	N	BL02	UMCf	97.0 - 107.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-04D	2/16/2023	N	EM06	UMCf	97.0 - 107.0	<11.7	<8.70	----	----	----	----	----	----	----	----	----	----
U4-MW-04D	3/21/2023	N	EM07	UMCf	97.0 - 107.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-04D	6/14/2023	N	EM10	UMCf	97.0 - 107.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-04I	4/19/2022	N	BL02	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-04I	3/20/2023	N	EM07	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-04I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	4/15/2022	N	BL02	UMCf	98.2 - 108.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	10/13/2022	N	EM02	UMCf	98.2 - 108.2	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	0.238 J	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	1/11/2023	N	EM05	UMCf	98.2 - 108.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	2/14/2023	N	EM06	UMCf	98.2 - 108.2	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	3/16/2023	N	EM07	UMCf	98.2 - 108.2	<23.4	<17.4	<6.1	28 J	<5.8	620 J+	<5.8	<5.6	<5.3	<5.6	5.5 J	<6.0
U4-MW-05D	4/20/2023	N	EM08	UMCf	98.2 - 108.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	5/10/2023	N	EM09	UMCf	98.2 - 108.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	<0.234	<0.174	<3.0	150	24 J	280	<2.9	<2.8	16 J	<2.8	21 J	<3.0
U4-MW-05D	7/18/2023	N	EM11	UMCf	98.2 - 108.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	4/15/2022	N	BL02	UMCf	76.6 - 86.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	10/13/2022	N	EM02	UMCf	76.6 - 86.6	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	11/3/2022	N	EM03	UMCf	76.6 - 86.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	12/8/2022	N	EM04	UMCf	76.6 - 86.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	1/11/2023	N	EM05	UMCf	76.6 - 86.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	2/14/2023	N	EM06	UMCf	76.6 - 86.6	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	3/14/2023	N	EM07	UMCf	76.6 - 86.6	<23.4	<17.4	<3.0	14 J	<2.9	290	2.9 J	<2.8	11 J	<2.8	2.9 J	<3.0
U4-MW-05I	4/21/2023	N	EM08	UMCf	76.6 - 86.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	5/10/2023	N	EM09	UMCf	76.6 - 86.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-05I	6/15/2023	N	EM10	UMCf	76.6 - 86.6	<0.234	<0.174	<6.1	460	170	120	<5.8	<5.6	15 J	9.2 J	120	<6.0
U4-MW-05I	7/17/2023	N	EM11	UMCf	76.6 - 86.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-06D	4/19/2022	N	BL02	UMCf	97.1 - 107.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-06D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	<11.7	<8.70	----	----	----	----	----	----	----	----	----	----
U4-MW-06D	3/21/2023	N	EM07	UMCf	97.1 - 107.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-06D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-06I	4/19/2022	N	BL02	UMCf	76.5 - 86.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-06I	3/14/2023	N	EM07	UMCf	76.5 - 86.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-06I	6/16/2023	N	EM10	UMCf	76.5 - 86.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	4/15/2022	N	BL02	UMCf	96.8 - 106.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	10/12/2022	N	EM02	UMCf	96.8 - 106.5	<0.234	0.181 J	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	10/12/2022	FD	EM02	UMCf	96.8 - 106.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	11/3/2022	N	EM03	UMCf	96.8 - 106.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	12/7/2022	N	EM04	UMCf	96.8 - 106.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	1/11/2023	N	EM05	UMCf	96.8 - 106.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	2/14/2023	N	EM06	UMCf	96.8 - 106.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	3/16/2023	N	EM07	UMCf	96.8 - 106.5	<0.234	<0.174	<0.61	2.8 J	<0.58	61 J+	<0.58	<0.56	<0.53	<0.56	0.54 J	<0.60
U4-MW-07D	4/21/2023	N	EM08	UMCf	96.8 - 106.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	5/11/2023	N	EM09	UMCf	96.8 - 106.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07D	6/13/2023	N	EM10	UMCf	96.8 - 106.5	<0.234 UJ	<0.174 UJ	<12	370 J+	150	120 J+	<12	<11	19 J	<11	180	<12
U4-MW-07D	7/17/2023	N	EM11	UMCf	96.8 - 106.5	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	4/15/2022	N	BL02	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	11/3/2022	N	EM03	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	1/11/2023	N	EM05	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	<1.17	<0.870	<0.61	3.0 J	<0.58	66 J+	<0.58	<0.56	<0.53	<0.56	0.59 J	<0.60
U4-MW-07I	4/21/2023	N	EM08	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	5/11/2023	N	EM09	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-07I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<1.17	<0.870	<3.0	260	7.8 J	220	6.6 J	<2.8	12 J	<2.8	23 J	<3.0
U4-MW-07I	7/17/2023	N	EM11	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08D	4/13/2022	N	BL02	UMCf	98.6 - 108.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08D	12/7/2022	N	EM04	UMCf	98.6 - 108.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08D	3/17/2023	N	EM07	UMCf	98.6 - 108.6	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-MW-08D	6/13/2023	N	EM10	UMCf	98.6 - 108.6	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08DD	4/20/2022	N	BL02	UMCf	119.8 - 129.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08DD	4/20/2022	FD	BL02	UMCf	119.8 - 129.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08DD	12/8/2022	N	EM04	UMCf	119.8 - 129.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08DD	3/15/2023	N	EM07	UMCf	119.8 - 129.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08DD	6/14/2023	N	EM10	UMCf	119.8 - 129.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08I	4/13/2022	N	BL02	UMCf	78.0 - 88.0	0.413 J	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08I	12/7/2022	N	EM04	UMCf	78.0 - 88.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08I	12/7/2022	FD	EM04	UMCf	78.0 - 88.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08I	3/17/2023	N	EM07	UMCf	78.0 - 88.0	<11.7	<8.70	----	----	----	----	----	----	----	----	----	----
U4-MW-08I	6/13/2023	N	EM10	UMCf	78.0 - 88.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08S	4/15/2022	N	BL02	UMCf	54.9 - 64.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08S	12/7/2022	N	EM04	UMCf	54.9 - 64.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08S	12/7/2022	FD	EM04	UMCf	54.9 - 64.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08S	3/13/2023	N	EM07	UMCf	54.9 - 64.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08S	3/13/2023	FD	EM07	UMCf	54.9 - 64.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-08S	6/13/2023	N	EM10	UMCf	54.9 - 64.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B		Volatile Fatty Acids by AM23G									
						Vinyl Chloride	Xylenes, Total	3-Methylbutanoic Acid	Acetic Acid	Butyric Acid	Formic Acid	Hexanoic Acid	i-Hexanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid
						µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
U4-MW-08S	6/13/2023	FD	EM10	UMCf	54.9 - 64.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-09D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-09D	12/6/2022	N	EM04	UMCf	96.9 - 106.9	<2.34 UJ	<1.74 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-09D	3/16/2023	N	EM07	UMCf	96.9 - 106.9	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-09D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-09DD	4/14/2022	N	BL02	UMCf	119.8 - 129.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-09DD	12/6/2022	N	EM04	UMCf	119.8 - 129.8	<0.234 UJ	<0.174 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-09DD	3/21/2023	N	EM07	UMCf	119.8 - 129.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-09DD	6/15/2023	N	EM10	UMCf	119.8 - 129.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-09I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	<0.234	0.326 J	----	----	----	----	----	----	----	----	----	----
U4-MW-09I	12/6/2022	N	EM04	UMCf	76.8 - 86.8	<2.34 UJ	<1.74 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-09I	3/16/2023	N	EM07	UMCf	76.8 - 86.8	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-09I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-09S	4/14/2022	N	BL02	UMCf	55.3 - 65.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-09S	12/6/2022	N	EM04	UMCf	55.3 - 65.3	<0.234 UJ	<0.174 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-09S	3/17/2023	N	EM07	UMCf	55.3 - 65.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-09S	6/15/2023	N	EM10	UMCf	55.3 - 65.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-10D	4/14/2022	N	BL02	UMCf	96.9 - 106.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-10D	12/5/2022	N	EM04	UMCf	96.9 - 106.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-10D	3/17/2023	N	EM07	UMCf	96.9 - 106.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-10D	6/14/2023	N	EM10	UMCf	96.9 - 106.9	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-10I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-10I	12/5/2022	N	EM04	UMCf	77.1 - 87.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-10I	3/17/2023	N	EM07	UMCf	77.1 - 87.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-10I	6/14/2023	N	EM10	UMCf	77.1 - 87.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	4/15/2022	N	BL02	UMCf	97.4 - 107.4	<0.234	<0.174	<6.1	25 J	<5.8	460	<5.8	<5.6	<5.3	<5.6	<5.3	<6.0
U4-MW-11D	9/26/2022	N	EM01	UMCf	97.4 - 107.4	<11.7	<8.70	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	10/11/2022	N	EM02	UMCf	97.4 - 107.4	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	11/1/2022	N	EM03	UMCf	97.4 - 107.4	<11.7	<8.70	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	12/6/2022	N	EM04	UMCf	97.4 - 107.4	<5.85 UJ	<4.35 UJ	<3.0	27 J+	4.1 J	320 J+	<2.9	<2.8	6.7 J	<2.8	3.4 J	<3.0
U4-MW-11D	1/12/2023	N	EM05	UMCf	97.4 - 107.4	<46.8	<34.8	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	2/14/2023	N	EM06	UMCf	97.4 - 107.4	<46.8	<34.8	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	3/16/2023	N	EM07	UMCf	97.4 - 107.4	<46.8	<34.8	<12	<25	<12	670 J+	<12	<11	<11	<11	<11	<12
U4-MW-11D	4/18/2023	N	EM08	UMCf	97.4 - 107.4	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	5/17/2023	N	EM09	UMCf	97.4 - 107.4	<4.68 UJ	<3.48 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-11D	6/16/2023	N	EM10	UMCf	97.4 - 107.4	<0.234	<0.174	<12	36 J	<12	1,100	<12	<11	<11	<11	16 J	<12
U4-MW-11D	7/14/2023	N	EM11	UMCf	97.4 - 107.4	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	4/14/2022	N	BL02	UMCf	77.0 - 87.0	<0.234	<0.174	<1.2	3.6 J	<1.2	91	<1.2	<1.1	<1.1	<1.1	<1.1	<1.2
U4-MW-11I	9/26/2022	N	EM01	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	9/26/2022	FD	EM01	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	10/10/2022	N	EM02	UMCf	77.0 - 87.0	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	10/10/2022	FD	EM02	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	10/31/2022	N	EM03	UMCf	77.0 - 87.0	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	10/31/2022	FD	EM03	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	12/6/2022	N	EM04	UMCf	77.0 - 87.0	<0.234 UJ	<0.174 UJ	<6.1 UJ	480 J-	11 J	21 J	<5.8 UJ	<5.6 UJ	8.7 J	<5.6 UJ	21 J	<6.0 UJ
U4-MW-11I	12/6/2022	FD	EM04	UMCf	77.0 - 87.0	<0.234 UJ	<0.174 UJ	<6.1 UJ	490 J-	15 J	53 J	<5.8 UJ	<5.6 UJ	10 J	<5.6 UJ	26 J	<6.0 UJ
U4-MW-11I	1/12/2023	N	EM05	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	1/12/2023	FD	EM05	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	2/14/2023	N	EM06	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	2/14/2023	FD	EM06	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	3/16/2023	N	EM07	UMCf	77.0 - 87.0	<0.234	<0.174	<3.0	270	<2.9	59 J+	<2.9	<2.8	4.4 J	<2.8	92	<3.0
U4-MW-11I	3/16/2023	FD	EM07	UMCf	77.0 - 87.0	<0.234	<0.174	<3.0	290	<2.9	58 J+	<2.9	<2.8	3.7 J	<2.8	94	<3.0
U4-MW-11I	4/18/2023	N	EM08	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	4/18/2023	FD	EM08	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	5/19/2023	N	EM09	UMCf	77.0 - 87.0	<0.234 UJ	<0.174 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	5/19/2023	FD	EM09	UMCf	77.0 - 87.0	<0.234 UJ	<0.174 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	6/15/2023	N	EM10	UMCf	77.0 - 87.0	<0.234	<0.174	1.3 J	90	<0.58	63	0.63 J	<0.56	7.6	<0.56	46	1.9 J
U4-MW-11I	6/15/2023	FD	EM10	UMCf	77.0 - 87.0	<0.234	<0.174	0.96 J	95	<0.58	61	<0.58	<0.56	7.8	<0.56	48	1.4 J
U4-MW-11I	7/13/2023	N	EM11	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-11I	7/13/2023	FD	EM11	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	4/15/2022	N	BL02	UMCf	97.1 - 107.1	<0.234	<0.174	<6.1	26 J	<5.8	460	<5.8	43 J	<5.3	<5.6	<5.3	<6.0
U4-MW-12D	9/27/2022	N	EM01	UMCf	97.1 - 107.1	<4.68	<3.48	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	10/12/2022	N	EM02	UMCf	97.1 - 107.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	11/2/2022	N	EM03	UMCf	97.1 - 107.1	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	12/7/2022	N	EM04	UMCf	97.1 - 107.1	<0.234	<0.174	<6.1 R	49 J	<5.8 R	<5.5 R	6.9 J	<5.6 R	9.4 J	<5.6 R	1,500 J-	<6.0 R
U4-MW-12D	1/12/2023	N	EM05	UMCf	97.1 - 107.1	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	2/15/2023	N	EM06	UMCf	97.1 - 107.1	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	3/14/2023	N	EM07	UMCf	97.1 - 107.1	<11.7	<8.70	<6.1	65	<5.8	260	<5.8	<5.6	<5.3	<5.6	10 J	<6.0
U4-MW-12D	4/17/2023	N	EM08	UMCf	97.1 - 107.1	<1.17 UJ	<0.870 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	5/17/2023	N	EM09	UMCf	97.1 - 107.1	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-MW-12D	6/16/2023	N	EM10	UMCf	97.1 - 107.1	<0.234	<0.174	<12	28 J	<12	1,200	<12	<11	<11	<11	11 J	<12
U4-MW-12D	7/13/2023	N	EM11	UMCf	97.1 - 107.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	4/14/2022	N	BL02	UMCf	76.8 - 86.8	<0.234	<0.174	<6.1	<12	<5.8	240	<5.8	<5.6	<5.3	<5.6	<5.3	<6.0
U4-MW-12I	4/14/2022	FD	BL02	UMCf	76.8 - 86.8	<0.234	<0.174	<6.1	<12	<5.8	220	<5.8	<5.6	<5.3	<5.6	<5.3	<6.0
U4-MW-12I	9/27/2022	N	EM01	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	10/12/2022	N	EM02	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	11/2/2022	N	EM03	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	12/7/2022	N	EM04	UMCf	76.8 - 86.8	<0.234	<0.174	<1.2 R	170 J-	<1.2 R	110 J-	2.1 J	<1.1 R	6.9 J	<1.1 R	6.1 J	<1.2 R
U4-MW-12I	12/7/2022	FD	EM04	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B		Volatile Fatty Acids by AM23G									
						Vinyl Chloride	Xylenes, Total	3-Methylbutanoic Acid	Acetic Acid	Butyric Acid	Formic Acid	Hexanoic Acid	i-Hexanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid
						µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
U4-MW-12I	1/13/2023	N	EM05	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	2/15/2023	N	EM06	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	3/13/2023	N	EM07	UMCf	76.8 - 86.8	<0.234	<0.174	<6.1	590	26 J	54	<5.8	<5.6	15 J	<5.6	150	<6.0
U4-MW-12I	4/17/2023	N	EM08	UMCf	76.8 - 86.8	<0.234 UJ	<0.174 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	5/17/2023	N	EM09	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-12I	6/16/2023	N	EM10	UMCf	76.8 - 86.8	<0.234	<0.174	<3.0	170	<2.9	290	<2.9	<2.8	<2.7	<2.8	82	<3.0
U4-MW-12I	7/11/2023	N	EM11	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	4/14/2022	N	BL02	UMCf	98.2 - 108.2	<0.234	<0.174	<12	27 J	<12	490	<12	<11	<11	<11	<11	<12
U4-MW-13D	9/28/2022	N	EM01	UMCf	98.2 - 108.2	<2.34	<1.74	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	10/11/2022	N	EM02	UMCf	98.2 - 108.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	11/3/2022	N	EM03	UMCf	98.2 - 108.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	12/7/2022	N	EM04	UMCf	98.2 - 108.2	<0.234	<0.174	<3.0 R	18 J	<2.9 R	<2.7 R	<2.9 R	<2.8 R	6.6 J	<2.8 R	300 J-	<3.0 R
U4-MW-13D	1/12/2023	N	EM05	UMCf	98.2 - 108.2	<4.68	<3.48	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	2/15/2023	N	EM06	UMCf	98.2 - 108.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	3/17/2023	N	EM07	UMCf	98.2 - 108.2	<4.68	<3.48	<1.2 UJ	5.2 J	<1.2 UJ	130 J	<1.2 UJ	<1.1 UJ	<1.1 UJ	<1.1 UJ	<1.1 UJ	<1.2 UJ
U4-MW-13D	4/18/2023	N	EM08	UMCf	98.2 - 108.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	5/17/2023	N	EM09	UMCf	98.2 - 108.2	<4.68	<3.48	----	----	----	----	----	----	----	----	----	----
U4-MW-13D	6/15/2023	N	EM10	UMCf	98.2 - 108.2	<0.234	<0.174	<1.2	5.7 J	<1.2	120	<1.2	<1.1	5.2 J	<1.1	1.8 J	<1.2
U4-MW-13D	7/12/2023	N	EM11	UMCf	98.2 - 108.2	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	4/14/2022	N	BL02	UMCf	77.1 - 87.1	<0.234	<0.174	<3.0	17 J	<2.9	240	<2.9	<2.8	21 J	<2.8	<2.6	<3.0
U4-MW-13I	9/28/2022	N	EM01	UMCf	77.1 - 87.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	10/10/2022	N	EM02	UMCf	77.1 - 87.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	11/3/2022	N	EM03	UMCf	77.1 - 87.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	12/6/2022	N	EM04	UMCf	77.1 - 87.1	<1.17 UJ	<0.870 UJ	<1.2	68	<1.2	130 J+	<1.2	<1.1	7.3 J	<1.1	1.5 J	<1.2
U4-MW-13I	1/12/2023	N	EM05	UMCf	77.1 - 87.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	2/14/2023	N	EM06	UMCf	77.1 - 87.1	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	3/16/2023	N	EM07	UMCf	77.1 - 87.1	<0.234	<0.174	<0.61	56	<0.58	58 J+	<0.58	<0.56	<0.53	<0.56	4.2 J	<0.60
U4-MW-13I	4/19/2023	N	EM08	UMCf	77.1 - 87.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	5/17/2023	N	EM09	UMCf	77.1 - 87.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-13I	6/15/2023	N	EM10	UMCf	77.1 - 87.1	<0.234	<0.174	<0.61	4.2 J	<0.58	58	<0.58	<0.56	12	<0.56	0.86 J	<0.60
U4-MW-13I	7/12/2023	N	EM11	UMCf	77.1 - 87.1	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-14D	4/13/2022	N	BL02	UMCf	97.3 - 107.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-14D	12/6/2022	N	EM04	UMCf	97.3 - 107.3	<1.17 UJ	<0.870 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-14D	3/16/2023	N	EM07	UMCf	97.3 - 107.3	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-MW-14D	6/15/2023	N	EM10	UMCf	97.3 - 107.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-14I	4/14/2022	N	BL02	UMCf	77.3 - 87.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-14I	12/6/2022	N	EM04	UMCf	77.3 - 87.3	<1.17 UJ	<0.870 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-14I	3/16/2023	N	EM07	UMCf	77.3 - 87.3	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-MW-14I	6/15/2023	N	EM10	UMCf	77.3 - 87.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15D	4/13/2022	N	BL02	UMCf	96.0 - 106.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15D	12/5/2022	N	EM04	UMCf	96.0 - 106.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15D	3/20/2023	N	EM07	UMCf	96.0 - 106.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15D	6/14/2023	N	EM10	UMCf	96.0 - 106.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15DD	4/13/2022	N	BL02	UMCf	120.3 - 130.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15DD	12/5/2022	N	EM04	UMCf	120.3 - 130.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15DD	3/15/2023	N	EM07	UMCf	120.3 - 130.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15DD	6/13/2023	N	EM10	UMCf	120.3 - 130.3	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15I	4/12/2022	N	BL02	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15I	12/5/2022	N	EM04	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15I	3/17/2023	N	EM07	UMCf	76.8 - 86.8	<4.68	<3.48	----	----	----	----	----	----	----	----	----	----
U4-MW-15I	6/14/2023	N	EM10	UMCf	76.8 - 86.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15S	4/13/2022	N	BL02	UMCf	54.8 - 64.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15S	12/5/2022	N	EM04	UMCf	54.8 - 64.8	<5.85	<4.35	----	----	----	----	----	----	----	----	----	----
U4-MW-15S	3/13/2023	N	EM07	UMCf	54.8 - 64.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-15S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16D	4/11/2022	N	BL02	UMCf	96.8 - 106.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16D	12/5/2022	N	EM04	UMCf	96.8 - 106.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16D	3/14/2023	N	EM07	UMCf	96.8 - 106.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16D	6/13/2023	N	EM10	UMCf	96.8 - 106.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16DD	4/12/2022	N	BL02	UMCf	120.8 - 130.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16DD	12/5/2022	N	EM04	UMCf	120.8 - 130.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16DD	3/15/2023	N	EM07	UMCf	120.8 - 130.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16DD	6/13/2023	N	EM10	UMCf	120.8 - 130.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16I	4/11/2022	N	BL02	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16I	12/5/2022	N	EM04	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16I	12/5/2022	FD	EM04	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16I	3/13/2023	N	EM07	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16I	3/13/2023	FD	EM07	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16I	6/12/2023	N	EM10	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16I	6/12/2023	FD	EM10	UMCf	77.0 - 87.0	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16S	4/12/2022	N	BL02	UMCf	54.8 - 64.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16S	4/12/2022	FD	BL02	UMCf	54.8 - 64.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16S	12/6/2022	N	EM04	UMCf	54.8 - 64.8	<0.234 UJ	<0.174 UJ	----	----	----	----	----	----	----	----	----	----
U4-MW-16S	3/15/2023	N	EM07	UMCf	54.8 - 64.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-MW-16S	6/13/2023	N	EM10	UMCf	54.8 - 64.8	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-SLMW	11/10/2022	N	EM03	N/A	-	<1.17	<0.870	----	----	----	----	----	----	----	----	----	----
U4-T3	10/13/2022	N	EM02	N/A	-	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-T3	11/3/2022	N	EM03	N/A	-	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-T3	12/6/2022	N	EM04	N/A	-	<4.68 UJ	<3.48 UJ	----	----	----	----	----	----	----	----	----	----

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Table 5
Groundwater Analytical Results
Unit 4 Source Area Bioremediation Treatability Study

Well	Sample Date	QC Type	Event	Screened Lithology	Screened Interval	Volatile Organic Compounds by SW8260B		Volatile Fatty Acids by AM23G									
						Vinyl Chloride	Xylenes, Total	3-Methylbutanoic Acid	Acetic Acid	Butyric Acid	Formic Acid	Hexanoic Acid	i-Hexanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid
						µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
U4-T3	1/9/2023	N	EM05	N/A	-	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-T3	2/13/2023	N	EM06	N/A	-	<23.4	<17.4	----	----	----	----	----	----	----	----	----	----
U4-T3	3/13/2023	N	EM07	N/A	-	<5.85	<4.35	----	----	----	----	----	----	----	----	----	----
U4-T3	4/19/2023	N	EM08	N/A	-	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-T3	5/18/2023	N	EM09	N/A	-	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-T3	6/12/2023	N	EM10	N/A	-	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----
U4-T3	7/11/2023	N	EM11	N/A	-	<0.234	<0.174	----	----	----	----	----	----	----	----	----	----

Notes:
FD - Field duplicate
E - Field instrument error.
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 low.
J+ - The result is an estimated quantity, but the result may be biased high.
N/A - Not Applicable
mg/L - milligrams per liter
µg/L - micrograms per liter
N - Normal field sample

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.

UMCf- Upper Muddy Creek Formation
< - The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
-- Not tested.
M-252 damaged/obstructed when checked on June 14, 2023 for EM10.