

March 16, 2022
File No. 27213168.21
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MEMORANDUM

TO: Jared Morrison, Director, Water and Waste Programs
Energymetro, Inc. (f/k/a Kansas City Power & Light Co., Inc.)

FROM: Douglas L. Doerr, SCS Engineers
John R. Rockhold, SCS Engineers

SUBJECT: **Notification of Closure Completion (40 CFR 257.102(h) and
Certification of Closure by Removal (40 CFR 257.102(c)
Iatan Generating Station Ash Impoundment
Groundwater Monitoring Concentrations Evaluation and Closure**

This memorandum presents the Notification of Closure Completion as required by 40 CFR 257.102(h); certification of final closure as required by 40 CFR 257.102(f)(3); and the results of groundwater monitoring performed by SCS Engineers following removal of coal combustion residuals (CCR) from the Ash Impoundment at the Iatan Generating Station (Station). The Ash Impoundment is subject to Federal Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments per 40 CFR 257 Subpart D (CCR Rule) and is operated by Energymetro, Inc. (Energymetro). A document "Notification of Intent to Initiate Closure of Inactive CCR Surface Impoundments" was placed in the CCR Operating Record on December 17, 2015. This was communicated to the Missouri Department of Natural Resources on January 13, 2016.

Energymetro retained Clarkson Construction to remove ponded CCR material from the Iatan Ash Impoundment. Dredge America served as subcontractor to Clarkson Construction to complete the hydraulic dredging component of the pond closure project. Energymetro retained Burns & McDonnell (BMCD) as certifying engineer to certify that, upon completion of the work, the CCR in the Ash Impoundment had been removed in accordance with the written closure plan titled "CCR Closure Plan, Ash Impoundment, Iatan Generating Station, Revision 0", dated April 13, 2018, as required by 40 CFR 257.102(b) (Attachment 1). Closure construction activities began in April 2016 and were projected to be completed by April of 2021 (within five years of commencing closure construction as required by 40 CFR 257.102(f)(1)(ii)). As of November 5, 2020, an estimated 190,000 cubic yards of CCR material remained to be removed and it was determined that closure would not be completed within the five year timeframe. Therefore, BMCD prepared a demonstration for Energymetro for a two-year extension to the timeframe for completing closure per 40 CFR 257.102(f)(2)(ii)(B) (Attachment 2).

BMCD certified removal of CCR material from the Ash Impoundment was completed in accordance with the Closure Plan required by 40 CFR 257.102(b) and met the CCR removal requirement of 40 CFR 257.102(c) per 40 CFR 257.102(f)(3). Removal of CCR from the Ash Impoundment was certified November 30, 2021 (Attachment 3). SCS Engineers has reviewed this document.

In addition to removal of the CCR material, 40 CFR 257.102(c) requires groundwater monitoring concentrations to be below the groundwater protection standard (GWPS) as stated below:

40 CFR 257.102 (c) Closure by removal of CCR. An owner or operator may elect to close a CCR unit by removing and decontaminating all areas affected by releases from the CCR unit. CCR removal and decontamination of the CCR unit are complete when constituent concentrations throughout the CCR unit and any areas affected by releases from the CCR unit have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standard established pursuant to §257.95(h) for constituents listed in Appendix IV to this part.

The Ash Impoundment is in assessment groundwater monitoring under 40 CFR 257.95. No Appendix IV constituents have been detected at statistically significant levels above the GWPSs; therefore, no corrective measures, remedies, or corrective actions have been required under 40 CFR 257.96 through 257.98.

GWPSs were determined for each Appendix IV constituent detected in the Impoundment's monitoring wells pursuant to 40 CFR 257.95(h) as summarized below.

1. If the constituent has a National Primary Drinking Water Regulation Maximum Contaminant Level (MCL) provided by the United States Environmental Protection Agency, the MCL is the GWPS.
2. For cobalt 6 µg/L, lead 15 µg/L, lithium 40 µg/L, and molybdenum 100 µg/L (40 CFR 257.95(h)(2)).
3. For constituents with background levels higher than the MCL or higher than the levels listed above in item 2, the background concentration becomes the GWPS.

The GWPSs for Appendix IV constituents were set equal to the highest value of the MCL, concentrations specified by 40 CFR 257.95(h)(2) or background concentrations. The background concentrations for each of the Appendix IV constituents were determined following the prediction limit statistical procedures as specified in the "Statistical Method Certification by A Qualified Professional Engineer" dated April 17, 2019. Appendix IV constituent background samples were collected over eight sampling events between February 2018 and February 2019. Appendix IV constituent background results were reported in the "2018-2019 Annual Groundwater Monitoring and Corrective Action Report, Ash Impoundment, Iatan Generating Station" dated July 22, 2019.

Seven Appendix IV constituents were detected at low levels in historical background samples in at least one of the monitoring wells. These include: arsenic, barium, cadmium, fluoride, lithium, molybdenum, and radium combined. Cadmium was only detected in one well one time and is considered an outlier and was not used in the determination of background concentrations. All other Appendix IV constituents were sampled and analyzed but were not detected.

Groundwater samples for closure confirmation were collected from the Ash Impoundment monitoring wells on October 19, 2021 and December 2, 2021 following removal of CCR from the Ash Impoundment and analyzed for Appendix IV constituents.

Closure confirmation sample results for both sampling events are below the GWPSs for each of the detected Appendix IV constituents. A summary of the detected Appendix IV constituents, background

data, MCLs, 40 CFR 257.95(h)(2) values, background concentrations (prediction limits), and GWPSs is attached as Table 1. Based on these results, Appendix IV constituents in groundwater do not exceed the GWPSs. Sampling and analysis to demonstrate Appendix IV constituents do not exceed GWPS values has been completed within the two-year extension to the timeframe for completing closure of the Ash Impoundment per 40 CFR 257.102(f)(2)(ii)(B)).

CERTIFICATION

As required by 40 CFR 257.102(f)(3), I hereby certify that the groundwater monitoring concentrations at the Iatan Ash Impoundment do not exceed the groundwater protection standards determined for the Ash Impoundment pursuant to 40 CFR 257.95(h) for constituents listed in Appendix IV of 40 CFR 257. Based on acceptance of the certification of CCR removal (Attachment 3; without independent verification) and no exceedances of the groundwater protection standards for the closure confirmation samples, the Iatan Ash Impoundment is now closed in accordance with the requirements of 40 CFR 257.102.



Attachments:

- Table 1: Appendix IV Background Data and Groundwater Protection Standards
- Attachment 1 - *CCR Closure Plan, Ash Impoundment, Iatan Generating Station, Revision 0, April 13, 2018*
- Attachment 2 - *Iatan Ash Impoundment Extension of Closure Timeframe, December 17, 2020*
- Attachment 3 - *Certification of CCR Removal in Preparation for Closure by Removal of the Iatan Ash Impoundment, November 30, 2021*

TABLE 1

Appendix IV Background Data and Groundwater Protection Standards

Table 1
Ash Impoundment
Appendix IV Background Data and Groundwater Protection Standards
Evergy Iatan Generating Station

Well Number	Sample Date	Appendix IV Constituents														
		Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Selenium (mg/L)	Thallium (mg/L)	Radium Combined (pCi/L)
MCL GWPS		0.006	0.010	2	0.004	0.005	0.1	NA	4.0	0.015*	NA	0.002	NA	0.05	0.002	5
40 CFR 257.95(h) GWPS		NA	NA	NA	NA	NA	NA	0.006	NA	NA	0.040	NA	0.100	NA	NA	NA
MW-101	02/27/18	<0.00200	0.00247	0.681	<0.00200	<0.00100	<0.0100	<0.0100	0.288	<0.00200	0.0362	<0.000200	<0.00500	<0.00200	<0.00200	0.177
MW-101	04/16/18	<0.00200	<0.00200	0.694	<0.00200	<0.00100	<0.0100	<0.0100	0.387	<0.00200	0.0369	<0.000200	<0.00500	<0.00200	<0.00200	0.870
MW-101	05/21/18	<0.00200	<0.00200	0.686	<0.00200	<0.00100	<0.0100	<0.0100	0.300	<0.00200	0.0381	<0.000200	<0.00500	<0.00200	<0.00200	0.894
MW-101	07/19/18	<0.00200	<0.00200	0.689	<0.00200	<0.00100	<0.0100	<0.0100	0.297	<0.00200	0.0339	<0.000200	<0.00500	<0.00200	<0.00200	1.82
MW-101	09/10/18	<0.00200	0.00462	0.630	<0.00200	<0.00100	<0.0100	<0.0100	0.392	<0.00200	0.0323	<0.000200	<0.00500	<0.00200	<0.00200	1.08
MW-101	10/30/18	<0.00200	<0.00200	0.678	<0.00200	<0.00100	<0.0100	<0.0100	0.318	<0.00200	0.0287	<0.000200	<0.00500	<0.00200	<0.00200	2.78
MW-101	12/20/18	<0.00200	0.00473	0.663	<0.00200	<0.00100	<0.0100	<0.0100	0.316	<0.00200	0.0324	<0.000200	<0.00500	<0.00200	<0.00200	1.16
MW-101	02/15/19	<0.00200	0.00412	0.637	<0.00200	<0.00100	<0.0100	<0.0100	0.318	<0.00200	0.0325	<0.000200	<0.00500	<0.00200	<0.00200	2.28
MW-101 PL/BG		0.002	0.007753	0.7322	0.002	0.001	0.01	0.01	0.4303	0.002	0.04177	0.0002	0.005	0.002	0.002	3.569
MW-101 GWPS		0.006	0.010	2	0.004	0.005	0.1	0.006	4.0	0.015	0.04177**	0.002	0.100	0.05	0.002	5
MW-101	10/19/21	<0.00400	<0.00200	0.676	<0.00200	<0.00100	<0.0100	<0.00200	0.333	<0.00200	0.0326	<0.000200	<0.00500	<0.00200	<0.00200	0.817 (J)
MW-101	12/02/21	<0.00400	<0.00200	0.678	<0.00200	<0.00100	<0.0100	<0.00200	0.349	<0.00200	0.0320	<0.000200	<0.00500	<0.00200	<0.00200	1.91
MW-102 PL/BG		0.002	0.04415	0.8502	0.002	0.001	0.01	0.01	0.3783	0.002	0.04603	0.0002	0.005	0.002	0.002	4.338
MW-102 GWPS		0.006	0.04415**	2	0.004	0.005	0.1	0.006	4	0.015	0.04603**	0.002	0.100	0.05	0.002	5
MW-102	10/19/21	<0.00400	0.00465	0.643	<0.00200	<0.00100	<0.0100	<0.00200	0.263	<0.00200	0.0345	<0.000200	<0.00500	<0.00200	<0.00200	2.17
MW-102	12/02/21	<0.00400	0.00307 (B)	0.633	<0.00200	<0.00100	<0.0100	<0.00200	0.263	<0.00200	0.0317	<0.000200	<0.00500	<0.00200	<0.00200	2.670
MW-103 PL/BG		0.002	0.002	0.7999	0.002	0.001	0.01	0.01	0.3425	0.002	0.06572	0.0002	0.005	0.002	0.002	4.142
MW-103 GWPS		0.006	0.010	2	0.004	0.005	0.1	0.006	4.0	0.015	0.06572**	0.002	0.100	0.05	0.002	5
MW-103	10/19/21	<0.00400	<0.00200	0.655	<0.00200	<0.00100	<0.0100	<0.00200	0.238	<0.00200	0.0480	<0.000200	<0.00500	<0.00200	<0.00200	3.65
MW-103	12/02/21	<0.00400	<0.00200	0.650	<0.00200	<0.00100	<0.0100	<0.00200	0.248	<0.00200	0.0470	<0.000200	<0.00500	<0.00200	<0.00200	2.42

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Evergy Iatan Generating Station

Well Number	Sample Date	Appendix IV Constituents														
		Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Selenium (mg/L)	Thallium (mg/L)	Radium Combined (pCi/L)
MCL GWPS		0.006	0.010	2	0.004	0.005	0.1	NA	4.0	0.015*	NA	0.002	NA	0.05	0.002	5
40 CFR 257.95(h) GWPS		NA	NA	NA	NA	NA	NA	0.006	NA	NA	0.040	NA	0.100	NA	NA	NA
MW-104	02/28/18	<0.00200	<0.00200	0.181	<0.00200	<0.00100	<0.0100	<0.0100	0.470	<0.00200	0.0160	<0.000200	0.0226	<0.00200	<0.00200	0.698
MW-104	04/16/18	<0.00200	<0.00200	0.161	<0.00200	<0.00100	<0.0100	<0.0100	0.674	<0.00200	0.0203	<0.000200	0.0229	<0.00200	<0.00200	0.368
MW-104	05/21/18	<0.00200	<0.00200	0.162	<0.00200	<0.00100	<0.0100	<0.0100	0.628	<0.00200	0.0164	<0.000200	0.0251	<0.00200	<0.00200	0.942
MW-104	07/19/18	<0.00200	<0.00200	0.152	<0.00200	<0.00100	<0.0100	<0.0100	0.510	<0.00200	0.0156	<0.000200	0.0288	<0.00200	<0.00200	0.396
MW-104	09/11/18	<0.00200	<0.00200	0.162	<0.00200	<0.00100	<0.0100	<0.0100	0.670	<0.00200	0.0161	<0.000200	0.0280	<0.00200	<0.00200	0.506
MW-104	10/30/18	<0.00200	<0.00200	0.163	<0.00200	<0.00100	<0.0100	<0.0100	0.598	<0.00200	<0.0150	<0.000200	0.0249	<0.00200	<0.00200	1.67
MW-104	12/20/18	<0.00200	<0.00200	0.165	<0.00200	<0.00100	<0.0100	<0.0100	0.453	<0.00200	0.0159	<0.000200	0.0225	<0.00200	<0.00200	1.72
MW-104	02/14/19	<0.00200	<0.00200	0.163	<0.00200	<0.00100	<0.0100	<0.0100	0.537	<0.00200	<0.0150	<0.000200	0.0220	<0.00200	<0.00200	0.953
MW-104 PL/BG		0.002	0.002	0.1843	0.002	0.001	0.01	0.01	0.7922	0.002	0.03283	0.0002	0.03131	0.002	0.002	2.284
MW-104 GWPS		0.006	0.010	2	0.004	0.005	0.1	0.006	4.0000	0.015	0.040	0.002	0.100	0.05	0.002	5
MW-104	10/19/21	<0.00400	<0.00200	0.240	<0.00200	<0.00100	<0.0100	<0.00200	0.497	<0.00200	0.0201	<0.000200	0.0218	<0.00200	<0.00200	1.15
MW-104	12/02/21	<0.00400	<0.00200	0.240	<0.00200	<0.00100	<0.0100	<0.00200	0.537	<0.00200	0.0213	<0.000200	0.0220	<0.00200	<0.00200	0.665 (J)
MW-105	02/28/18	<0.00200	<0.00200	0.402	<0.00200	<0.00100	<0.0100	<0.0100	0.654	<0.00200	0.0287	<0.000200	0.0148	<0.00200	<0.00200	0.772
MW-105	04/16/18	<0.00200	<0.00200	0.377	<0.00200	<0.00100	<0.0100	<0.0100	0.837	<0.00200	0.0362	<0.000200	0.0167	<0.00200	<0.00200	0.539
MW-105	05/21/18	<0.00200	<0.00200	0.369	<0.00200	<0.00100	<0.0100	<0.0100	0.791	<0.00200	0.0339	<0.000200	0.0151	<0.00200	<0.00200	0.884
MW-105	07/19/18	<0.00200	<0.00200	0.374	<0.00200	<0.00100	<0.0100	<0.0100	0.637	<0.00200	0.0304	<0.000200	0.0155	<0.00200	<0.00200	0.895
MW-105	09/11/18	<0.00200	<0.00200	0.380	<0.00200	<0.00100	<0.0100	<0.0100	0.808	<0.00200	0.0269	<0.000200	0.0196	<0.00200	<0.00200	2.05
MW-105	10/30/18	<0.00200	<0.00200	0.358	<0.00200	<0.00100	<0.0100	<0.0100	0.744	<0.00200	0.0232	<0.000200	0.0340	<0.00200	<0.00200	1.98
MW-105	12/19/18	<0.00200	<0.00200	0.370	<0.00200	<0.00100	<0.0100	<0.0100	0.595	<0.00200	0.0248	<0.000200	0.0352	<0.00200	<0.00200	1.68
MW-105	02/14/19	<0.00200	<0.00200	0.374	<0.00200	<0.00100	<0.0100	<0.0100	0.690	<0.00200	0.0273	<0.000200	0.0194	<0.00200	<0.00200	0.434
MW-105 PL/BG		0.002	0.002	0.4079	0.002	0.001	0.01	0.01	0.9474	0.002	0.04029	0.0002	0.0455	0.002	0.002	2.824
MW-105 GWPS		0.006	0.010	2	0.004	0.005	0.1	0.006	4.0	0.015	0.04029**	0.002	0.100	0.05	0.002	5
MW-105	10/19/21	<0.00400	<0.00200	0.231	<0.00200	<0.00100	<0.0100	<0.00200	0.682	<0.00200	0.0247	<0.000200	0.0241	<0.00200	<0.00200	1.71 (J)
MW-105	12/02/21	<0.00400	<0.00200	0.232	<0.00200	<0.00100	<0.0100	<0.00200	0.692	<0.00200	0.0248	<0.000200	0.0250	<0.00200	<0.00200	0.818 (J)
MW-107	02/28/18	<0.00200	<0.00200	0.112	<0.00200	<0.00100	<0.0100	<0.0100	0.494	<0.00200	<0.0150	<0.000200	0.0979	<0.00200	<0.00200	0.754
MW-107	04/16/18	<0.00200	<0.00200	0.102	<0.00200	<0.00100	<0.0100	<0.0100	0.790	<0.00200	<0.0150	<0.000200	0.110	<0.00200	<0.00200	1.56
MW-107	05/21/18	<0.00200	<0.00200	0.0994	<0.00200	<0.00100	<0.0100	<0.0100	0.779	<0.00200	<0.0150	<0.000200	0.103	<0.00200	<0.00200	0.190
MW-107	07/19/18	<0.00200	<0.00200	0.0995	<0.00200	<0.00100	<0.0100	<0.0100	0.604	<0.00200	<0.0150	<0.000200	0.102	<0.00200	<0.00200	0.221
MW-107	09/11/18	<0.00200	<0.00200	0.0991	<0.00200	<0.00100	<0.0100	<0.0100	0.416	<0.00200	<0.0150	<0.000200	0.0897	<0.00200	<0.00200	0.144
MW-107	10/29/18	<0.00200	<0.00200	0.103	<0.00200	<0.00100	<0.0100	<0.0100	0.667	<0.00200	<0.0150	<0.000200	0.0915	<0.00200	<0.00200	1.02
MW-107	12/20/18	<0.00200	<0.00200	0.105	<0.00200	<0.00100	<0.0100	<0.0100	0.532	<0.00200	<0.0150	<0.000200	0.0703	<0.00200	<0.00200	1.64
MW-107	02/15/19	<0.00200	<0.00200	0.116	<0.00200	<0.00100	<0.0100	<0.0100	0.652	<0.00200	<0.0150	<0.000200	0.0711	<0.00200	<0.00200	0.309
MW-107 PL/BG		0.002	0.002	0.1207	0.002	0.001	0.01	0.01	0.9578	0.002	0.015	0.0002	0.1295	0.002	0.002	2.325
MW-107 GWPS		0.006	0.010	2	0.004	0.005	0.1	0.006	4.0	0.015	0.040	0.002	0.1295**	0.05	0.002	5
MW-107	10/19/21	<0.00400	<0.00200	0.116	<0.00200	<0.00100	<0.0100	<0.00200	0.429	<0.00200	0.0168	<0.000200	0.0303	<0.00200	<0.00200	1.75
MW-107	12/02/21	<0.00400	<0.00200	0.119	<0.00200	<0.00100	<0.0100	<0.00200	0.435	<0.00200	<0.0150	<0.000200	0.0293	<0.00200	<0.00200	0.0272 (U)

Table 1
Ash Impoundment
Appendix IV Background Data and Groundwater Protection Standards
Evergy Iatan Generating Station

Well Number	Sample Date	Appendix IV Constituents														
		Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Selenium (mg/L)	Thallium (mg/L)	Radium Combined (pCi/L)
MCL GWPS		0.006	0.010	2	0.004	0.005	0.1	NA	4.0	0.015*	NA	0.002	NA	0.05	0.002	5
40 CFR 257.95(h) GWPS		NA	NA	NA	NA	NA	NA	0.006	NA	NA	0.040	NA	0.100	NA	NA	NA
MW-108	02/28/18	<0.00200	<0.00200	0.202	<0.00200	<0.00100	<0.0100	<0.0100	0.394	<0.00200	0.0330	<0.000200	0.0131	<0.00200	<0.00200	1.59
MW-108	04/16/18	<0.00200	0.00251	0.197	<0.00200	<0.00100	<0.0100	<0.0100	0.668	<0.00200	0.0338	<0.000200	0.0147	<0.00200	<0.00200	1.55
MW-108	05/21/18	<0.00200	0.00226	0.204	<0.00200	<0.00100	<0.0100	<0.0100	0.605	<0.00200	0.0376	<0.000200	0.0126	<0.00200	<0.00200	0.585
MW-108	07/19/18	<0.00200	0.00204	0.171	<0.00200	<0.00100	<0.0100	<0.0100	0.425	<0.00200	0.0346	<0.000200	0.0112	<0.00200	<0.00200	1.14
MW-108	09/10/18	<0.00200	<0.00200	0.175	<0.00200	<0.00100	<0.0100	<0.0100	0.480	<0.00200	0.0340	<0.000200	0.00776	<0.00200	<0.00200	1.00
MW-108	10/29/18	<0.00200	0.00288	0.235	<0.00200	<0.00100	<0.0100	<0.0100	0.530	<0.00200	0.0310	<0.000200	0.0110	<0.00200	<0.00200	0.447
MW-108	12/19/18	<0.00200	0.00302	0.283	<0.00200	<0.00100	<0.0100	<0.0100	0.327	<0.00200	0.0450	<0.000200	0.00944	<0.00200	<0.00200	0.488
MW-108	02/15/19	<0.00200	0.00211	0.153	<0.00200	<0.00100	<0.0100	<0.0100	0.482	<0.00200	0.0353	<0.000200	0.0118	<0.00200	<0.00200	0.470
MW-108 PL/BG		0.002	0.004927	0.3081	0.002	0.001	0.01	0.01	0.7754	0.002	0.04651	0.0002	0.01701	0.002	0.002	2.149
MW-108 GWPS		0.006	0.010	2	0.004	0.005	0.1	0.006	4.0	0.015	0.04651**	0.002	0.100	0.05	0.002	5
MW-108	10/19/21	<0.00400	<0.00200	0.0726	<0.00200	<0.00100	<0.0100	<0.00200	0.576	<0.00200	0.0225	<0.000200	0.0333	<0.00200	<0.00200	0.650 (U)
MW-108	12/02/21	<0.00400	0.00226 (B)	0.0634	<0.00200	<0.00100	<0.0100	<0.00200	0.691	<0.00200	0.0199	<0.000200	0.0351	<0.00200	<0.00200	0.0238 (U)
MW-109	02/27/18	<0.00200	<0.00200	0.207	<0.00200	<0.00100	<0.0100	<0.0100	0.461	<0.00200	0.0234	<0.000200	0.0255	<0.00200	<0.00200	0.416
MW-109	04/16/18	<0.00200	<0.00200	0.282	<0.00200	<0.00100	<0.0100	<0.0100	0.600	<0.00200	0.0347	<0.000200	0.0205	<0.00200	<0.00200	1.67
MW-109	05/21/18	<0.00200	0.00219	0.296	<0.00200	<0.00100	<0.0100	<0.0100	0.580	<0.00200	0.0306	<0.000200	0.0179	<0.00200	<0.00200	0.280
MW-109	07/19/18	<0.00200	0.00334	0.244	<0.00200	<0.00100	<0.0100	<0.0100	0.470	<0.00200	0.0263	<0.000200	0.0163	<0.00200	<0.00200	1.88
MW-109	09/10/18	<0.00200	0.00351	0.303	<0.00200	<0.00100	<0.0100	<0.0100	0.601	<0.00200	0.0258	<0.000200	0.0130	<0.00200	<0.00200	1.19
MW-109	10/29/18	<0.00200	0.00487	0.315	<0.00200	<0.00100	<0.0100	<0.0100	0.557	<0.00200	0.0235	<0.000200	0.0119	<0.00200	<0.00200	1.34
MW-109	12/19/18	<0.00200	<0.00200	0.208	<0.00200	<0.00100	<0.0100	<0.0100	0.445	<0.00200	0.0190	<0.000200	0.0198	<0.00200	<0.00200	0.480
MW-109	02/15/19	<0.00200	<0.00200	0.246	<0.00200	<0.00100	<0.0100	<0.0100	0.517	<0.00200	0.0281	<0.000200	0.0203	<0.00200	<0.00200	0.765
MW-109 PL/BG		0.002	0.006871	0.3717	0.002	0.001	0.01	0.01	0.6944	0.002	0.03881	0.0002	0.0295	0.002	0.002	2.56
MW-109 GWPS		0.006	0.010	2	0.004	0.005	0.1	0.006	4.0	0.015	0.040	0.002	0.100	0.05	0.002	5
MW-109	10/19/21	<0.00400	<0.00200	0.093	<0.00200	<0.00100	<0.0100	<0.00200	0.673	<0.00200	0.0177	<0.000200	0.0371	<0.00200	<0.00200	0.900 (J)
MW-109	12/02/21	<0.00400	<0.00200	0.100	<0.00200	<0.00100	<0.0100	<0.00200	0.663	<0.00200	0.0172	<0.000200	0.0377	<0.00200	<0.00200	1.050
MW-110	02/27/18	<0.00200	<0.00200	0.115	<0.00200	<0.00100	<0.0100	<0.0100	0.489	<0.00200	0.0195	<0.000200	0.0701	<0.00200	<0.00200	0.930
MW-110	04/16/18	<0.00200	0.00444	0.173	<0.00200	<0.00100	<0.0100	<0.0100	0.648	<0.00200	0.0175	<0.000200	0.0887	<0.00200	<0.00200	0.351
MW-110	05/21/18	<0.00200	<0.00200	0.125	<0.00200	<0.00100	<0.0100	<0.0100	0.621	<0.00200	0.0217	<0.000200	0.0767	<0.00200	<0.00200	0.139
MW-110	07/19/18	<0.00200	<0.00200	0.110	<0.00200	<0.00100	<0.0100	<0.0100	0.457	<0.00200	0.0191	<0.000200	0.0622	<0.00200	<0.00200	0.59
MW-110	09/10/18	<0.00200	<0.00200	0.374	<0.00200	<0.00100	<0.0100	<0.0100	0.628	<0.00200	0.0257	<0.000200	0.0132	<0.00200	<0.00200	1.59
MW-110	10/30/18	<0.00200	0.00464	0.130	<0.00200	<0.00100	<0.0100	<0.0100	0.470	<0.00200	<0.0150	<0.000200	0.0829	<0.00200	<0.00200	0.81
MW-110	12/19/18	<0.00200	0.00365	0.133	<0.00200	<0.00100	<0.0100	<0.0100	0.374	<0.00200	<0.0150	<0.000200	0.0675	<0.00200	<0.00200	0.772
MW-110	02/15/19	<0.00200	0.00235	0.119	<0.00200	<0.00100	<0.0100	<0.0100	0.461	<0.00200	<0.0150	<0.000200	0.0884	<0.00200	<0.00200	0.983
MW-110 PL/BG		0.002	0.007361	0.374	0.002	0.001	0.01	0.01	0.7768	0.002	0.04121	0.0002	0.1316	0.002	0.002	1.902
MW-110 GWPS		0.006	0.010	2	0.004	0.005	0.1	0.006	4.0	0.015	0.04121**	0.002	0.1316**	0.05	0.002	5
MW-110	10/19/21	<0.00400	0.00280	0.0716	<0.00200	<0.00100	<0.0100	<0.00200	0.561	<0.00200	<0.0150	<0.000200	0.0978	<0.00200	<0.00200	0.267 (U)
MW-110	12/02/21	<0.00400	0.00469 (B)	0.0742	<0.00200	<0.00100	<0.0100	<0.00200	0.650	<0.00200	<0.0150	<0.000200	0.0957	<0.00200	<0.00200	0.635 (J)

Table 1
Ash Impoundment
Appendix IV Background Data and Groundwater Protection Standards
Evergy Iatan Generating Station

Well Number	Sample Date	Appendix IV Constituents														
		Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Selenium (mg/L)	Thallium (mg/L)	Radium Combined (pCi/L)
MCL GWPS		0.006	0.010	2	0.004	0.005	0.1	NA	4.0	0.015*	NA	0.002	NA	0.05	0.002	5
40 CFR 257.95(h) GWPS		NA	NA	NA	NA	NA	NA	0.006	NA	NA	0.040	NA	0.100	NA	NA	NA
MW-111	02/27/18	<0.00200	<0.00200	0.344	<0.00200	<0.00100	<0.0100	<0.0100	0.661	<0.00200	0.0311	<0.000200	0.0153	<0.00200	<0.00200	0.472
MW-111	04/16/18	<0.00200	0.00215	0.441	<0.00200	<0.00100	<0.0100	<0.0100	0.608	<0.00200	0.0331	<0.000200	0.0139	<0.00200	<0.00200	0.252
MW-111	05/21/18	<0.00200	<0.00200	0.410	<0.00200	<0.00100	<0.0100	<0.0100	0.646	<0.00200	0.0302	<0.000200	0.0155	<0.00200	<0.00200	0.489
MW-111	07/19/18	<0.00200	<0.00200	0.370	<0.00200	<0.00100	<0.0100	<0.0100	0.488	<0.00200	0.0270	<0.000200	0.0149	<0.00200	<0.00200	1.21
MW-111	09/10/18	<0.00200	<0.00200	0.373	<0.00200	0.0733***	<0.0100	<0.0100	0.620	<0.00200	0.0230	<0.000200	0.0140	<0.00200	<0.00200	2.58
MW-111	10/30/18	<0.00200	<0.00200	0.391	<0.00200	<0.00100	<0.0100	<0.0100	0.525	<0.00200	0.0249	<0.000200	0.0124	<0.00200	<0.00200	2.29
MW-111	12/19/18	<0.00200	<0.00200	0.386	<0.00200	<0.00100	<0.0100	<0.0100	0.422	<0.00200	0.0235	<0.000200	0.0124	<0.00200	<0.00200	1.13
MW-111	02/15/19	<0.00200	0.00370	0.454	<0.00200	<0.00100	<0.0100	<0.0100	0.513	<0.00200	0.0270	<0.000200	0.0127	<0.00200	<0.00200	1.18
MW-111 PL/BG		0.002	0.0037	0.4916	0.002	0.001	0.01	0.01	0.7805	0.002	0.03697	0.0002	0.01718	0.002	0.002	3.384
MW-111 GWPS		0.006	0.010	2	0.004	0.005	0.1	0.006	4.0	0.015	0.040	0.002	0.100	0.05	0.002	5
MW-111	10/19/21	<0.00400	<0.00200	0.471	<0.00200	<0.00100	<0.0100	<0.00200	0.409	<0.00200	0.0268	<0.000200	0.0104	<0.00200	<0.00200	3.62
MW-111	12/02/21	<0.00400	0.00544 (B)	0.562	<0.00200	<0.00100	<0.0100	<0.00200	0.453	<0.00200	0.0262	<0.000200	0.0113	<0.00200	<0.00200	1.26

* EPA Action Level

** Groundwater Protection Standard Based on Background Level

*** Outlier not used to determine Groundwater Protection Standard

CCR - Coal Combustion Residuals

GWPS - Groundwater Protection Standard

MCL - Maximum Contaminant Level

PL/BG - Prediction Limit / Background Level

mg/L - Milligrams per Liter

pCi/L - Picocuries per Liter

B - Same analyte is found in the associated laboratory blank

BDL - Below detectable levels

J - The identification of the analyte is acceptable; the reported value is an estimate.

U - Below Detectable Limits: Indicates that the analyte was not detected.

ATTACHMENT 1

CCR Closure Plan, Ash Impoundment, Iatan Generating Station,
Revision 0, October 13, 2018

CCR Closure Plan Ash Impoundment



Iatan Generating Station

Kansas City Power & Light Company
Project No. 87292

Revision 0
4/13/2018

CCR Closure Plan Ash Impoundment

prepared for

**Kansas City Power & Light Company
Iatan Generating Station
Weston, Missouri**

Project No. 87292

**Revision 0
4/13/2018**

prepared by

**Burns & McDonnell Engineering Company, Inc.
Kansas City, Missouri**

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INDEX AND CERTIFICATION

Kansas City Power & Light Company
Iatan Generating Station
CCR Closure Plan
Ash Impoundment
Project No. 87292

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Certification

I hereby certify, as a Professional Engineer in the State of Missouri, that the information in this document was assembled under my direct personal charge. This report is not intended or represented to be suitable for reuse by the Kansas City Power & Light Company or others without specific verification or adaptation by the Engineer.



Edward Theodore Tohill, P.E.
Missouri License # 26841

Date: 04/13/13

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LIST OF ABBREVIATIONS

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
Iatan	Iatan Generating Station
KCP&L	Kansas City Power & Light Company
RCRA	Resource Conservation and Recovery Act
U.S.C.	United States Code

1.0 INTRODUCTION

On April 17, 2015, the Environmental Protection Agency (EPA) issued the final version of the federal Coal Combustion Residuals Rule (CCR Rule) to regulate the disposal of coal combustion residuals (CCR) generated at coal-fired units. The rule is administered as part of the Resource Conservation and Recovery Act ([RCRA, 42 United States Code [(U.S.C.) §6901 et seq.]), under Subtitle D.

On August 5, 2016, the EPA published the CCR “Extension Rule” following a United States Court of Appeals settlement between the utility industry and environmental groups. The Extension Rule became effective on October 4, 2016, and it, in part, removed the “early closure” provisions for inactive surface impoundments under the original CCR Rule and extended compliance deadlines for these impoundments. The inactive CCR surface impoundment (herein referred to as the Ash Impoundment) at Kansas City Power & Light Company’s (KCP&L’s) Iatan Generating Station (Iatan) is subject to the CCR Rule, and as such, KCP&L is required to develop a Closure Plan per 40 Code of Federal Regulations (CFR) §257.102 no later than April 17, 2018. This report serves as the Closure Plan for the Ash Impoundment at Iatan.

2.0 PLAN OBJECTIVES

Per 40 CFR §257.102 (b), the Closure Plan for a CCR unit being closed by removal of CCR must contain the following:

- A description of how the CCR unit will be closed.
- A description of the procedures to remove the CCR and decontaminate the CCR unit in accordance with 40 CFR §257.102(c).
- An estimate of the maximum inventory of CCR material ever stored in the CCR unit over its active life.
- A schedule for completing closure activities, including the anticipated year of closure and major milestones for permitting and construction activities.

Because the Ash Impoundment is being closed by removal of CCR, a Post-Closure Plan is not required per 40 CFR §257.104(b).

Per 40 CFR §257.102(b)(4), KCP&L must obtain certification from a qualified professional engineer that the closure plan, and subsequent updates to the plan, meets the requirements of 40 CFR §257.102. This sealed document serves as that certification.

3.0 EXISTING CONDITIONS

Iatan is located northwest of Weston in Platte County, Missouri. The site contains one CCR surface impoundment, the Ash Impoundment, which is incised.

Historically, CCR materials were sluiced or deposited into the Ash Impoundment while the adjoining Reclamation Pond predominately served as a source of recirculating sluice water, receiving primarily decanted overflow and stormwater. Much of the fly ash deposited in the north portion of the impoundment became cemented over time.

The Ash Impoundment closure design began in 2015 with closure construction starting in April of 2016. Closure construction will be ongoing through completion.

3.1 CCR Inventory

It is estimated that approximately 1.7 million cubic yards of material were stored in the impoundment prior to commencing closure construction.

4.0 CLOSURE METHOD

The Ash Impoundment will be closed by removing CCR. Procedures that are underway for closing the surface impoundment are described in detail herein.

4.1 Removal of CCR

Loose sediment is hydraulically dredged from the impoundment and sent to geotextile tubes for dewatering. The tubes sit for a period of time as dictated by weather conditions and other contractor activities, then the tubes are broken up so that the material can be loaded onto haul trucks and placed in the on-site CCR landfill or used beneficially. Hardened CCR material from the north portion of the Ash Impoundment is mechanically excavated and hauled to the on-site CCR landfill unless used beneficially. CCR removal progress is confirmed by comparing bathymetric surveys to the estimated impoundment bottom surface, which was updated to reflect the results of field investigation efforts.

4.2 Post-Closure Conditions

Dredging activities will conclude upon completion of CCR removal, which will be verified by bathymetric survey as noted above. Groundwater monitoring will be conducted to confirm that CCR removal and decontamination has been completed pursuant to §257.102(c) of the CCR Rule.

5.0 CLOSURE SCHEDULE

An estimated schedule for completing the CCR surface impoundment closure at Iatan is included in Table 5-1. Per 40 CFR §257.102(f) of the CCR Rule, closure must be completed within five years of initiating closure activities unless extensions are granted per 40 CFR 257.102(e)(2). Closure activities began after contractor mobilization in April 2016, and at this time, closure is anticipated to be completed prior to April of 2021.

Table 5-1: Closure Schedule

Notification of Intent to Close Placed in Operating Record	December 17, 2015
Permitting & Design Support	4 th Quarter 2015 – 1 st Quarter 2016
Mobilization	2 nd Quarter 2016
General Construction	1 st Quarter 2016 – 1 st Quarter 2021
Project Completion	2 nd Quarter 2021

Notes:

1. Final closure of surface impoundments must be completed within five years of commencing closure unless a demonstration is placed in the operating record (40 CFR 257.102(f)(2)).
2. Initiation of Closure may be extended for multiple two-year periods in accordance with 40 CFR 257.102(e)(2) (ii) and (iii).

For the purposes of this Closure Plan, closure of the Ash Impoundment is considered complete when CCR has been removed from the unit and placed in the on-site landfill or sent offsite for beneficial reuse. Within 30 days of completion of closure, a Notification of Closure of the CCR surface impoundment will be prepared and placed in the facility's CCR Operating Record. This Notification of Closure will be posted on KCP&L's public CCR website within 30 days of placement in the Operating Record. This notification will include certification by a qualified professional engineer in the State of Missouri verifying that closure has been completed in accordance with this Closure Plan and the requirements of 40 CFR §257.102.

6.0 REVISIONS AND AMENDMENTS

The initial Closure Plan will be placed in the CCR Operating Record by April 17, 2018. If the Closure Plan is revised, the written Closure Plan will be amended no later than 30 days following the triggering event. The initial Closure Plan and any amendment will be certified by a qualified professional engineer in the State of Missouri for meeting the requirements of §257.102 of the CCR Rule. All amendments and revisions must be posted on the CCR public website within 30 days following placement in the facility's CCR Operating Record. A record of revisions made to this document is included in Section 7.0 of this document.

7.0 RECORD OF REVISIONS AND UPDATES

Revision Number	Date	Revisions Made	By Whom
0	04/13/2018	Initial Issue	Burns & McDonnell



CREATE AMAZING.

Burns & McDonnell World Headquarters
9400 Ward Parkway
Kansas City, MO 64114
O 816-333-9400
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www.burnsmcd.com

ATTACHMENT 2

Iatan Ash Impoundment Extension of Closure Timeframe,
December 17, 2020



December 17, 2020

Jared Morrison
Director, Waste and Water Programs
Eversource Energy, Inc.
1200 Main St.
Kansas City, MO 64105

Re: Iatan Ash Impoundment Extension of Closure Timeframe

Dear Jared:

The purpose of this document is to indicate Eversource Energy, Inc.'s (Eversource's) demonstration for a two-year extension to the timeframe for completing closure of the Ash Impoundment at the Iatan Generating Station (Iatan) due to factors beyond the facility's control. Since the Ash Impoundment is larger than 40 acres, the closure timeframe may be extended in up to five, two-year increments per 40 CFR § 257.102(f)(2)(ii)(B) if the need for the extension can be substantiated. Per § 257.102(f)(2)(i), the following factors may be considered to support closure timeframe extensions:

- A. Complications stemming from the climate and weather, such as unusual amounts of precipitation or a significantly shortened construction season;
- B. Time required to dewater a surface impoundment due to the volume of CCR contained in the CCR unit or the characteristics of the CCR in the unit;
- C. The geology and terrain surrounding the CCR unit will affect the amount of material needed to close the CCR unit; or
- D. Time required or delays caused by the need to coordinate with and obtain necessary approvals and permits from a state or other agency.

As noted in the Ash Impoundment Closure Plan (Revision 0, 4/13/2018), closure construction activities began in April 2016 and were projected to be completed by April of 2021 (within five years of commencing closure construction as required by § 257.102(f)(1)(ii)). As of November 5, 2020, the contractor had removed approximately 1,510,000 cubic yards (CY) of ponded sediment from the impoundment and an estimated 190,000 CY remained to be removed. CCR material from the north portion of the impoundment was blasted, mechanically excavated to the extent practicable, hauled to the site landfill, and compacted. Submerged sediment continues to be hydraulically dredged from the impoundment and pumped to geotextile tubes for dewatering. The geotextile tubes sit for a period of time dictated by weather conditions and other contractor activities before the dewatered material inside can be excavated and loaded onto haul trucks and placed in the facility's onsite CCR landfill.

The original understanding was that the impoundment was used primarily to store bottom ash (apart from the north portion which contained fly ash that cemented over time, hence the need for blasting), and the bottom ash would be able to dewater in the geotextile tubes in

Jared Morrison
Every Metro, Inc.
December 17, 2020
Page 2

approximately two weeks; however, the ponded sediment is a mixture of bottom ash, fly ash, and silt, and takes much more time to dewater than expected. The contractor currently allows the geotextile tubes to sit for approximately two months prior to removing the material from the tubes. Once placed in the landfill, the material needs further conditioning in order to meet project compaction limits. This dewatering process has slowed construction progress considerably.

Dredging work and dewatering are limited by winter weather and cannot occur when the pond and the geotextile tubes are frozen, which also slows the removal and disposal processes. The contractor filled multiple geotextile tubes in the fall of 2018 before demobilizing for the winter months; however, due to significant periods of rain and the resulting Missouri River flood events, access to the impoundment area was limited from March 2019 through April 2020, making closure construction progress minimal throughout that time period. The impoundment closure contractor was not able to resume hauling material from the geotextile tubes until April of 2020. Once the dredged material was removed from the existing geotextile tubes, the dredging contractor deployed additional geotextile tubes so that dredging could re-commence in mid-June 2020.

Based on the estimated remaining quantity of material in the impoundment and current dredge production rates, it is anticipated that closure will be completed within the two-year extension timeframe. As discussed above, the extension is substantiated based on impacts of climate (§ 257.102(f)(2)(i)(A)) and challenges dewatering the CCR material (§ 257.102(f)(2)(i)(B)). The certification statement required under § 257.102(f)(2)(iii) has been provided at the end of this letter and is signed by an authorized representative of the Owner/Operator.

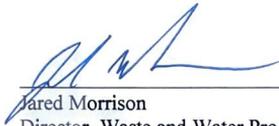
Sincerely,



Ed Tohill, P.E.
Engineer of Record

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Jared Morrison
Director, Waste and Water Programs
December 17, 2020

ATTACHMENT 3

*Certification of CCR Removal in Preparation for Closure by Removal of the Iatan Ash Impoundment,
November 30, 2021*

Memorandum



Date: November 30, 2021

To: Jared Morrison, Director Water and Waste Programs
Evergy Metro, Inc. (f/k/a Kansas City Power & Light Co., Inc.)

From: Ed Tohill, P.E., Burns & McDonnell Engineering Co., Inc.

Subject: Certification of CCR Removal in Preparation for Closure by Removal of the Iatan Ash Impoundment

The purpose of this memorandum is to present the results of documentation and work performed during the removal of coal combustion residuals (CCR) from the Ash Impoundment at the Iatan Generating Station (Iatan) which is owned and operated by Evergy Metro, Inc. (Evergy); and to certify the removal of the CCR waste materials in accordance with the Impoundment's CCR Closure Plan per 40 CFR 257.102. The Iatan Ash Impoundment is a CCR surface impoundment and is subject to the Federal Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments per 40 CFR 257 Subpart D.

Evergy retained Clarkson Construction (Clarkson) to remove ponded CCR waste from the Iatan Ash Impoundment to the levels indicated on a survey drawing from 1981, which was believed to represent the bottom of the impoundment (i.e., bottom of CCR). Dredge America served as subcontractor to Clarkson to complete the hydraulic dredging component of the pond closure project. The preconstruction surface contours, which indicate the top of the of CCR and pond sediment prior to excavation, are shown in Figure 1, attached to this document. The contours are a compilation of survey data completed by Burns & McDonnell Engineering Co., Inc. (BMcD), Wilson & Company, Inc., and TREKK Design Group, LLC.

As noted in Section 4.1 of the CCR Closure Plan (dated April 16, 2018), loose sediment was hydraulically dredged from the impoundment and sent to geotextile tubes for dewatering. The tubes sat for a period of time as dictated by weather conditions and other contractor activities, then the tubes were opened up so the material could be loaded onto haul trucks and placed in the on-site CCR landfill. Hardened CCR material from the north portion of the Ash Impoundment was mechanically excavated and hauled via off-road trucks to the on-site CCR landfill. CCR removal progress was confirmed by comparing periodic bathymetric surveys to the impoundment bottom surface. This approach was used because the pond was not able to be maintained in a dewatered condition during construction due to the groundwater elevation. The periodic surveys were completed by both The Mapping Network and BMcD in order to verify the bottom elevations achieved.

During the mechanical excavation of the north portion of the pond, the contractor located additional CCR material below the 1981 surveyed limits which suggested that the 1981 survey data may not be representative of the bottom of CCR. As a result, a field investigation was conducted by Terracon Consultants, Inc. (Terracon) to confirm the limits of CCR within the impoundment footprint. The investigation was conducted in two phases. Phase I was completed

November 30, 2021

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within the north portion of the Ash Impoundment which contained hardened, drained material and was accessible by an ATV drill rig. Phase II included borings within the wet portion of the pond which were accessed by barge. Borings were completed on a 200-foot grid, similar to the 1981 survey points. The borings were completed with continuous split-spoon sampling until native material was encountered. Figure 2 indicates the revised pond bottom contours which reflect the results from the field investigation and were utilized as the new target CCR removal elevations.

Figure 3 is provided to indicate the final removal contours as surveyed by The Mapping Network and observed by BMcD. Throughout the course of the project, a total of approximately 1.7 million cubic yards of material were removed from the CCR surface impoundment. This work took place between April 2016 and September of 2021, extending several months beyond the anticipated closure timeframe noted in the Closure Plan. In accordance with the CCR Rule, Evergy prepared a closure extension demonstration which was placed in the facility's operating record. The closure extension demonstration is included as Appendix B in this document. A series of photographs from the closure construction is also included in Appendix C.

CERTIFICATION

As required by 40 CFR 257.102(f)(3), I hereby certify that removal of CCR from the Ash Impoundment at the Iatan Generating Station was completed in accordance with the written closure plan required by 40 CFR 257.102(b) with an extension of closure timeframe per 257.102(f)(2)(ii)(B), and the CCR removal requirement of 40 CFR 257.102(c).


Edward Theodore Tohill

11/30/21
Date


11/30/21

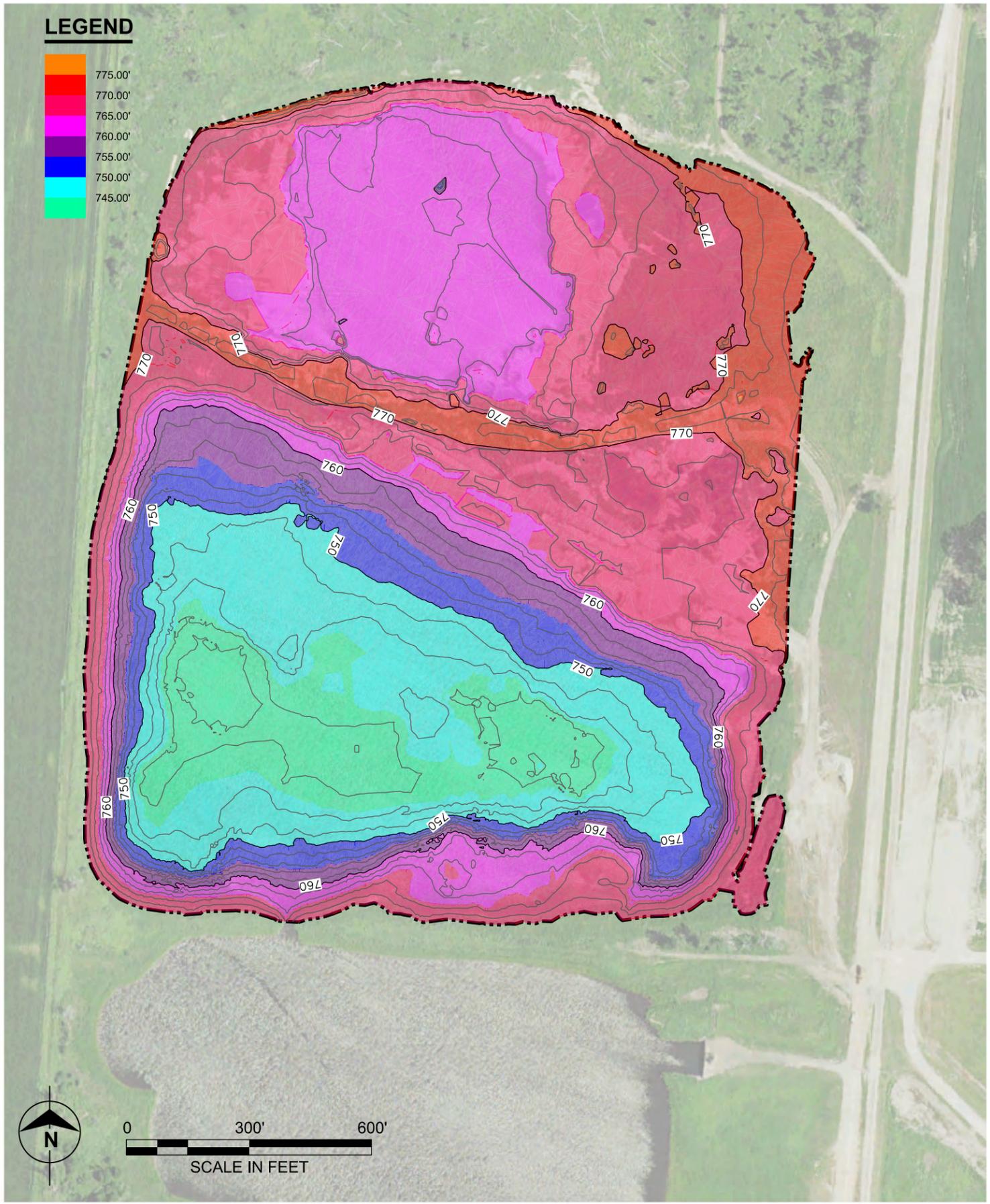
Attachments –

- Appendix A - Figures No. 1, 2, & 3
- Appendix B - Iatan Ash Impoundment Extension of Closure Timeframe
- Appendix C - Photographs



APPENDIX A
Figures

LEGEND



NOTES:

- 1. CONTOURS REPRESENT THE TOP OF PONDED SEDIMENT.
- 2. PRE-CONSTRUCTION SURVEY IS A COMPILATION OF THE FOLLOWING SURVEY DATA: BATHYMETRIC SURVEY BY BURNS & MCDONNELL ENGINEERING CO., INC. COMPLETED IN 2015, GROUND SURVEY BY TREKK DESIGN GROUP LLC IN 2016, AND AERIAL LIDAR SURVEY BY WILSON & COMPANY, INC. IN 2015.



date 09/09/2021

designed A. MYERS

EVERGY METRO, INC.
IATAN GENERATING STATION
ASH IMPOUNDMENT CLOSURE
PRE-CONSTRUCTION SURVEY DATA

project 87292

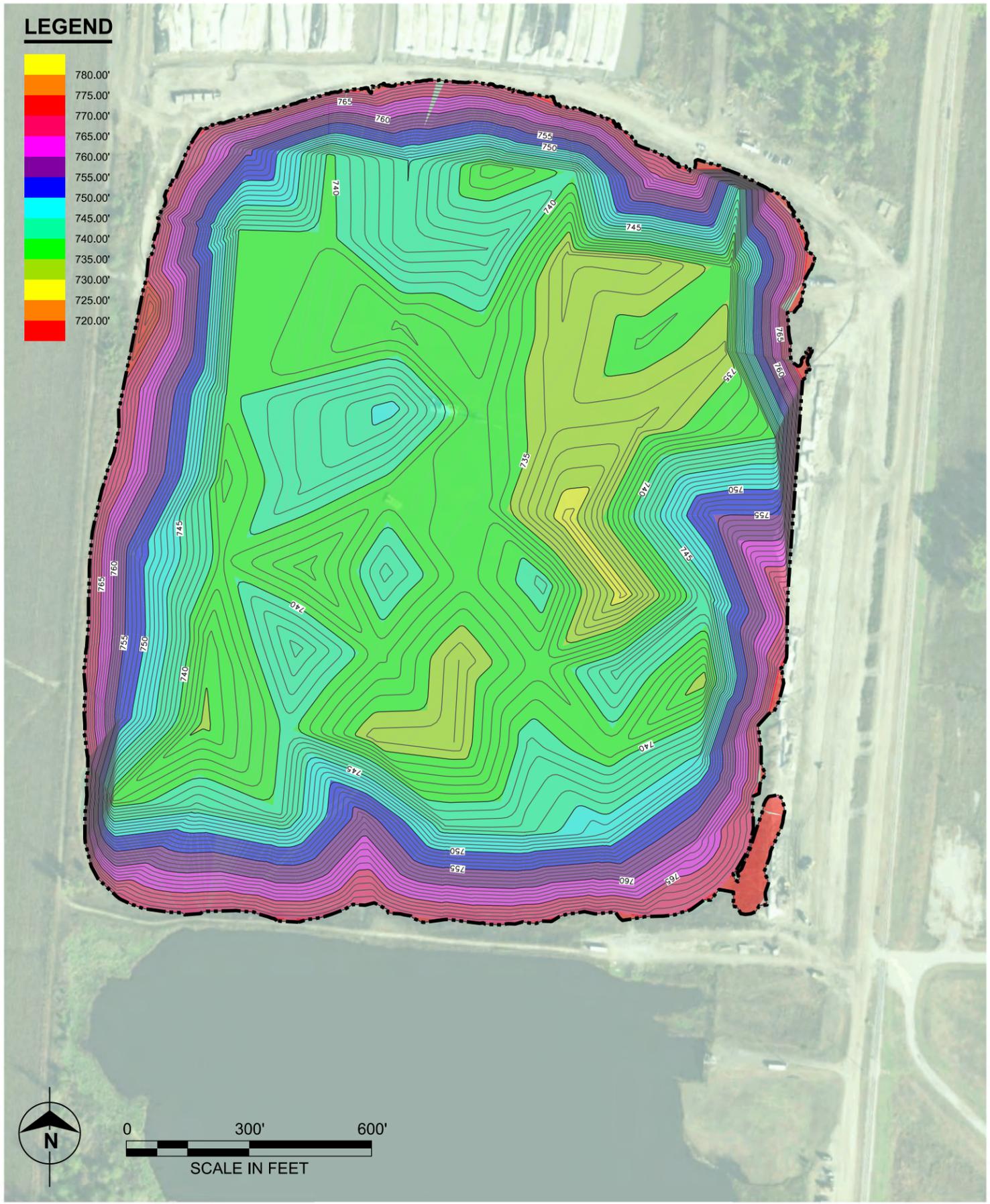
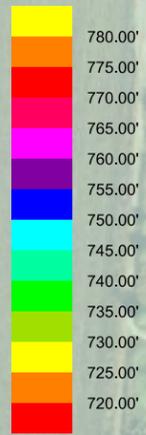
contract -

dwg **FIGURE 1** rev **A**

NOTES:

1. CONTOURS REPRESENT BOTTOM OF CCR BASED ON FIELD INVESTIGATION BY TERRACON CONSULTANTS, INC. WHICH INCLUDED SAMPLING AT SPECIFIED POINTS. SAMPLING WAS COMPLETED IN TWO PHASES IN DECEMBER 2016 (PHASE 1) AND FEBRUARY 2017 (PHASE 2).

LEGEND

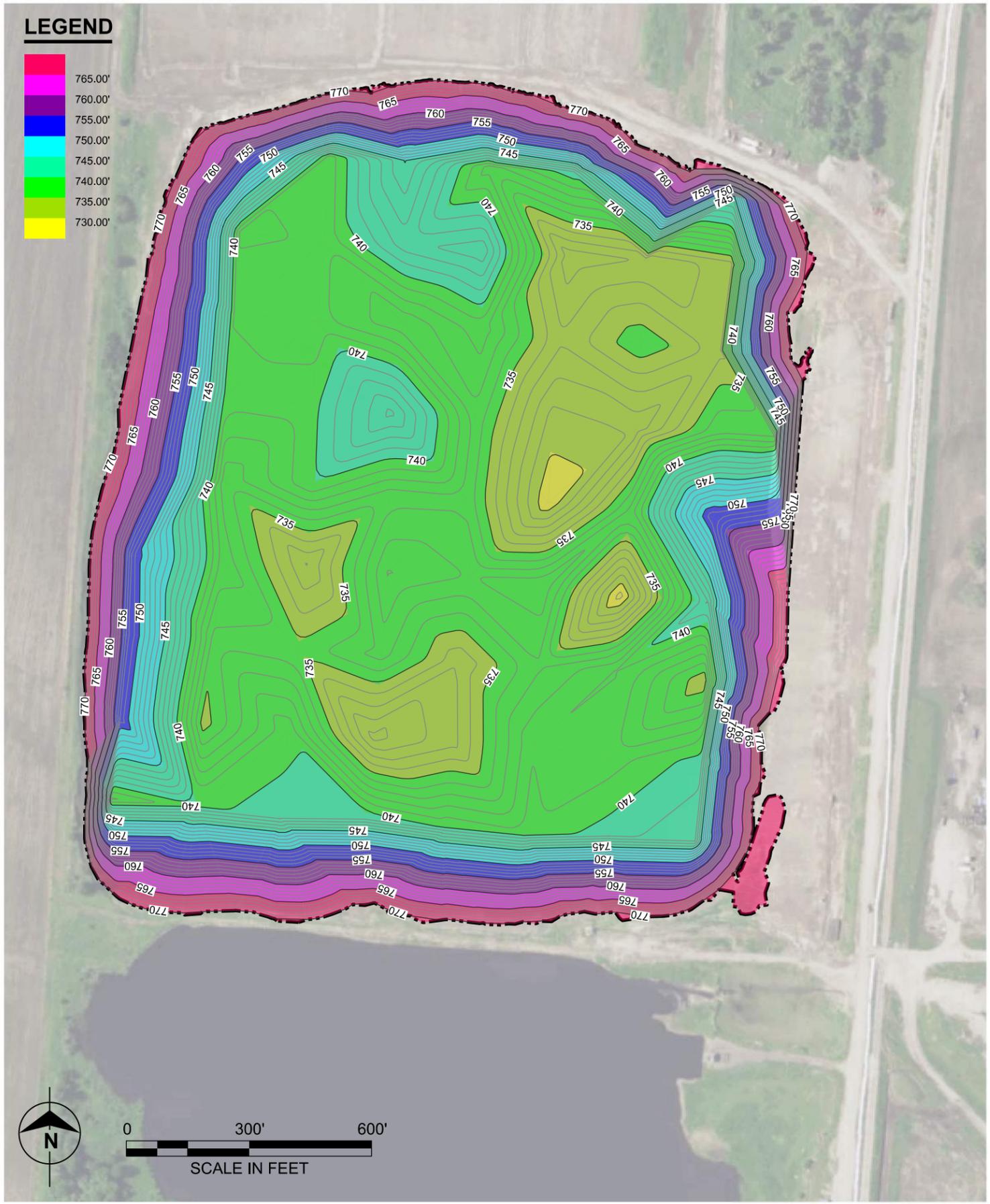
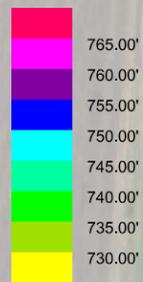


 date 09/09/2021 designed A. MYERS	EVERGY METRO, INC. IATAN GENERATING STATION ASH IMPOUNDMENT CLOSURE REVISED POND BOTTOM CONTOURS (BOTTOM OF CCR)	project	87292
		contract	-
		dwg	rev
		FIGURE 2	A

NOTES:

1. CONTOURS REPRESENT THE EXCAVATED POND BOTTOM BASED ON PROBING AT SAMPLE POINT LOCATIONS FROM THE TERRACON INVESTIGATION. PROBES WERE COMPLETED BY THE MAPPING NETWORK IN AUGUST 2021 AND OBSERVED BY BURNS & MCDONNELL. DREDGING AND SURVEYING TOLERANCE ESTIMATED AT +/- 0.5 FT BASED ON AVAILABLE TECHNOLOGY. APPROXIMATELY 1.7 MILLION CY OF CCR MATERIAL WERE REMOVED.

LEGEND



date 10/01/2021
 designed A. MYERS

EVERGY METRO, INC.
 IATAN GENERATING STATION
 ASH IMPOUNDMENT CLOSURE
 POST-REMOVAL SURVEY CONTOURS

project	87292
contract	-
dwg	FIGURE 3
rev	A



APPENDIX B

Iatan Ash Impoundment Extension of Closure Timeframe



December 17, 2020

Jared Morrison
Director, Waste and Water Programs
Evergy Metro, Inc.
1200 Main St.
Kansas City, MO 64105

Re: Iatan Ash Impoundment Extension of Closure Timeframe

Dear Jared:

The purpose of this document is to indicate Evergy Metro, Inc.'s (Evergy's) demonstration for a two-year extension to the timeframe for completing closure of the Ash Impoundment at the Iatan Generating Station (Iatan) due to factors beyond the facility's control. Since the Ash Impoundment is larger than 40 acres, the closure timeframe may be extended in up to five, two-year increments per 40 CFR § 257.102(f)(2)(ii)(B) if the need for the extension can be substantiated. Per § 257.102(f)(2)(i), the following factors may be considered to support closure timeframe extensions:

- A. Complications stemming from the climate and weather, such as unusual amounts of precipitation or a significantly shortened construction season;
- B. Time required to dewater a surface impoundment due to the volume of CCR contained in the CCR unit or the characteristics of the CCR in the unit;
- C. The geology and terrain surrounding the CCR unit will affect the amount of material needed to close the CCR unit; or
- D. Time required or delays caused by the need to coordinate with and obtain necessary approvals and permits from a state or other agency.

As noted in the Ash Impoundment Closure Plan (Revision 0, 4/13/2018), closure construction activities began in April 2016 and were projected to be completed by April of 2021 (within five years of commencing closure construction as required by § 257.102(f)(1)(ii)). As of November 5, 2020, the contractor had removed approximately 1,510,000 cubic yards (CY) of ponded sediment from the impoundment and an estimated 190,000 CY remained to be removed. CCR material from the north portion of the impoundment was blasted, mechanically excavated to the extent practicable, hauled to the site landfill, and compacted. Submerged sediment continues to be hydraulically dredged from the impoundment and pumped to geotextile tubes for dewatering. The geotextile tubes sit for a period of time dictated by weather conditions and other contractor activities before the dewatered material inside can be excavated and loaded onto haul trucks and placed in the facility's onsite CCR landfill.

The original understanding was that the impoundment was used primarily to store bottom ash (apart from the north portion which contained fly ash that cemented over time, hence the need for blasting), and the bottom ash would be able to dewater in the geotextile tubes in

Jared Morrison
Evergy Metro, Inc.
December 17, 2020
Page 2

approximately two weeks; however, the ponded sediment is a mixture of bottom ash, fly ash, and silt, and takes much more time to dewater than expected. The contractor currently allows the geotextile tubes to sit for approximately two months prior to removing the material from the tubes. Once placed in the landfill, the material needs further conditioning in order to meet project compaction limits. This dewatering process has slowed construction progress considerably.

Dredging work and dewatering are limited by winter weather and cannot occur when the pond and the geotextile tubes are frozen, which also slows the removal and disposal processes. The contractor filled multiple geotextile tubes in the fall of 2018 before demobilizing for the winter months; however, due to significant periods of rain and the resulting Missouri River flood events, access to the impoundment area was limited from March 2019 through April 2020, making closure construction progress minimal throughout that time period. The impoundment closure contractor was not able to resume hauling material from the geotextile tubes until April of 2020. Once the dredged material was removed from the existing geotextile tubes, the dredging contractor deployed additional geotextile tubes so that dredging could re-commence in mid-June 2020.

Based on the estimated remaining quantity of material in the impoundment and current dredge production rates, it is anticipated that closure will be completed within the two-year extension timeframe. As discussed above, the extension is substantiated based on impacts of climate (§ 257.102(f)(2)(i)(A)) and challenges dewatering the CCR material (§ 257.102(f)(2)(i)(B)). The certification statement required under § 257.102(f)(2)(iii) has been provided at the end of this letter and is signed by an authorized representative of the Owner/Operator.

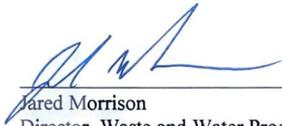
Sincerely,



Ed Tohill, P.E.
Engineer of Record

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Jared Morrison
Director, Waste and Water Programs
December 17, 2020



APPENDIX C
Photographs



Figure 1: Iatan Ash Impoundment – overview of pond area (looking northwest)



Figure 2: Iatan Ash Impoundment (northwest bank looking southeast)



Figure 3: Iatan Ash Impoundment – mechanical excavation from north portion of pond (looking northeast)



Figure 4: Iatan Ash Impoundment – mechanical excavation from north portion of pond (looking northeast)



Figure 5: Iatan Ash Impoundment – mechanical excavation from north portion of pond (looking east)



Figure 6: Iatan Ash Impoundment – remaining mechanical excavation of north portion of pond (west bank looking southeast)



Figure 7: Iatan Ash Impoundment – dredge, north pond (east bank looking west)



Figure 8: Iatan Ash Impoundment – prepping geotextile tube area (east bank looking north)



Figure 9: Iatan Ash Impoundment – prepping geotextile tube area (east bank looking west)



Figure 10: Iatan Ash Impoundment – installing geotextile tube system (east bank looking south)



Figure 11: Iatan Ash Impoundment – filling geotextile tubes (east bank looking southwest)



Figure 12: Iatan Ash Impoundment – filling geotextile tubes (east bank looking northwest)



Figure 13: Iatan Ash Impoundment – filled geotextile tubes (east bank looking southwest)



Figure 14: Iatan Ash Impoundment – excavating ash from geotextile tubes (east bank looking northwest)



Figure 15: Iatan CCR Landfill – disposal area (looking south)



Figure 16: Iatan CCR Landfill – disposal area (looking southwest)



Figure 17: Iatan CCR Landfill – dumping excavated ash (looking east)



Figure 18: Iatan CCR Landfill – processing excavated ash (looking east)