SCS ENGINEERS

July 30, 2024 File No. 27222352.00

Mr. Curtis Spence Assistant Director – Electric Department Ames Municipal Electric System 200 E. 5th Street Ames, Iowa 50010

Subject: 2023-2024 Annual Groundwater Monitoring and Corrective Action Report

Coal Combustion Residuals Inactive Surface Impoundment

Dear Mr. Spence:

On behalf of the City of Ames Municipal Electric System, SCS Engineers (SCS) is submitting this 2023-2024 Annual Groundwater Monitoring and Corrective Action Report for the Ames Municipal Electric System Coal Combustion Residuals Inactive Surface Impoundment.

If you have any questions regarding this document, please contact the undersigned.

Sincerely,

Sean Marczewski Project Professional

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SCS Engineers

SAM/MDB/CLC

Christine L. Collier, P.E. Project Manager SCS Engineers

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2023-2024 Annual Groundwater Monitoring and Corrective Action Report



City of Ames Municipal Electric System 502 Carrol Avenue Ames, Iowa 50010

SCS ENGINEERS

27222352.00 | July 30, 2024

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1.0 INTRODUCTION

This 2023-2024 Annual Groundwater Monitoring and Corrective Action Report was prepared to support compliance with the groundwater monitoring requirements of the "Coal Combustion Residuals (CCR) Final Rule" (Rule) published by the United States Environmental Protection Agency (USEPA) in the Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule, dated April 17, 2015 (USEPA, 2015), and subsequent revisions. The City of Ames Municipal Electric System CCR Inactive Surface Impoundment (Impoundment) is classified as an "inactive" CCR unit and is therefore regulated by the August 5, 2016, update to the Rule subject to the new language of 40 CFR 257.100(e). Owners and operators of inactive CCR surface impoundments subject to the provisions of the new 40 CFR 257.100(e)(5)(ii) were required to prepare an annual groundwater monitoring and corrective action report no later than August 1, 2019, and annually thereafter per 40 CFR 257.90(e).

Specifically, this report was prepared to fulfill the requirements of 40 CFR 257.90(e). Changes to the text of 40 CFR 257.90(e), based on the new 40 CFR 257.100(e), are shown in brackets. The applicable sections of the Rule are provided below in italics, followed by applicable information relative to the 2023-2024 Annual Groundwater Monitoring and Corrective Action Report for the Impoundment.

1.1 § 257.90(e)(6) SUMMARY

A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:

1.1.1 § 257.90(e)(6)(i) Initial Monitoring Program

At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;

At the start of the current annual reporting period (August 1, 2023), the Impoundment was operating under an assessment monitoring program in compliance with § 257.95.

1.1.2 § 257.90(e)(6)(ii) Final Monitoring Program

At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;

At the end of the current annual reporting period (July 31, 2024), the Impoundment was operating under an assessment monitoring program in compliance with § 257.95.

1.1.3 § 257.90(e)(6)(iii) Statistically Significant Increases

If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix III to this part pursuant to § 257.94(e):

(A) Identify those constituents listed in Appendix III to this part and the names of the monitoring wells associated with such an increase; and

The original SSIs triggering the initiation of the assessment monitoring program are included in Table 1 below. SSIs determined during the 2023-2024 reporting period are included in Table 2 below.

Table 1. Original SSIs Triggering Assessment Monitoring

Monitoring Event	Monitoring Well	Constituent
Spring 2019	MW-104	Boron, Calcium, Chloride, Sulfate, Total Dissolved Solids (TDS)

Table 2. 2023-2024 Reporting Period SSIs

Octob	October 2023 Sampling Event											
Monitoring Well	Constituent											
MW-101	Chloride, Sulfate											
MW-105	Boron, Calcium, Chloride, Sulfate, TDS											
MW-106	Boron, Calcium, Chloride, Sulfate, TDS											
MW-107	Calcium, Chloride											
April	April 2024 Sampling Event											
Monitoring Well	Constituent											
MW-101	Chloride, Sulfate											
MW-102	Chloride											
MW-105	Boron, Chloride											
MW-106	Chloride, Fluoride											
MW-107	Chloride											

(B) Provide the date when the assessment monitoring program was initiated for the CCR unit.

The assessment monitoring program was initiated on November 13, 2019, and the initial assessment monitoring sampling event was performed on October 9, 2019.

1.1.4 § 257.90(e)(6)(iv) Statistically Significant Levels

If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in Appendix IV to this part pursuant to § 257.95(g) include all of the following:

(A) Identify those constituents listed in Appendix IV to this part and the names of the monitoring wells associated with such an increase;

A statistically significant level above the groundwater protection standard was not identified.

(B) Provide the date when the assessment of corrective measures was initiated for the CCR unit;

Not applicable because a statistically significant level above the groundwater protection standard was not identified.

(C) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and

Not applicable because there was no assessment of corrective measures initiated for the Impoundment.

(D) Provide the date when the assessment of corrective measures was completed for the CCR unit.

Not applicable because there was no assessment of corrective measures initiated for the Impoundment.

1.1.5 § 257.90(e)(6)(v) Selection of Remedy

Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection; and

Not applicable because corrective measures are not required.

1.1.6 § 257.90(e)(6)(vi) Remedial Activities

Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

Not applicable because corrective measures are not required.

2.0 § 257.90(E) ANNUAL REPORT REQUIREMENTS

Annual groundwater monitoring and corrective action report. For [inactive] CCR surface impoundments, no later than [August 1, 2019], and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For [inactive] CCR surface impoundments, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than [August 1] of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by §257.105(h)(1). At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

2.1 § 257.90(e)(1) SITE MAP

A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

A site map with an aerial image showing the Impoundment and background (or upgradient) and downgradient monitoring wells with identification numbers for the Impoundment groundwater monitoring program is provided as **Figure 1** in **Appendix A**.

2.2 § 257.90(e)(2) MONITORING SYSTEM CHANGES

Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

The Impoundment groundwater monitoring system was initially certified on April 15, 2019. No new monitoring wells were installed and no wells were decommissioned as part of the Impoundment groundwater monitoring program during this reporting period.

2.3 § 257.90(e)(3) SUMMARY OF SAMPLING EVENTS

In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

The sampling events during this reporting period are included in Table 1 below.

Table 1. 2023-2024 Sampling Event Summary

Date of Sample	Monitoring Program	Monitoring Points Sampled	Parameter List
October 17, 2023	Assessment	MW-101*, MW-102*, MW-103*, MW-104,	Appendix III+
		MW-105, MW-106, MW-107, MW-108	
April 23, 2024	Assessment	MW-101*, MW-102*, MW-103*, MW-104,	Appendix III &
		MW-105, MW-106, MW-107, MW-108	Appendix IV

Note: Appendix III+ denotes a sample was collected and analyzed for the Appendix III parameters plus those Appendix IV parameters that were detected during the previous sampling event.

The October 17, 2023, assessment monitoring samples were analyzed for Appendix III constituents and those Appendix IV constituents previously detected during the April 2023 sampling event on a well-specific basis. The April 23, 2024, assessment monitoring samples were analyzed for Appendix III and Appendix IV constituents.

The Appendix III and Appendix IV constituents are specified in both 40 CFR 257 and in Table 3 of the April 16, 2019, City of Ames CCR Groundwater Monitoring Sampling and Analysis Program report. An analytical data summary table of the current reporting period is included in **Appendix B Table B-1** and historical data is included in **Appendix B Table B-2**. The field data are summarized in **Appendix B Table B-3**.

^{*:} Upgradient monitoring well

2.4 § 257.90(e)(4) MONITORING TRANSITION NARRATIVE

A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and

There was no monitoring program transition during the period covered by this annual report. The Impoundment groundwater monitoring program transitioned from detection monitoring to assessment monitoring following the identification of verified statistically significant increases (SSIs) at MW-104 (boron, calcium, chloride, sulfate, and total dissolved solids) from the August 1, 2019, resampling event. Assessment monitoring sampling began on October 9, 2019. Assessment monitoring sampling is currently ongoing at the Impoundment.

2.5 § 257.90(e)(5) OTHER REQUIREMENTS

Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.

A summary of potentially required information and the corresponding section of the Rule is provided in the following sections.

2.5.1 § 257.90(e)

For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year...

Status of Groundwater Monitoring and Corrective Action Program for the CCR Unit.

The groundwater monitoring and corrective action program for the Impoundment is currently in assessment monitoring.

Summary of Key Actions Completed.

Detection monitoring resampling was completed on August 1, 2019. Statistical evaluation of the resampling event data identified five confirmed SSIs at MW-104, resulting in assessment monitoring program initiation, and the subsequent completion of seven assessment monitoring sampling events in October 2019, April 2020, May 2020, October 2020, April 2021, October 2021, and April 2022. Statistical evaluation of the assessment monitoring data identified various Appendix III and/or Appendix IV SSIs from each of the seven assessment monitoring sampling events. None of the SSIs exceeded their respective groundwater protection standards at statistically significant levels (SSL). Since no SSLs have been identified, assessment of corrective measures and subsequent corrective action are not required for the Impoundment at this time.

Description of Any Problems Encountered.

No noteworthy problems were reported associated with the collection and laboratory analysis of groundwater samples and statistical evaluation of groundwater analytical data over the reporting period.

Discussion of Actions to Resolve the Problems.

Not applicable because no noteworthy problems were encountered.

Projection of Key Activities for the Upcoming Year (August 2024-July 2025).

Semiannual assessment monitoring groundwater sampling, analysis, and statistical evaluation will continue during the fall 2024 and spring 2025 of the upcoming reporting year. Verification sampling and alternative source demonstration(s) will be completed, if required. The 2024-2025 Groundwater Monitoring and Corrective Action Report will be prepared.

2.5.2 § 257.94(d)(3)

Demonstration providing the basis for an alternative monitoring frequency for detection monitoring and certification that it meets the requirements of this section.

Not applicable because the site is no longer in detection monitoring.

2.5.3 § 257.94(e)(2)

Demonstration that an alternative source other than the CCR unit caused the statistically significant increase (SSI) over background or that the SSI was caused by an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. In addition, certification of the demonstration is to be included in the annual report.

Not applicable because no such demonstration was warranted.

2.5.4 § 257.95(b)

Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator of the CCR unit must sample and analyze the groundwater for all constituents listed in appendix IV to this part.

The assessment monitoring program was triggered on August 15, 2019, after analytical results from the August 1, 2019, resampling event were received and statistical analyses performed identifying SSIs. The first assessment monitoring sampling event was conducted within 90 days on October 9, 2019. During the first assessment monitoring event, each Impoundment groundwater monitoring network well was sampled and analyzed for Appendix IV constituents.

2.5.5 § 257.95(c)(3)

Demonstration providing the basis for an alternative monitoring frequency for assessment monitoring and certification that it meets the requirements of this section.

Not applicable because no alternative monitoring frequency for assessment monitoring and certification was pursued.

2.5.6 § 257.95(d)(1)

Within 90 days of obtaining the results [from the initial and subsequent sampling events required in § 257.95(B)], and on at least a semiannual basis thereafter, resample all wells that were installed pursuant to the requirements of § 257.91, conduct analyses for all parameters in appendix III to this

part and for those constituents in appendix IV to this part that are detected in response to § 257.95(B), and record their concentrations in the facility operating record.

The samples collected during the October 17, 2023, assessment monitoring sampling event were analyzed for the full list of Appendix III constituents and for the Appendix IV constituents previously detected during the April 13, 2023, sampling event on a well-specific basis. The samples collected during the April 23, 2024, assessment monitoring sampling event were analyzed for the full list of Appendix III and Appendix IV constituents.

2.5.7 § 257.95(d)(3)

Include the concentrations of Appendix III and detected Appendix IV constituents from the assessment monitoring, the established background concentrations, and the established groundwater protection standards.

Concentrations of Appendix III and Appendix IV constituents reported during this reporting period and established groundwater protection standards are included in **Appendix B Table B-1**.

2.5.8 § 257.95(f)

If the concentrations of any constituent in appendices III and IV to this part are above background values, but all concentrations are below the groundwater protection standard established under §257.95(H), using the statistical procedures in § 257.93(g), the owner or operator must continue assessment monitoring in accordance with this section.

The Appendix III and Appendix IV constituents that were detected above background values during this reporting period were below their respective groundwater protection standards using statistical procedures in § 257.93(g). Thus, the Impoundment will continue assessment monitoring.

2.5.9 § 257.95(g)(3)(ii)

Demonstration that an alternative source other than the CCR unit caused the contamination, or that the SSI (during assessment monitoring) resulted from an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. In addition, certification of the demonstration is to be included in the annual report.

Not applicable because no such demonstration was warranted.

2.5.10 § 257.96(a)

Demonstration of the need for additional time to complete the assessment of corrective measures due to site-specific conditions or circumstances. In addition, certification of the demonstration is to be included in the annual report.

Not applicable because an assessment monitoring alternative source demonstration was not required.

3.0 GENERAL COMMENTS

This report has been prepared and reviewed under the direction of a qualified groundwater scientist and qualified professional engineer. The information contained in this report is a reflection of the conditions encountered at the City of Ames Municipal Electric System Inactive CCR Surface

Impoundment at the time of fieldwork. This report includes a review and compilation of the required information and does not reflect any variations of the subsurface, which may occur between sampling locations. Actual subsurface conditions may vary and the extent of such variations may not become evident without further investigation.

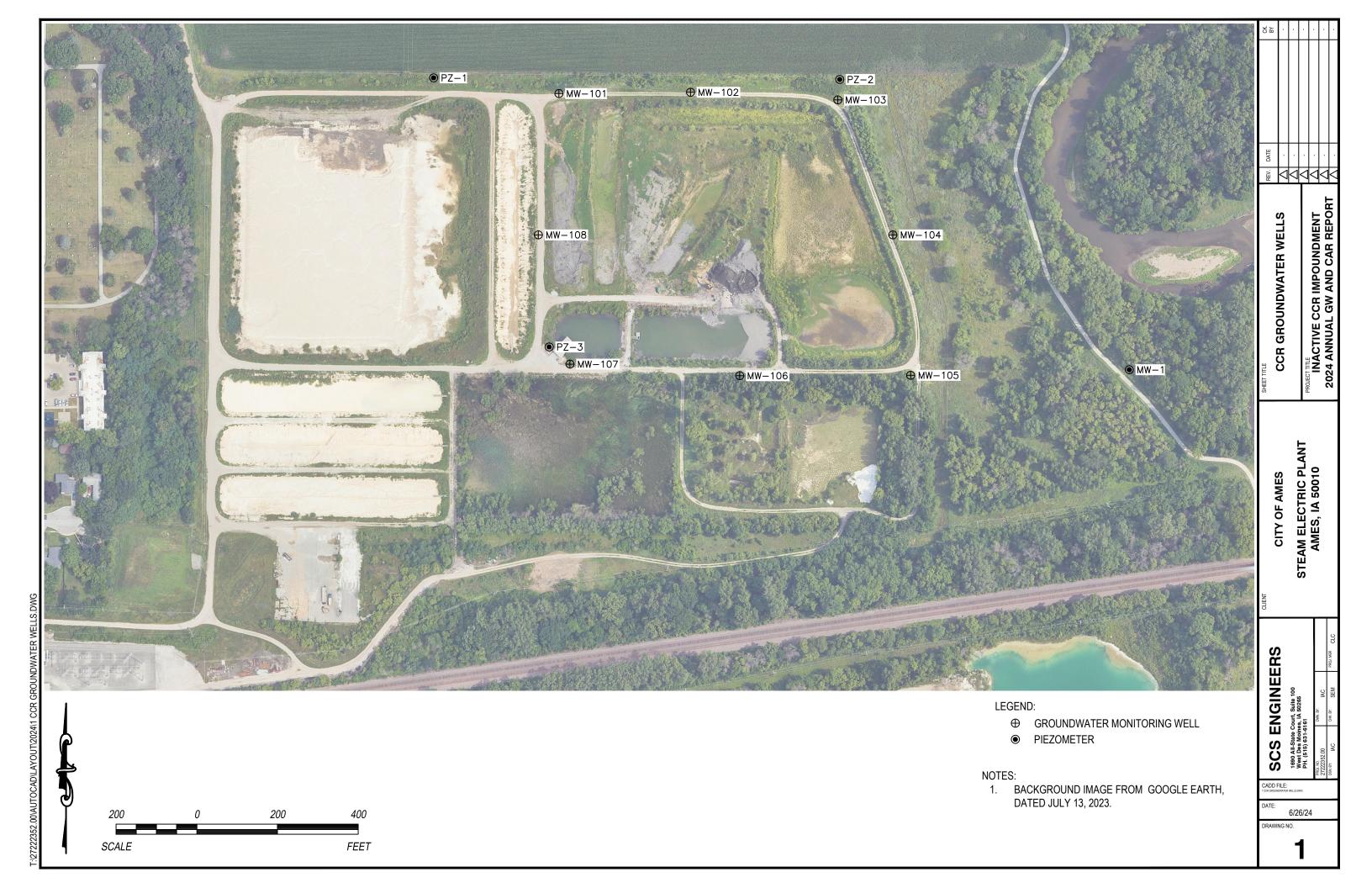
Conclusions drawn by others from the result of this work should recognize the limitation of the methods used. Please note that SCS Engineers does not warrant the work of regulatory agencies or other third parties supplying information used in the assimilation of this report. This report is prepared in accordance with generally accepted environmental engineering and geological practices, within the constraints of the client's directives. It is intended for the exclusive use of the City of Ames Municipal Electric Systems for specific application to the Inactive CCR Surface Impoundment. No warranties, express or implied, are intended or made.

Appendix A

Figure 1: Site Map

Figure 2: Groundwater Contour Map (October 2023)

Figure 3: Groundwater Contour Map (April 2024)



Appendix B

Tables

Table B-1: 2023-2024 Groundwater Monitoring Analytical Laboratory Results

Table B-2: Historical Groundwater Monitoring Analytical Laboratory Results

Table B-3: Groundwater Monitoring Field Measurements

Table B-1 Inactive CCR Surface Impoundment

2023-2024 Reporting Period Appendix III and Appendix IV Detection and Assessment Monitoring Analytical Laboratory Groundwater Sample Results City of Ames Municipal Electric System

Arsenic Barium mg/L mg/L 0.00542 0.146 0.01 2.0 - 0.12 <0.00200 0.117 - 0.09 <0.00200 0.123 - 0.04 <0.00200 0.132 - 0.04 <0.00200 0.332 - 0.07 <0.00200 0.0050	mg/L 0.00542 0.01 - <0.00200 - <0.00200 - <0.00200 - <0.00200	mg/L 0.146 2.0 0.12 0.117 0.09 0.123 0.04 0.132 0.07	Beryllium mg/L 0.001 0.004 - <0.00100 - <0.00100 - <0.00100	Cadmium mg/L 0.0002 0.005 - <0.000200 - <0.000200 - <0.000200	Chromium mg/L 0.0121 0.1	Cobalt mg/L 0.00899 0.00899 - <0.000500 - <0.000500	Fluoride mg/L 0.846 4.0 <1.00 <1.00 *+ <1.00 *+	Lead mg/L 0.00841 0.015 - <0.000500 - <0.000500	Lithium mg/L 0.0238 0.04 0.0105 0.0102 -	Mercury mg/L 0.0002 0.002 - <0.000200	Molybdenum mg/L 0.0135 0.10 - <0.00200	Selenium mg/L 0.0133 0.05 0.01 0.00620	Thallium mg/L 0.001	Combined Radium 226 228 pCi/L 1.18
0.00542 0.146 0.01 2.0 - 0.12 -0.0200 0.117 - 0.09 -0.00200 0.123 - 0.07 -0.00200 0.132 - 0.07 -0.00200 0.0020	0.00542 0.01 - <0.00200 - <0.00200 - <0.00200	0.146 2.0 0.12 0.117 0.09 0.123 0.04 0.132 0.07	0.001 0.004 - <0.00100 - <0.00100 - <0.00100	0.0002 0.005 - <0.000200 - <0.000200 - <0.000200	0.0121 0.1 - <0.00500 - <0.00500	0.00899 0.00899 - <0.000500 - <0.000500	0.846 4.0 <1.00 *+ <1.00 *+ <1.00 *+	0.00841 0.015 - <0.000500	0.0238 0.04 0.0105 0.0102	0.0002 0.002 - <0.000200	0.0135	0.0133 0.05 0.01	0.001	1.18
- 0.12 <0.00200 0.117 - 0.09 <0.00200 0.123 - 0.04 <0.00200 0.132 - 0.07 <0.00200 0.6006	- <0.00200 - <0.00200 - <0.00200	0.12 0.117 0.09 0.123 0.04 0.132 0.07	<0.00100 - <0.00100 - <0.00100	<0.000200 - <0.000200 - <0.000200	<0.00500 - <0.00500	<0.000500 - <0.000500	<1.00 <1.00 *+ <1.00 *- <1.00 *+	<0.000500	0.0105 0.0102	<0.000200	-	0.01	-	5
<0.00200 0.117 - 0.09 <0.00200 0.123 - 0.04 <0.00200 0.132 - 0.07 <0.00200 0.0606	<0.00200 - <0.00200 - <0.00200	0.117 0.09 0.123 0.04 0.132 0.07	<0.00100 - <0.00100 - <0.00100	<0.000200 - <0.000200 - <0.000200	<0.00500 - <0.00500 -	<0.000500 - <0.000500	<1.00 *+ <1.00 <1.00 *+	<0.000500	0.0102	<0.000200				
- 0.09 <0.00200 0.123 - 0.04 <0.00200 0.132 - 0.07 <0.00200 0.0606	- <0.00200 - <0.00200	0.09 0.123 0.04 0.132 0.07	<0.00100 - <0.00100	<0.000200 - <0.000200	- <0.00500 -	<0.000500	<1.00 <1.00 *+	-	-		<0.00200	0.00620		
 <0.00200 0.123 - 0.04 <0.00200 0.132 - 0.07 <0.00200 0.0606 	<0.00200 - <0.00200 -	0.123 0.04 0.132 0.07	<0.00100 - <0.00100	<0.000200 - <0.000200	<0.00500		<1.00 *+	<0.000500		-			< 0.00100	0.858
- 0.04 <0.00200 0.132 - 0.07 <0.00200 0.0606	<0.00200	0.04 0.132 0.07	<0.00100	<0.000200	-			< 0.000500			-	< 0.00500	-	-
<0.00200 0.132 - 0.07 <0.00200 0.0606	<0.00200	0.132 0.07	<0.00100	<0.000200		-			0.0108	<0.000200	< 0.00200	0.00560	< 0.00100	0.729
- 0.07 <0.00200 0.0606	-	0.07			< 0.00500		<1.00	-	-	-		-	-	-
<0.00200 0.0606			-			<0.000500	<1.00 *+	<0.000500	0.0133	<0.000200	<0.00200	<0.00500	< 0.00100	0.442
	<0.00200					-	<1.00	-	0.0147	-	0.0270	-	-	-
		0.0606	< 0.00100	<0.000200	<0.00500	<0.000500	<1.00 *+	<0.000500	0.0102	<0.000200	0.0249	0.00559	< 0.00100	0.775
	0.0021	0.0556	-	-		0.0010	<1.00	-	0.0315	-	0.0374	-	-	-
0.00277 0.0411	0.00277	0.0411	< 0.00100	<0.000200	<0.00500	0.000535	<1.00 *+	<0.000500	0.0342	<0.000200	0.0483	< 0.00500	< 0.00100	0.854
- 0.09			-	-		0.0296	<1.00	-	0.0606	-	0.0224	-	-	-
0.0178 0.0780	0.0178		< 0.00100	<0.000200	<0.00500	0.0118	1.35	0.00140	0.0184	<0.000200	0.0994	< 0.00500	< 0.00100	1.49
- 0.06			-	-		0.0642	<1.00	-	0.0362	-	0.0211	-	-	-
<0.00200 0.0629	<0.00200	0.0629	<0.00100	0.000984	<0.00500	0.0161	<1.00 *+	0.00172		<0.000200	0.0117	<0.00500	<0.00100	0.842
- 0.10			-	-	-	-	<1.00	-		-	-	-	-	-
<0.00200 0.0585	<0.00200	0.0585	<0.00100	<0.000200	<0.00500	<0.000500	<1.00 *+	<0.000500	0.0305	<0.000200	<0.00200	< 0.00500	< 0.00100	0.594
	İ	<0.00200	<0.00200 0.0629 - 0.10	<0.00200 0.0629 <0.00100 - 0.10 -	<0.00200 0.0629 <0.00100 0.000984 - 0.10	<0.00200 0.0629 <0.00100 0.000984 <0.00500 - 0.10	<0.00200 0.0629 <0.00100 0.00984 <0.00500 0.0161 - 0.10	<0.00200 0.0629 <0.00100 0.000984 <0.00500 0.0161 <1.00 *+ - 0.10 - < <1.00	<0.00200 0.0629 <0.00100 0.000984 <0.00500 0.0161 <1.00 *+ 0.00172 - 0.10 <1.00 -	<0.00200 0.0629 <0.00100 0.00984 <0.00500 0.0161 <1.00 *+ 0.00172 0.0228 - 0.10 <1.00 - 0.0585	<0.00200 0.0629 <0.00100 0.00984 <0.00500 0.0161 <1.00 *+ 0.00172 0.0228 <0.00200 - 0.10 - - - - <1.00	<0.00200 0.0629 <0.00100 0.00984 <0.00500 0.0161 <1.00 *+ 0.00172 0.0228 <0.00200 0.0117 - 0.10 - - - <1.00	<0.00200 0.0629 <0.00100 0.00984 <0.00500 0.0161 <1.00 *+ 0.00172 0.0228 <0.00200 0.0117 <0.00500 - 0.10 - - - - <1.00	<0.00200 0.0629 <0.00100 0.00984 <0.00500 0.0161 <1.00 *+ 0.00172 0.0228 <0.000200 0.0117 <0.00500 <0.00100 . 0.10 <1.00

Table B-2
Inactive CCR Surface Impoundment
Historical Appendix III and Appendix IV Detection and Assessment Monitoring Analytical Laboratory Groundwater Sample Results
City of Ames Municipal Electric System

				An	pendix III Const	tituonte									Δ.	pendix IV Con	etituante						
				Ap	pendix iii consi	lituents									A	pendix iv con	Sutuents						Combined
Monitoring Well Number	Sample Date	Boron	Calcium	Chloride	Fluoride	рН	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226 + 228
		mg/L	mg/L	mg/L	mg/L	S.U.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L
Background Co (UPI		0.472	245	208	0.846	7.272 - 8.072	613	1390	0.002	0.00542	0.146	0.001	0.0002	0.0121	0.00899	0.846	0.00841	0.0238	0.0002	0.0135	0.0133	0.001	1.18
Groundwater Stand		NA	NA	NA	4.0	NA	NA	NA	0.006	0.01	2.0	0.004	0.005	0.1	0.00899	4.0	0.015	0.04	0.002	0.10	0.05	0.002	5
	8/1/2019		-	-		-		-				-	-		-		-	-	-		-		-
	10/9/2019	-	-	-	< 0.50	-	-	-	< 0.001	<0.002	0.10	< 0.001	<0.0001	<0.005	<0.0005	<0.50	< 0.0005	< 0.01	<0.0002	<0.002	0.01	< 0.001	0.51
	4/15/2020	-	-	-	< 0.50	-		-	< 0.001	<0.002	0.11	< 0.001	< 0.0001	<0.005	< 0.0005	< 0.50	< 0.0005	< 0.01	<0.0002	<0.002	0.01	< 0.001	0.255 U
	5/28/2020	0.111	91.7	22.9	< 0.50	7.6 HF	44.4	388	-		0.11	-	-		-	< 0.50	-	-	-		0.01	-	0.58
	10/26/2020	<0.100	100	24.4	< 0.500	8.1 HF	48.3	364	-	-	0.118	-	-	-	-	<0.500	-	-	-	-	0.0106	-	-0.0141 U
MW-101	4/1/2021	<0.100	105.0	32.7	< 0.500	7.3 HF	58.1	424	<0.00200	<0.00200	0.13	< 0.00100	<0.000100	< 0.00500	<0.000500	< 0.500	< 0.000500	< 0.0100	<0.000200	<0.00200	0.01	< 0.00100	0.51
10100-101	10/1/2021	<0.100	109.0	27.6	< 0.500	7.4 HF	52.8	396	-	-	0.12	-	-	-	-	< 0.500	-	-	-	-	0.01	-	0.54
	4/1/2022	<0.100	104.0	27.6	< 0.500	7.5 HF	51.3	388	<0.00200	<0.00200	0.12	<0.00100	<0.000100	<0.00500	<0.000500	< 0.500	<0.000500	<0.0100	<0.000200	<0.00200	0.01	<0.00100	0.88
	10/3/2022	<0.100	80.3	25	< 0.500	7.5 HF	41.6	394		-	0.0913	-	-	-	-	<0.500	-		-	-	0.0088	-	-
	4/13/2023	<0.100	109.0	29.8	<1.00	7.4 HF	52.3	452	<0.00200 *+	<0.00200	0.12	<0.00100	<0.000200	<0.00500	<0.000500	<1.00	<0.000500	0.0106	<0.000200	<0.00200	0.01	<0.00100	0.166 U
	10/17/2023	<0.100	104.0	24.8	<1.00	7.4 HF	45.7	382		-	0.12	-	-		-	<1.00	-	0.0105	-		0.01	-	-
	4/23/2024	<0.100	107	34.1	<1.00 *+	7.2 HF	47.4	384	<0.00200	<0.00200	0.117	<0.00100	<0.000200	<0.00500	<0.000500	<1.00 *+	<0.000500	0.0102	<0.000200	<0.00200	0.00620	<0.00100	0.858
	8/1/2019 10/9/2019		-		<0.50	-	-	-	<0.001	<0.002	0.07	<0.001	<0.0001	<0.005	<0.0005	<0.50	<0.0005	<0.01	<0.0002	<0.002	<0.005	<0.001	0.63
	4/15/2020	-	-	-	<0.50	-	-	-	<0.001	<0.002	0.07	<0.001	<0.0001	<0.005	<0.0005	<0.50	<0.0005	<0.01	<0.0002	<0.002	<0.005	<0.001	-0.184 U
	5/28/2020	0.114	92.6	10.3	<0.50	7.5 HF	20.5	372	NU.001	<0.002	0.07	<0.001	<0.0001	<0.005	<0.0003	<0.50	<0.0003	VU.U1	<0.0002		<0.005	NO.001	0.399 U
	10/26/2020	<0.100	88.1	13.7	<0.500	8.2 HF	19.1	276	-		0.0682	-		-	-	<0.500			-	-		-	0.387 U
	4/1/2021	<0.100	83.5	14.8	<0.500	7.5 HF	22.1	320	<0.00200	<0.00200	0.07	<0.00100	<0.000100	<0.00500	<0.000500	<0.500	<0.000500	<0.0100	<0.000200	<0.00200	0.01	<0.00100	0.296 U
MW-102	10/1/2021	<0.100	101.0	21.9	< 0.500	7.4 HF	43.5	408	-	-	0.09	-	-	-	-	< 0.500	-	-	-	-	<0.00500	-	-
	4/1/2022	<0.100	93.8	19.1	<0.500	7.4 HF	39.5	320	<0.00200	<0.00200	0.10	< 0.00100	< 0.000100	< 0.00500	<0.000500	<0.500	<0.000500	<0.0100	<0.000200	<0.00200	0.01	< 0.00100	-0.0363 U
	10/3/2022	<0.100	70.1	23.9	< 0.500	7.4 HF	23.1	334	-		0.0539		-		-	< 0.500	-	-	-		< 0.00500	-	-
	4/13/2023	<0.100	96.1	23.9	<1.00	6.2 HF	30.8	394	<0.00200 *+	<0.00200	0.07	< 0.00100	<0.000200	< 0.00500	<0.000500	<1.00	< 0.000500	<0.0100	<0.000200	<0.00200	0.01	< 0.00100	0.304 U
	10/17/2023	<0.100	99.8	24.8	<1.00	7.5 HF	33.3	362	-	-	0.09	-	-	-	-	<1.00	-	-	-	-	< 0.00500	-	-
	4/23/2024	<0.100	103	30.7	<1.00 *+	7.3 HF	48.2	382	<0.00200	<0.00200	0.123	< 0.00100	<0.000200	< 0.00500	<0.000500	<1.00 *+	< 0.000500	0.0108	<0.000200	<0.00200	0.00560	<0.00100	0.729
	8/1/2019	-	-		-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-
	10/9/2019	-	-	-	0.57	-	-	-	<0.001	<0.002	0.07	< 0.001	<0.0001	<0.005	<0.0005	0.57	<0.0005	0.0206	<0.0002	0.0135	<0.005	< 0.001	0.77
	4/15/2020	-	-	-	<0.50	-	-	-	<0.001	<0.002	0.03	<0.001	<0.0001	<0.005	<0.0005	<0.50	<0.0005	<0.01	<0.0002	<0.002	0.01	<0.001	0.52
	5/28/2020	0.127	93.9	37.3	<0.50	7.7 HF	86.2	460	-	-	0.02	-	-	-	-	<0.50	-	-	-	-	0.01	-	0.581 U
	10/26/2020	0.145	156	99.7	<0.500	8.2 HF	210	638			0.036	-				<0.500			-		<0.00500		0.399 U
MW-103	4/1/2021	0.276	207.0	203.0	<0.500 <0.500	7.4 HF 7.4 HF	403.0	1080	<0.00200	<0.00200	0.04	<0.00100	<0.000100	<0.00500	<0.000500	<0.500 <0.500	<0.000500	0.0230 <0.0100	<0.000200	0.0027 <0.00200	<0.00500	<0.00100	0.75
	10/1/2021 4/1/2022	<0.100 <0.100	89.4 90.8	15.7 17.0	<0.500	7.4 HF	52.4 56.9	316 312	<0.00200	<0.00200	0.02	<0.00100	<0.000100	<0.00500	<0.000500	<0.500	<0.000500	<0.0100	<0.000200	<0.00200	<0.00500	<0.00100	0.161 U 0.323 U
	10/3/2022	<0.100	84.7	14.4	<0.500	7.4 HF	43.6	338	<0.00200	<0.00200	0.02	<0.00100	~U.UUU1UU	\U.UU3UU	NU.UUU30U	<0.500	40.00030U	V0.0100	<0.000200	NU.UU2UU	<0.00500	<0.00100	0.323 U
	4/13/2023	<0.100	98.2	18.4	<1.00	7.5 HF	58.3	414	<0.00200 *+	<0.00200	0.0219	<0.00100	<0.000200	<0.00500	<0.000500	<1.00	<0.000500	<0.0100	<0.000200	<0.00200	<0.00500	<0.00100	0.0405 U
	10/17/2023	<0.100	103.0	23.9	<1.00	7.5 HF	57.8	386		-0.00200	0.04	-0.00100	-	-	-	<1.00	-	-0.0100	-0.000200	-0.00200	-	-0.00100	-
	4/23/2024	<0.100	104	32.7	<1.00 *+	7.3 HF	68.9	376	<0.00200	<0.00200	0.132	<0.00100	<0.000200	<0.00500	<0.000500	<1.00 *+	<0.000500	0.0133	<0.000200	<0.00200	<0.00500	< 0.00100	0.442
	8/1/2019	0.814	347.0	245.0	-	-	738 F1	1670	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10/9/2019		-	-	0.60	-	-	-	< 0.001	<0.002	0.04	< 0.001	0.00	<0.005	0.0008	0.60	<0.0005	0.0219	<0.0002	0.0502	<0.005	< 0.001	0.94
	4/15/2020		-	-	0.52	-	-	-	< 0.001	<0.002	0.04	<0.001	<0.0001	<0.005	0.0007	0.52	<0.0005	0.0226	<0.0002	0.0697	<0.005	<0.001	0.107 U
	5/28/2020	0.872	276.0	258.0	< 0.50	7.4 HF	751.0	1530			0.04	-	-		0.0006	<0.50	-	0.0203	-	0.0555	-	-	0.70
	10/26/2020	0.8	348	296	<0.500	8 HF	657	1260	-		0.043	-	-		0.000703	<0.500	-	0.0275	-	0.0535	-	-	0.508 U
MW-104	4/1/2021	0.581	353.0	263.0	< 0.500	7 HF	631.0	1610	< 0.00200	<0.00200	0.05	<0.00100	<0.000100	< 0.00500	0.0009	< 0.500	<0.000500	0.0260	<0.000200	0.0256	< 0.00500	< 0.00100	0.78
	10/1/2021	0.564	308.0	232.0	< 0.500	7 HF	607.0	1360	-	-	0.04	-	-		0.0009	< 0.500	-	0.0236	-	0.0261	-	-	1.11
	4/1/2022	0.529	154.0	59.2	< 0.500	7.1 HF	190.0	590	<0.00200	<0.00200	0.04	<0.00100	<0.000100	<0.00500	0.0006	<0.500	<0.000500	0.0180	<0.000200	0.0310	<0.00500	<0.00100	0.518 U
	10/3/2022	0.262	105	39.3	< 0.500	7.2 HF	131	578	-	-	0.0396	-	-	-	<0.000500	<0.500	-	0.014	-	0.0289	-	-	-
	4/13/2023	0.263	140.0	19.1	<1.00	7.2 HF	96.2	538	<0.00200 *+	<0.00200	0.06	<0.00100	<0.000200	<0.00500	<0.000500	<1.00	<0.000500	0.0175	<0.000200	0.0353	<0.00500	<0.00100	-0.248 U
	10/17/2023	0.116	135.0	24.5	<1.00	7.5 HF	71.6	452		-	0.07	-	-		-	<1.00	-	0.0147	-	0.0270		-	-
	4/23/2024	<0.100	111	24.9	<1.00 *+	7.2 HF	63.9	364	< 0.00200	< 0.00200	0.0606	< 0.00100	< 0.000200	< 0.00500	<0.000500	<1.00 *+	< 0.000500	0.0102	< 0.000200	0.0249	0.00559	< 0.00100	0.775

Table B-2 Inactive CCR Surface Impoundment Historical Appendix III and Appendix IV Detection and Assessment Monitoring Analytical Laboratory Groundwater Sample Results City of Ames Municipal Electric System

				Ap	endix III Consti	ituents			Appendix IV Constituents														
onitoring Well Number	Sample Date	Boron	Calcium	Chloride	Fluoride	рН	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Combined Radium 226 228
		mg/L	mg/L	mg/L	mg/L	S.U.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pCi/L
Background Con (UPL)		0.472	245	208	0.846	7.272 - 8.072	613	1390	0.002	0.00542	0.146	0.001	0.0002	0.0121	0.00899	0.846	0.00841	0.0238	0.0002	0.0135	0.0133	0.001	1.18
Groundwater P Standa		NA	NA	NA	4.0	NA	NA	NA NA	0.006	0.01	2.0	0.004	0.005	0.1	0.00899	4.0	0.015	0.04	0.002	0.10	0.05	0.002	5
	8/1/2019		-		-	-		-			-	-	-		-		-	-	-		-	-	-
ļ	10/9/2019	-	-	-	0.63	-		-	<0.001	0.0086	0.0853	<0.001	<0.0001	<0.005	0.0069	0.63	<0.0005	0.0274	<0.0002	0.0260	<0.005	<0.001	0.96
-	4/15/2020 5/28/2020	0.495	250.0	279.0	0.93	7.5 HF	635.0	1430	<0.001	0.0095	0.0718	<0.001	<0.0001	<0.005	0.0016 0.0014	0.93	<0.0005	0.0300	<0.0002	0.0533	<0.005 ^	<0.001	0.71 1.13
F	10/26/2020	0.799	404	450	0.636	8 HF	919	1770		0.0033	0.0586	-		-	0.0014	0.636		0.0394	-	0.0625	-		0.707
MW-105	4/1/2021	0.723	384.0	452.0	0.74	7.5 HF	923.0	2110	<0.00200	0.0024	0.0789	< 0.00100	<0.000100	<0.00500	0.0012	0.74	<0.000500	0.0493	<0.000200	0.0415	< 0.00500	< 0.00100	1.15
IVIVV-103	10/1/2021	0.426	411.0	487.0	<0.500	7.5 HF	950.0	2180	-	0.0039	0.0460	-	-		0.0016	<0.500	-	0.0383	-	0.0558	-		0.80
	4/1/2022	0.849	292.0	359.0	0.75	7.5 HF	749.0	1650	<0.00200	0.0035	0.0418	<0.00100	<0.000100	<0.00500	0.0010	0.75	<0.000500	0.0417	<0.000200	0.0555	<0.00500	<0.00100	1.12
-	10/3/2022 4/13/2023	0.609	194 208.0	291 242.0	0.646 <1.00	7.6 HF 7.7 HF	575 486.0	1420 1330	<0.00200 *+	0.0022	0.0308	<0.00100	<0.000200	<0.00500	0.000945	0.646 <1.00	<0.000500	0.0252	<0.000200	0.0281 0.0566	<0.00500	<0.00100	0.0927 U
+	10/17/2023	0.904	265.0	286.0	<1.00	7.7 HF	670.0	1500	<0.00200 *+	0.0031	0.0368	<0.00100	<0.000200	<0.00500	0.0008	<1.00	<0.000500	0.0308	<0.000200	0.0374	<0.00500	<0.00100	0.0927 0
F	4/23/2024	0.731	196	223	<1.00 *+	7.6 HF	544	1230	<0.00200	0.0027	0.0411	<0.00100	<0.000200	<0.00500	0.000535	<1.00 *+	<0.000500	0.0313	<0.000200	0.0483	<0.00500	<0.00100	0.854
	8/1/2019		-	-	<0.50	-		-	-	-	-	-	-	-	-	< 0.50	-		-	-	-	-	-
	10/9/2019		-	-	0.54	-		-	< 0.001	0.00	0.04	< 0.001	< 0.0001	<0.005	0.0011	0.54	< 0.0005	0.0213	<0.0002	0.0274	< 0.005	< 0.001	1.10
	4/15/2020		-	-	<0.50	-		-	< 0.001	0.00	0.05	< 0.001	< 0.0001	<0.005	0.0014	<0.50	<0.0005	0.0229	<0.0002	0.0083	<0.005 ^	<0.001	0.71
-	5/28/2020	0.327	166.0 322	166.0 334	0.57	7.5 HF 7.7 HF	372.0 689	1030 1560		0.00	0.06	-	-	-	0.0015	0.57	-	0.0211	-	0.0179	-	-	0.561 U 1.52
-	10/26/2020 4/1/2021	0.587	340.0	386.0	1.08	7.7 HF 7.2 HF	781.0	1790	<0.00200	0.00334	0.0967	<0.00100	<0.000100	<0.00500	0.00392	1.08	<0.000500	0.0304	<0.000200	0.0188	<0.00500	0.00	1.52
MW-106	10/1/2021	0.499	403.0	388.0	<0.500	7.2 HF	896.0	1930	<0.00200 -	0.00	0.11		<0.000100	-	0.0029	<0.500		0.0329	<0.000200	0.0240		<0.00100	2.13
	4/1/2022	0.398	344.0	388.0	0.61	7.2 HF	922.0	1680	<0.00200	0.00	0.08	< 0.00100	<0.000100	<0.00500	0.0033	0.61	<0.000500	0.0499	<0.000200	0.0230	<0.00500	<0.00100	1.39
	10/3/2022	0.526	308	393	<0.5	7.1 HF	646	1830		0.00358	0.0751	-	-		0.00328	<0.5	-	0.0541	-	0.0231	-		
	4/13/2023	0.413	363.0	462.0	<1.00	7.1 HF	892.0	2040	<0.00200 *+	<0.00200	0.07	< 0.00100	<0.000200	< 0.00500	0.0039	<1.00	<0.000500	0.0537	<0.000200	0.0212	< 0.00500	<0.00100	1.37
	10/17/2023	0.580	396.0	453.0	<1.00	7.2 HF	896.0	2120		-	0.09	-	-		0.0296	<1.00	-	0.0606	-	0.0224	-	-	-
-	4/23/2024 8/1/2019	0.396	139	559	1.35	7.2 HF	93.2	900	<0.00200	0.0178	0.0780	<0.00100	<0.000200	<0.00500	0.0118	1.35	0.00140	0.0184	<0.000200	0.0994	<0.00500	<0.00100	1.49
	10/9/2019	<u> </u>	-	-	0.86			<u> </u>	<0.001	<0.002	0.07	<0.001	0.00	<0.005	0.0006	0.86	0.00	0.0156	<0.0002	0.0137	<0.005	<0.001	0.87
F	4/15/2020		-		0.89	-		-	<0.001	<0.002	0.08	< 0.001	0.00	<0.005	0.0008	0.89	0.00	0.0187	<0.0002	0.0159	<0.005 ^	<0.001	1.43
	5/28/2020	0.308	127.0	127.0	1.14	7.5 HF	300.0	806			0.06	-	< 0.0001	-	0.0005	1.14	< 0.0005	0.0183	-	0.0441	-	-	0.411 U
	10/26/2020	0.383	208	164	<0.500	8 HF	344	1150		-	0.0748	-	<0.000100		0.000807	<0.500	<0.000500	0.0193	-	0.00637	-	-	0.396 U
MW-107	4/1/2021	0.545	207.0	229.0	0.54	7.1 HF	467.0	1250	<0.00200	<0.00200	0.09	<0.00100	<0.000100	<0.00500	0.0011	0.54	<0.000500	0.0163	<0.000200	0.0047	<0.00500	<0.00100	0.61
-	10/1/2021 4/1/2022	0.344	129.0 128.0	116.0 68.4	<0.500 <0.500	7.2 HF 7.1 HF	260.0 150.0	750 300	<0.00200	<0.00200	0.05	<0.00100	<0.000100	<0.00500	0.0007 0.0006	<0.500	<0.000500	0.0111	<0.000200	0.0032 0.0042	<0.00500	<0.00100	0.87 0.213 U
-	10/3/2022	0.302	224	304	<0.500	7.1 HF	670	1630	<0.00200	<0.00200	0.0519	<0.00100	<0.000100	<0.00300	0.00094	<0.500	<0.000500	0.0120	<0.000200	0.00959	<0.00300	<0.00100	0.213 0
F	4/13/2023	0.373	280.0	295.0	1.13	7 HF	635.0	1580	<0.00200 *+	<0.00200	0.06	< 0.00100	<0.000200	<0.00500	0.0010	1.13	<0.000500	0.0332	<0.000200	0.0127	<0.00500	<0.00100	0.80
	10/17/2023	0.422	247.0	309.0	<1.00	7 HF	453.0	1370	-		0.06	-	-	-	0.0642	<1.00	-	0.0362	-	0.0211	-		
	4/23/2024	0.262	192	218	<1.00 *+	6.9 HF	293	800	<0.00200	<0.00200	0.0629	<0.00100	0.000984	<0.00500	0.0161	<1.00 *+	0.00172	0.0228	<0.000200	0.0117	<0.00500	<0.00100	0.842
	8/1/2019		-	-	-	-		-			-	-	-		-	-	-	-	-		-		
-	10/9/2019 4/15/2020	-	-		<0.50 <0.50	-		-	<0.001 <0.001	<0.002 <0.002	0.09 0.12	<0.001 <0.001	<0.0001	<0.005 <0.005	<0.0005 0.0006	<0.50 <0.50	<0.0005 <0.0005	<0.01 0.0109	<0.0002	0.0343	<0.005 ^	<0.001 <0.001	0.95 1.20
ŀ	5/28/2020	0.104	88.4	19.7	<0.50	7.6 HF	88.7	442		VU.UUZ	0.12	VU.001	V0.0001		<0.0005	<0.50	NU.UUU3	0.0109	<0.0002	0.0030	\U.UU3 ^	NU.001	1.20
ŀ	10/26/2020	0.171	108	58.2	<0.500	8.3 HF	171	660	-		0.123	-	-	-	<0.000500	<0.500	-	0.0113	-	0.00932	-	-	0.718
MW-108	4/1/2021	0.114	87.1	21.2	<0.500	7.5 HF	67.6	402	<0.00200	<0.00200	0.11	<0.00100	<0.000100	<0.00500	<0.000500	<0.500	<0.000500	0.0144	<0.000200	0.0029	<0.00500	<0.00100	1.13
	10/1/2021	0.283	113.0	66.0	<0.500	7.6 HF	120.0	570	-	-	0.11	-	-		-	<0.500	-	0.0222	-	<0.00200		-	1.47
	4/1/2022	0.143	60.0	50.1	<0.500	7.7 HF	77.6	268	<0.00200	<0.00200	0.08	<0.00100	<0.000100	<0.00500	<0.000500	<0.500	<0.000500	0.0162	<0.000200	0.0093	<0.00500	<0.00100	0.64
-	10/3/2022 4/13/2023	<0.100	101 111.0	27.3 29.1	<0.500 <1.00	7.6 HF 7.6 HF	69.2 71.2	456 482	<0.00200 *+	<0.00200	0.117 0.12	<0.00100	<0.000200	<0.00500	<0.000500	<0.500 <1.00	<0.000500	0.0258	<0.000200	0.00277 <0.00200	<0.00500	<0.00100	0.97
F	10/17/2023	0.152	111.0	53.6	<1.00	7.6 HF	124.0	534	-0.00200 °T	-	0.12	-0.00100	-0.000200	-	-0.000300	<1.00	-0.000300	0.0585	-0.000200		-0.00300	-0.00100	- 0.57
İ	4/23/2024	<0.100	68.3	75.2	<1.00 *+	7.7 HF	80.2	384	<0.00200	<0.00200	0.0585	<0.00100	<0.000200	<0.00500	<0.000500	<1.00 *+	<0.000500	0.0305	<0.000200	<0.00200	<0.00500	<0.00100	0.594
otes: A: Not applicable. g/L: miligrams per J.: Standard Units i/L: Picouries per ' Represents no d Result is less than Instrument relate	liter. liter. ata. n the sample de d quality conto	tection limit fo I sample (e.g., (or radiochemistry	r analyses. ation verificatio	n [CCV]) is outsi	de acceptance lin		,				,					,				,		

Table B-3

CCR Inactive Surface Impoundment

Detection and Assessment Monitoring Groundwater Sample Field Measurements

City of Ames Municipal Electric System

Monitoring Well Number	Sample Date	рН	Specific Conductivity	Temperature	Turbidity	Groundwater Level	Groundwater Elevation
		S.U.	μs/cm	°C	NTU	ft btoc	ft amsl
MW-101	10/17/2023	7.46	755	10.90	11.87	24.42	876.03
10100-101	4/23/2024	7.15	728	11.70	8.40	23.87	876.58
MW-102	10/17/2023	7.50	717	11.30	5.28	24.00	875.84
10100-102	4/23/2024	7.23	725	11.60	11.80	23.18	876.66
MW-103	10/17/2023	7.47	742	11.70	3.56	24.78	875.75
10100-102	4/23/2024	7.15	737	11.10	7.90	24.06	876.47
MW-104	10/17/2023	7.50	802	11.40	3.10	24.69	875.46
10100-104	4/23/2024	7.10	676	11.80	7.60	24.02	876.13
MW-105	10/17/2023	7.65	2,312	13.10	5.42	25.31	875.16
10100-102	4/23/2024	7.55	1,867	13.20	7.70	24.72	875.75
MW-106	10/17/2023	6.96	3,191	14.20	2.77	25.55	875.43
10100-100	4/23/2024	7.12	2,046	14.80	6.90	25.23	875.75
MW-107	10/17/2023	6.98	2,221	13.50	2.60	24.81	875.54
IVI VV-10 /	4/23/2024	6.82	1,604	14.00	7.60	24.44	875.91
MW-108	10/17/2023	7.76	944	11.90	2.75	25.70	875.70
10100-109	4/23/2024	7.66	641	12.00	9.80	25.29	876.11

Notes:

S.U.: Standard Units.

μs/cm: microsiemens per centimeter.

°C: degrees Celsius.

NTU: nephelometric turbidity units. ft btoc: feet below top of [well] casing. ft amsl: feet above mean sea level.

"-" represents no data.

[&]quot;*" indicates the negative number are likely due to instrument drift.