

January 20, 2021 File  
No. 27213168.20

**MEMORANDUM**

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

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

**SUBJECT:** **40 CFR 257.102 (c) Closure by Removal of CCR Certification  
Montrose Generating Station (Closed)  
North and South Ash Impoundments  
Groundwater Monitoring Concentrations Evaluation and Closure**

This memorandum presents the results of groundwater monitoring performed by SCS Engineers following removal of coal combustion residuals (CCR) from the North and South Ash Impoundments (Impoundments) at the Montrose Generating Station (Station) and certification of final closure. The Station's CCR surface impoundments are 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 Evergy Metro, Inc. (Evergy). A document "Notification of Intent to Close" was placed in the CCR Operating Record on January 28, 2020. This was communicated to the Missouri Department of Natural Resources on February 27, 2020.

Evergy retained Kissick Construction to remove ponded CCR waste from the Station's Impoundments through the method of excavation. Evergy retained Burns & McDonnell (BMcD) as certifying engineer to certify that, upon completion of construction, the CCR in the Impoundment had been removed in accordance with Section 2.1 of the facility written closure plan titled "*CCR Closure Plan, Montrose North Ash Impoundment, and CCR Closure Plan, Montrose South Ash Impoundment*" (Attachment 1, Closure Plans) dated October 14, 2016 as required by 40 CFR 257.102(b); specifically related to removal of CCR from the Impoundment. BMcD certified removal of CCR material from the Impoundments was performed in accordance with the Closure Plans and 40 CFR 257.102(c) per 40 CFR 257.102(f)(3). Removal of CCR from the Impoundments was certified January 19, 2021 (Attachment 2). 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.*

This unit has not entered into assessment groundwater monitoring under 40 CFR 257.95, therefore no corrective measures, remedies, or corrective actions have been required under 40 CFR 257.96 through 257.98 due to releases to groundwater. GWPSs were determined for each Appendix IV constituent detected in the Impoundments 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, RSL, or background concentration. 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 October 12, 2017. Appendix IV constituent background samples were collected over nine sampling events between December 2015 and October 2017. Appendix IV constituent background results were reported in the *“2017 Annual Groundwater Monitoring and Corrective Action Report, North and South Ash Impoundments, Montrose Generating Station”* dated January 30, 2018.

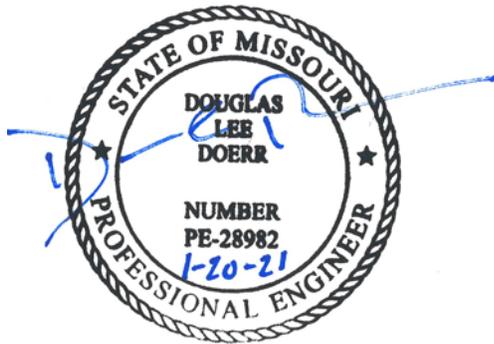
Twelve Appendix IV constituents were detected in background samples in at least one of the monitoring wells, including half (six) in upgradient monitoring wells. Antimony, molybdenum, and thallium were not detected above the laboratory reporting limits. Arsenic, beryllium, cadmium, cobalt, lithium and radium were present in background above their MCL or EPA 257.95(h) values. The GWPSs are the greater of the background concentration versus the applicable MCL or 40 CFR 257.95(h)(2) RSL value. Based on these results, 16 Appendix IV parameter/well pairs have GWPSs that are background values; the remainder are the applicable MCL or 40 DFT 257.97(h)(2) RSL values, as presented in Table 1.

Groundwater samples for closure confirmation were collected from the Impoundments monitoring wells on July 27, 2020 following removal of CCR from the Impoundments and analyzed for Appendix IV constituents.

Closure confirmation sample results 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) RSLs, background concentrations, 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 five years of closure initiation (40 CFR 257.102(f)(ii)).

**CERTIFICATION**

As required by 40 CFR 257.102(f)(3), I hereby certify that the groundwater monitoring concentrations at the Montrose North and South Ash Impoundments do not exceed the groundwater protection standards determined for the Impoundments 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 2; without independent verification) and no exceedances of the groundwater protection standards for the confirmation samples, the Montrose North and South Ash Impoundments are now closed in accordance with the requirements of 40 CFR 257.102.



Attachments:

Table 1: Summary of Detected CCR Appendix IV Constituents and Corresponding GWPS Values

Attachment 1 - CCR Closure Plan, Montrose North Ash Impoundment, and CCR Closure Plan, Montrose South Ash Impoundment"

Attachment 2 - Certification of CCR Removal in Preparation of Closure by Removal Montrose North and South Ash Impoundments

TABLE 1

Summary of Detected CCR Appendix IV Constituents and Corresponding GWPS Values

**TABLE 1**  
**Summary of Detected CCR Appendix IV Constituents and Corresponding GWPS Values**  
**North and South Ash Impoundments**  
**Montrose Generating Station**  
**Evergy Metro, Inc.**

Well Number	Sample Date	Detected Appendix IV Constituents											
		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)	Selenium (mg/L)	Radium Combined (pCi/L)
<b>MCL</b>		<b>0.010</b>	<b>2</b>	<b>0.004</b>	<b>0.005</b>	<b>0.1</b>	<b>NA</b>	<b>4.0</b>	<b>0.015*</b>	<b>NA</b>	<b>0.002</b>	<b>0.05</b>	<b>5</b>
<b>40 CFR 257.95(h) RSL</b>		<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>0.006</b>	<b>NA</b>	<b>NA</b>	<b>0.040</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>MW-701 Background Data</b>													
MW-701	12/16/2015	0.00264	0.0174	0.00282	0.00721	<0.01	0.0905	1.40	0.00693	0.249	<0.0002	0.0129	31.85**
MW-701	2/16/2016	0.00252	0.0136	0.00234	0.00649	<0.01	0.0762	1.29	0.00270	0.275	<0.0002	0.0119	1.493
MW-701	5/24/2016	0.00266	0.0104	0.00291	0.00657	<0.01	0.0509	1.37	<0.002	0.257	0.000267	0.0118	1.507
MW-701	8/22/2016	0.00225	0.0111	0.00240	0.00598	<0.01	0.0436	1.32	<0.002	0.244	0.000223	0.0126	0.855
MW-701	11/8/2016	0.00236	0.0101	0.00208	0.00575	<0.01	0.0294	1.18	<0.002	0.205	<0.0002	0.0129	1.04
MW-701	2/7/2017	<0.002	0.00906	0.00205	0.00460	<0.01	0.0196	1.12	<0.02	0.216	<0.0002	0.0126	0.198
MW-701	5/2/2017	0.00209	0.00897	<0.002	0.00469	<0.01	0.0199	1.09	<0.002	0.226	0.000243	0.00883	1.44
MW-701	7/31/2017	0.00201	0.00917	<0.002	0.00465	<0.01	0.0167	1.22	<0.002	0.179	0.000273	0.00816	1.37
MW-701	10/2/2017	0.00207	0.00998	0.00202	0.00523	<0.01	0.0370	1.17	<0.002	0.245	<0.0002	0.00922	2.96
<b>MW-701 PL/BG</b>		<b>0.00328</b>	<b>0.01715</b>	<b>0.004246</b>	<b>0.00778</b>	<b>0.01</b>	<b>0.0997</b>	<b>1.494</b>	<b>0.01</b>	<b>0.2973</b>	<b>0.000273</b>	<b>0.01541</b>	<b>3.18</b>
<b>GWPS</b>		<b>0.010</b>	<b>2</b>	<b>0.004246</b>	<b>0.00778</b>	<b>0.1</b>	<b>0.0997</b>	<b>4.0</b>	<b>0.015</b>	<b>0.297</b>	<b>0.002</b>	<b>0.05</b>	<b>5</b>
MW-701	7/27/2020	<0.002	0.00826	<0.002	0.00431	<0.01	0.0221	1.02	<0.005	0.186	0.000287	0.00706	2.18
<b>MW-702 Background Data</b>													
MW-702	12/17/2015	0.00434	0.0228	<0.002	<0.001	<0.01	0.00328	0.329	0.00251	0.0381	<0.0002	<0.002	0.387
MW-702	2/16/2016	<0.002	0.0123	<0.002	<0.001	<0.01	<0.002	0.277	<0.002	0.0610	<0.0002	0.00262	0.257
MW-702	5/24/2016	<0.002	0.0114	<0.002	<0.001	<0.01	<0.002	0.179	<0.002	0.0577	<0.0002	0.00213	1.475
MW-702	8/22/2016	<0.002	0.0104	<0.002	<0.001	<0.01	<0.002	0.214	<0.002	0.0532	<0.0002	<0.002	0.165
MW-702	11/7/2016	<0.002	0.00947	<0.002	<0.001	<0.01	<0.002	0.244	<0.002	0.0390	<0.0002	<0.002	2.592
MW-702	2/7/2017	<0.002	0.0105	<0.002	<0.001	<0.01	<0.002	0.208	<0.02	0.0528	<0.0002	<0.002	0.265
MW-702	5/2/2017	<0.002	0.0124	<0.002	<0.001	<0.01	<0.002	0.221	<0.002	0.0623	<0.0002	<0.002	1.24
MW-702	7/31/2017	<0.002	0.0107	<0.002	<0.001	<0.01	<0.002	0.217	<0.002	0.0266	<0.0002	<0.002	4.08
MW-702	10/2/2017	<0.002	0.00998	<0.002	<0.001	<0.01	<0.002	0.267	<0.002	0.0536	<0.0002	<0.002	1.56
<b>MW-702 PL/BG</b>		<b>0.00434</b>	<b>0.0228</b>	<b>0.002</b>	<b>0.001</b>	<b>0.01</b>	<b>0.00328</b>	<b>0.309</b>	<b>0.01</b>	<b>0.07588</b>	<b>0.0002</b>	<b>0.00262</b>	<b>4.213</b>
<b>GWPS</b>		<b>0.010</b>	<b>2</b>	<b>0.004</b>	<b>0.005</b>	<b>0.1</b>	<b>0.006</b>	<b>4.0</b>	<b>0.015</b>	<b>0.07588</b>	<b>0.002</b>	<b>0.05</b>	<b>5</b>
MW-702	7/27/2020	<0.002	0.0141	<0.002	<0.001	<0.01	0.00461	0.185	<0.005	0.0439	<0.0002	<0.002	0.455
<b>MW-703 Background Data</b>													
MW-703	12/17/2015	0.00278	0.0511	<0.002	<0.001	<0.01	0.00802	0.343	<0.002	0.0448	<0.0002	<0.002	1.686
MW-703	2/16/2016	<0.002	0.0492	<0.002	<0.001	<0.01	0.00379	0.127	<0.002	0.0561	<0.0002	<0.002	1.283
MW-703	5/23/2016	<0.002	0.0428	<0.002	<0.001	<0.01	0.00533	0.126	<0.002	0.0561	<0.0002	<0.002	0.644
MW-703	8/22/2016	<0.002	0.0394	<0.002	<0.001	<0.01	0.00448	0.137	<0.002	0.0552	<0.0002	<0.002	1.33
MW-703	11/7/2016	<0.002	0.0390	<0.002	<0.001	<0.01	0.00708	0.139	<0.002	0.0517	<0.0002	<0.002	2.407
MW-703	2/7/2017	<0.002	0.0394	<0.002	<0.001	<0.01	0.00607	0.116	<0.002	0.0630	<0.0002	<0.002	1.67
MW-703	5/2/2017	<0.002	0.0461	<0.002	<0.001	<0.01	0.00439	0.146	<0.002	0.0657	<0.0002	<0.002	0.747
MW-703	7/31/2017	<0.002	0.0362	<0.002	<0.001	<0.01	0.00721	0.124	<0.002	0.0492	<0.0002	<0.002	1.79
MW-703	10/2/2017	<0.002	0.0394	<0.002	<0.001	<0.01	0.00545	0.117	<0.002	0.0607	<0.0002	<0.002	1.51
<b>MW-703 PL/BG</b>		<b>0.00278</b>	<b>0.05382</b>	<b>0.002</b>	<b>0.001</b>	<b>0.01</b>	<b>0.008929</b>	<b>0.343</b>	<b>0.002</b>	<b>0.07046</b>	<b>0.0002</b>	<b>0.002</b>	<b>2.634</b>
<b>GWPS</b>		<b>0.010</b>	<b>2</b>	<b>0.004</b>	<b>0.005</b>	<b>0.1</b>	<b>0.008929</b>	<b>4.0</b>	<b>0.015</b>	<b>0.07046</b>	<b>0.002</b>	<b>0.05</b>	<b>5</b>
MW-703	7/27/2020	<0.002	0.0394	<0.002	<0.001	<0.01	0.00443	0.131	<0.005	0.0535	<0.0002	<0.002	3.07
<b>MW-704 Background Data</b>													
MW-704	12/17/2015	0.0132	0.0677	<0.002	<0.001	<0.01	0.00854	0.365	<0.002	0.0537	<0.0002	<0.002	0.519
MW-704	2/16/2016	0.0129	0.0616	<0.002	<0.001	<0.01	0.00411	<0.1	<0.002	0.0610	<0.0002	<0.002	0.674
MW-704	5/23/2016	0.0138	0.0604	<0.002	<0.001	<0.01	0.00265	0.107	<0.002	0.0583	<0.0002	<0.002	4.434
MW-704	8/22/2016	0.0143	0.0632	<0.002	<0.001	<0.01	0.00251	0.116	<0.002	0.0585	<0.0002	<0.002	1.178
MW-704	11/7/2016	0.0128	0.0591	<0.002	<0.001	<0.01	0.00298	0.131	<0.002	0.0516	<0.0002	<0.002	0.907
MW-704	2/7/2017	0.0132	0.0567	<0.002	<0.001	<0.01	0.00297	0.105	<0.002	0.0633	<0.0002	<0.002	1.18
MW-704	5/2/2017	0.0139	0.0591	<0.002	<0.001	<0.01	0.00277	0.120	<0.002	0.0648	<0.0002	<0.002	1.79
MW-704	7/31/2017	0.0129	0.0602	<0.002	<0.001	<0.01	0.00245	0.115	<0.002	0.0505	<0.0002	<0.002	1.99
MW-704	10/2/2017	0.0130	0.0637	<0.002	<0.001	<0.01	0.00248	0.104	<0.002	0.0646	<0.0002	<0.002	0.924
<b>MW-704 PL/BG</b>		<b>0.0145</b>	<b>0.06838</b>	<b>0.002</b>	<b>0.001</b>	<b>0.01</b>	<b>0.00854</b>	<b>0.280</b>	<b>0.002</b>	<b>0.07051</b>	<b>0.0002</b>	<b>0.002</b>	<b>4.322</b>
<b>GWPS</b>		<b>0.0145</b>	<b>2</b>	<b>0.004</b>	<b>0.005</b>	<b>0.1</b>	<b>0.00854</b>	<b>4.0</b>	<b>0.015</b>	<b>0.07051</b>	<b>0.002</b>	<b>0.05</b>	<b>5</b>
MW-704	7/27/2020	0.0131	0.0561	<0.002	<0.001	<0.01	0.00708	0.119	<0.005	0.0505	<0.0002	<0.002	0.894
<b>MW-705 Background Data</b>													
MW-705	12/17/2015	0.00935	0.0787	<0.002	<0.001	0.0115	0.00999	0.246	0.00942	0.0725	<0.0002	<0.002	1.54
MW-705	2/16/2016	0.00609	0.0451	<0.002	<0.001	<0.01	<0.002	0.179	<0.002	0.0748	<0.0002	<0.002	1.577
MW-705	5/24/2016	0.00656	0.0476	<0.002	<0.001	<0.01	0.00204	0.180	<0.002	0.0618	<0.0002	<0.002	0.756
MW-705	8/22/2016	0.00552	0.0481	<0.002	<0.001	<0.01	<0.002	0.187	<0.002	0.0578	<0.0002	<0.002	1.194
MW-705	11/8/2016	0.00528	0.0524	<0.002	<0.001	<0.01	0.00206	0.176	<0.002	0.0421	<0.0002	<0.002	1.419
MW-705	2/7/2017	0.00529	0.0558	<0.002	<0.001	<0.01	<0.002	0.168	<0.002	0.0642	<0.0002	<0.002	1.57
MW-705	5/2/2017	0.00458	0.0485	<0.002	<0.001	<0.01	<0.002	0.180	<0.002	0.0623	<0.0002	<0.002	0.524
MW-705	7/31/2017	0.00567	0.0529	<0.002	<0.001	<0.01	0.00205	0.185	<0.002	0.0450	<0.0002	<0.002	1.11
MW-705	10/2/2017	0.00549	0.0624	<0.002	<0.001	<0.01	<0.002	0.169	<0.002	0.0601	<0.0002	<0.002	4.67
<b>MW-705 PL/BG</b>		<b>0.009072</b>	<b>0.07748</b>	<b>0.002</b>	<b>0.001</b>	<b>0.0115</b>	<b>0.00999</b>	<b>0.246</b>	<b>0.00942</b>	<b>0.08399</b>	<b>0.0002</b>	<b>0.002</b>	<b>4.363</b>
<b>GWPS</b>		<b>0.010</b>	<b>2</b>	<b>0.004</b>	<b>0.005</b>	<b>0.1</b>	<b>0.00999</b>	<b>4.0</b>	<b>0.015</b>	<b>0.08399</b>	<b>0.002</b>	<b>0.05</b>	<b>5</b>
MW-705	7/27/2020	0.0045	0.0458	<0.002	<0.001	<0.01	<0.002	0.196	<0.005	0.0615	<0.0002	<0.002	2.43
<b>MW-706 Background Data</b>													
MW-706	12/17/2015	<0.002	0.0448	<0.002	<0.001	<0.01	<0.01	0.235	<0.002	0.0401	<0.0002	<0.002	3.449
MW-706	2/16/2016	0.0124	0.0455	<0.002	<0.001	<0.01	0.00507	0.160	<0.002	0.0518	<0.0002	<0.002	1.036
MW-706													

ATTACHMENT 1

CCR Closure Plan, Montrose North Ash Impoundment  
And  
CCR Closure Plan, Montrose South Ash Impoundment



**CCR CLOSURE PLAN**  
**Montrose North Ash Impoundment**  
**Montrose Generating Station**

**400 Southwest Hwy P**  
**Clinton, Missouri**

**Kansas City Power & Light Company**

October 14, 2016

## TABLE OF CONTENTS

SECTION 1 BACKGROUND .....	1
1.1 Facility Information .....	1
1.2 Regulatory Requirements .....	1
SECTION 2 CLOSURE DESCRIPTION .....	4
2.1 Closure Description .....	4
2.1.1 Description .....	4
2.1.2 Construction Procedures.....	4
2.2 Volume Estimates.....	4
2.3 Closure Schedule .....	5
2.3.1 Commencement of Closure .....	5
2.3.2 Closure Schedule.....	6
SECTION 3 AMENDMENT OF CCR CLOSURE PLAN .....	7
SECTION 4 ENGINEERING CERTIFICATION .....	8

**MONTROSE GENERATING STATION  
NORTH ASH IMPOUNDMENT  
CCR CLOSURE PLAN  
REVISION HISTORY**

<b>Revision Number</b>	<b>Revision Date</b>	<b>Section Revised</b>	<b>Summary of Revisions</b>

Revisions are accomplished in accordance with Section 3.

## SECTION 1

### BACKGROUND

The purpose of this CCR Closure Plan (Plan) is to identify and describe the Coal Combustion Residuals Rule (CCR Rule) measures needed to close the Montrose Generating Station (Montrose) North Ash Impoundment consistent with recognized and generally accepted good engineering practices and in accordance with the CCR Rule. The following sections provide background information on the facility and related regulatory requirements.

#### **1.1 Facility Information**

Name of Facility: Montrose Generating Station

Name of CCR Unit: North Ash Impoundment

Name of Operator: Kansas City Power & Light Company (KCP&L)

Facility Mailing Address: 400 Southwest Hwy. P, Clinton, MO 64735

Location: Approximately ten miles southwest of Clinton, Missouri.

Facility Description: The Montrose Generating Station has three coal-fired units that produce fly ash, economizer ash, and bottom ash. Economizer ash is sluiced to the North Ash Impoundment and later trucked to the landfill after dewatering. Related facilities include a groundwater monitoring system, storm water management system, and haul/access roads.

#### **1.2 Regulatory Requirements**

This plan has been developed for the Montrose Generating Station North Ash Impoundment in accordance with 40 CFR 257.102 (b). The CCR Rule requires preparation of a Closure Plan for all existing CCR landfills and surface impoundments in operation as of October 19, 2015, the effective date of the rule.

The owner or operator of a CCR unit must prepare a written closure plan that includes, at a minimum, the information specified in 40 CFR 257.102 (b) (1) (i) through (vi). These items and the section of this plan responsive to each follows:

#### 40 CFR 257.102 (b) Written Closure Plan

##### (1) Content of the Plan

- (i) Narrative description of how the CCR unit will be closed in accordance with 40 CFR 257.102 (Section 2.1).
- (ii) If closure of the CCR unit will be accomplished through removal of CCR from the CCR unit, a description of the procedures to remove the CCR and decontaminate the CCR unit in accordance with 40 CFR 257.102 (c). (Section 2.1).
- (iii) If closure of the CCR unit will be accomplished by leaving CCR in place, a description of the final cover system and methods and procedures used to install the final cover. The closure plan must also discuss how the final cover system will achieve the performance standards specified in 40 CFR 102 (d) (N/A).
- (iv) Estimate of the maximum inventory of CCR ever on-site over the active life of the CCR unit (Section 2.2).
- (v) Estimate of the largest area of the CCR unit ever requiring a final cover (N/A).
- (vi) Schedule for completing all activities necessary to satisfy the closure criteria in this section, including an estimate of the year in which all closure activities for the CCR unit will be completed. The schedule should provide sufficient information to describe the sequential steps that will be taken to close the CCR unit, including major milestones and the estimated timeframes to complete each step or phase of CCR unit closure (Section 2.3).

Selected definitions from the CCR Rule are provided below.

**Closed** means placement of CCR in a CCR unit has ceased, and the owner or operator has completed closure of the CCR unit in accordance with § 257.102 and has initiated post-closure care in accordance with § 257.104.

**CCR (coal combustion residuals)** means fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers.

**Surface Impoundment** means an area of land or an excavation that receives CCR and which is not a surface impoundment, an underground injection well, a

salt dome formation, a salt bed formation, an underground or surface coal mine, or a cave. For purposes of this subpart, a Surface Impoundment also includes sand and gravel pits and quarries that receive CCR, CCR piles, and any practice that does not meet the definition of a beneficial use of CCR.

**CCR surface impoundment** means a natural topographic depression, manmade excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR.

**CCR Unit** means any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit, or a combination of more than one of these units, based on the context of the paragraph(s) in which it is used. This term includes both new and existing units, unless otherwise specified.

**Qualified Professional Engineer** means an individual who is licensed by a state as a Professional Engineer to practice one or more disciplines of engineering and who is qualified by education, technical knowledge and experience to make the specific technical certifications required under this subpart. Professional engineers making these certifications must be currently licensed in the state where the CCR unit(s) is located.

## SECTION 2

### CLOSURE DESCRIPTION

This Plan describes the steps needed to close the Montrose North Ash Impoundment at any point during the active life of the unit in accordance with the CCR Rule and recognized and generally accepted good engineering practices. Plan items required under the CCR Rule described in this section fall into the general categories of Closure Description, Volume Estimates, and Closure Schedule. This initial or any subsequent Plan may be amended pursuant to 40 CFR 257.102 (b) (3) at any time as discussed in Section 5. The current plan is to close the unit by removal of CCR.

#### **2.1 Closure Description**

##### **2.1.1 Description**

The Montrose North Ash Impoundment was constructed as an incised impoundment. Closure will be accomplished through removal of CCR. The CCR material contained in the unit will be dewatered as necessary, removed, and either beneficially used or disposed in the on-site CCR Landfill.

##### **2.1.2 Construction Procedures**

CCR will be removed primarily by mechanical excavation using earth-moving equipment. CCR will be allowed to dewater by gravity drainage and evaporation. The impoundment will be decontaminated by removal of the CCR and will be considered complete when constituent concentrations throughout the CCR unit, if detected, have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standard for constituents listed in Appendix IV to 40 CFR 257.

#### **2.2 Volume Estimates**

The estimated maximum inventory of CCR and impounded water ever planned on-site over the active life of the CCR unit is approximately 18,400 cubic yards.

## 2.3 Closure Schedule

The size of area and time of year closure construction takes place will vary, therefore closure construction schedules will vary. The schedule provided in this section is therefore a general estimation.

### 2.3.1 Commencement of Closure

Commencement of final closure has occurred if placement of waste in the surface impoundment has ceased and any of the following actions or activities has been completed (40 CFR 102 (e) (3)):

- (i) Steps necessary to implement this closure plan;
- (ii) Submittal of a completed application for any required state or agency permit or permit modification; or
- (i) Steps necessary to comply with any state or other agency standards that are a prerequisite, or are otherwise applicable, to initiating or completing the closure.

There are three regulatory timeframes within which a unit may be required to close:

- (i) In accordance with 40 CFR 257.102 (e) (1), a surface impoundment has 30 days after the date the unit receives the *known* final receipt of waste, either CCR or non-CCR waste stream; or removes the *known* final volume of CCR from the CCR unit for the purpose of beneficial use of CCR.
- (ii) In accordance with 40 CFR 257.102 (e) (2), for idled units with additional capacity that expect to resume CCR or non-CCR waste disposal operations, or CCR removal operations for beneficial use, closure must be initiated within two years unless a written demonstration prepared in accordance with 40 CFR 257.102 (e) (2) (ii) is placed in the unit's operating record, which would provide an additional two year extension(s).
- (iii) In accordance with 40 CFR 257.102 (e) (4) surface impoundment closures due to groundwater exceedances or technical siting criteria (i.e. location in an unstable area), closure must be initiated within six months.

Extensions to complete the closure activity may be allowed under 40 CFR 257.102 (f) (2).

### 2.3.2 Closure Schedule

The milestones and the associated timeframes in this section are initial estimates. Some of the activities associated with the milestones will overlap.

#### Estimated Closure Schedule

Written Closure Plan	October 17, 2016
Notification of Intent to Close Placed in Operating Record	No later than the date closure of the CCR unit is initiated. Closure will commence per applicable timeframes in 40 CFR 257.102 (e). <sup>1</sup>
Initiation of Closure / Coordinating with and obtaining necessary approvals and permits from other agencies	Year 1
Mobilization	Year 1
Dewater and remove CCR	Year 1 - 5
Year all closure activities for the CCR unit will be completed	Year 1 - 5 <sup>2</sup>

Notes

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

## SECTION 3

### AMENDMENT OF CCR CLOSURE PLAN

This owner or operator may amend the initial or any subsequent written closure plan developed pursuant to 40 CFR 257.102 (b) (1) at any time.

The Plan must be amended whenever:

- There is a change in the operation of the CCR unit that would substantially affect the written closure plan in effect; or
- Before or after closure activities have commenced, unanticipated events necessitate a revision of the written closure plan.

The written closure plan must be amended at least 60 days prior to a planned change in the operation of the facility or CCR unit, or no later than 60 days after an unanticipated event requires the need to revise an existing written closure plan. If a written closure plan is revised after closure activities have commenced for a CCR unit, the current closure plan must be amended no later than 30 days following the triggering event.

A written certification from a qualified professional engineer that the initial and any amendment of the written closure plan meets the requirements of § 257.102 (b) must be obtained.

Plan changes will be documented using the Revision History which prefaces this Plan. Substantial changes to this plan will be certified by a Qualified Professional Engineer.

## SECTION 4

### ENGINEERING CERTIFICATION

Pursuant to 40 CFR 257.102 (b) (4) and by means of this certification, I attest that:

- (i) I am a Qualified Professional Engineer licensed in the State of Missouri;
- (ii) I am familiar with the requirements of the CCR Rule (40 CFR 257);
- (iii) I, or my agent, have visited and examined the Montrose Generating Station North Ash Impoundment;
- (iv) I do hereby certify to the best of my knowledge, information, and belief that this Closure Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of the CCR Rule;
- (v) this CCR Closure Plan meets the requirements of 40 CFR 257.102 (b); and
- (vi) the pages certified herein include Pages i, ii, 1 through 7, altogether a total of 9 pages in a protected Adobe™ document.

Walter J. Martin, P.E.

Printed Name of Qualified Professional Engineer  
1200 Main St, Kansas City, MO 64105, 816-556-2200

P.E. SEAL, STATE OF MISSOURI





**CCR CLOSURE PLAN**  
**Montrose South Ash Impoundment**  
**Montrose Generating Station**

**400 Southwest Hwy P**  
**Clinton, Missouri**

**Kansas City Power & Light Company**

October 14, 2016

## TABLE OF CONTENTS

SECTION 1 BACKGROUND .....	1
1.1 Facility Information .....	1
1.2 Regulatory Requirements .....	1
SECTION 2 CLOSURE DESCRIPTION .....	4
2.1 Closure Description .....	4
2.1.1 Description .....	4
2.1.2 Construction Procedures.....	4
2.2 Volume Estimates.....	4
2.3 Closure Schedule .....	5
2.3.1 Commencement of Closure .....	5
2.3.2 Closure Schedule.....	6
SECTION 3 AMENDMENT OF CCR CLOSURE PLAN .....	7
SECTION 4 ENGINEERING CERTIFICATION .....	8

**MONTROSE GENERATING STATION**  
**SOUTH ASH IMPOUNDMENT**  
**CCR CLOSURE PLAN**  
**REVISION HISTORY**

<b>Revision Number</b>	<b>Revision Date</b>	<b>Section Revised</b>	<b>Summary of Revisions</b>

Revisions are accomplished in accordance with Section 3.

## SECTION 1

### BACKGROUND

The purpose of this CCR Closure Plan (Plan) is to identify and describe the Coal Combustion Residuals Rule (CCR Rule) measures needed to close the Montrose Generating Station (Montrose) South Ash Impoundment consistent with recognized and generally accepted good engineering practices and in accordance with the CCR Rule. The following sections provide background information on the facility and related regulatory requirements.

#### **1.1 Facility Information**

Name of Facility: Montrose Generating Station

Name of CCR Unit: South Ash Impoundment

Name of Operator: Kansas City Power & Light Company (KCP&L)

Facility Mailing Address: 400 Southwest Hwy. P, Clinton, MO 64735

Location: Approximately ten miles southwest of Clinton, Missouri.

Facility Description: The Montrose Generating Station has three coal-fired units that produce fly ash, economizer ash, and bottom ash. Economizer ash is sluiced to the South Ash Impoundment and later trucked to the landfill after dewatering. Related facilities include a groundwater monitoring system, storm water management system, and haul/access roads.

#### **1.2 Regulatory Requirements**

This plan has been developed for the Montrose Generating Station South Ash Impoundment in accordance with 40 CFR 257.102 (b). The CCR Rule requires preparation of a Closure Plan for all existing CCR landfills and surface impoundments in operation as of October 19, 2015, the effective date of the rule.

The owner or operator of a CCR unit must prepare a written closure plan that includes, at a minimum, the information specified in 40 CFR 257.102 (b) (1) (i) through (vi). These items and the section of this plan responsive to each follows:

#### 40 CFR 257.102 (b) Written Closure Plan

##### (1) Content of the Plan

- (i) Narrative description of how the CCR unit will be closed in accordance with 40 CFR 257.102 (Section 2.1).
- (ii) If closure of the CCR unit will be accomplished through removal of CCR from the CCR unit, a description of the procedures to remove the CCR and decontaminate the CCR unit in accordance with 40 CFR 257.102 (c). (Section 2.1).
- (iii) If closure of the CCR unit will be accomplished by leaving CCR in place, a description of the final cover system and methods and procedures used to install the final cover. The closure plan must also discuss how the final cover system will achieve the performance standards specified in 40 CFR 102 (d) (N/A).
- (iv) Estimate of the maximum inventory of CCR ever on-site over the active life of the CCR unit (Section 2.2).
- (v) Estimate of the largest area of the CCR unit ever requiring a final cover (N/A).
- (vi) Schedule for completing all activities necessary to satisfy the closure criteria in this section, including an estimate of the year in which all closure activities for the CCR unit will be completed. The schedule should provide sufficient information to describe the sequential steps that will be taken to close the CCR unit, including major milestones and the estimated timeframes to complete each step or phase of CCR unit closure (Section 2.3).

Selected definitions from the CCR Rule are provided below.

**Closed** means placement of CCR in a CCR unit has ceased, and the owner or operator has completed closure of the CCR unit in accordance with § 257.102 and has initiated post-closure care in accordance with § 257.104.

**CCR (coal combustion residuals)** means Fly Ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers.

**Surface Impoundment** means an area of land or an excavation that receives CCR and which is not a surface impoundment, an underground injection well, a

salt dome formation, a salt bed formation, an underground or surface coal mine, or a cave. For purposes of this subpart, a Surface Impoundment also includes sand and gravel pits and quarries that receive CCR, CCR piles, and any practice that does not meet the definition of a beneficial use of CCR.

**CCR surface impoundment** means a natural topographic depression, manmade excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR.

**CCR Unit** means any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit, or a combination of more than one of these units, based on the context of the paragraph(s) in which it is used. This term includes both new and existing units, unless otherwise specified.

**Qualified Professional Engineer** means an individual who is licensed by a state as a Professional Engineer to practice one or more disciplines of engineering and who is qualified by education, technical knowledge and experience to make the specific technical certifications required under this subpart. Professional engineers making these certifications must be currently licensed in the state where the CCR unit(s) is located.

## SECTION 2

### CLOSURE DESCRIPTION

This Plan describes the steps needed to close the Montrose South Ash Impoundment at any point during the active life of the unit in accordance with the CCR Rule and recognized and generally accepted good engineering practices. Plan items required under the CCR Rule described in this section fall into the general categories of Closure Description, Volume Estimates, and Closure Schedule. This initial or any subsequent Plan may be amended pursuant to 40 CFR 257.102 (b) (3) at any time as discussed in Section 5. The current plan is to close the unit by removal of CCR.

#### **2.1 Closure Description**

##### **2.1.1 Description**

The Montrose South Ash Impoundment was constructed as an incised impoundment. Closure will be accomplished through removal of CCR. The CCR material contained in the unit will be dewatered as necessary, removed, and either beneficially used or disposed in the on-site CCR Landfill.

##### **2.1.2 Construction Procedures**

CCR will be removed primarily by mechanical excavation using earth-moving equipment. CCR will be allowed to dewater by gravity drainage and evaporation. The impoundment will be decontaminated by removal of the CCR and will be considered complete when constituent concentrations throughout the CCR unit, if detected, have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standard for constituents listed in Appendix IV to 40 CFR 257.

#### **2.2 Volume Estimates**

The estimated maximum inventory of CCR and impounded water ever planned on-site over the active life of the CCR unit is approximately 14,530 cubic yards.

## 2.3 Closure Schedule

The size of area and time of year closure construction takes place will vary, therefore closure construction schedules will vary. The schedule provided in this section is therefore a general estimation.

### 2.3.1 Commencement of Closure

Commencement of final closure has occurred if placement of waste in the surface impoundment has ceased and any of the following actions or activities has been completed (40 CFR 102 (e) (3)):

- (i) Steps necessary to implement this closure plan;
- (ii) Submittal of a completed application for any required state or agency permit or permit modification; or
- (i) Steps necessary to comply with any state or other agency standards that are a prerequisite, or are otherwise applicable, to initiating or completing the closure.

There are three regulatory timeframes within which a unit may be required to close:

- (i) In accordance with 40 CFR 257.102 (e) (1), a surface impoundment has 30 days after the date the unit receives the *known* final receipt of waste, either CCR or non-CCR waste stream; or removes the *known* final volume of CCR from the CCR unit for the purpose of beneficial use of CCR.
- (ii) In accordance with 40 CFR 257.102 (e) (2), for idled units with additional capacity that expect to resume CCR or non-CCR waste disposal operations, or CCR removal operations for beneficial use, closure must be initiated within two years unless a written demonstration prepared in accordance with 40 CFR 257.102 (e) (2) (ii) is placed in the unit's operating record, which would provide an additional two year extension(s).
- (iii) In accordance with 40 CFR 257.102 (e) (4) surface impoundment closures due to groundwater exceedances or technical siting criteria (i.e. location in an unstable area), closure must be initiated within six months.

Extensions to complete the closure activity may be allowed under 40 CFR 257.102 (f) (2).

### 2.3.2 Closure Schedule

The milestones and the associated timeframes in this section are initial estimates. Some of the activities associated with the milestones will overlap.

#### Estimated Closure Schedule

Written Closure Plan	October 17, 2016
Notification of Intent to Close Placed in Operating Record	No later than the date closure of the CCR unit is initiated. Closure will commence per applicable timeframes in 40 CFR 257.102 (e). <sup>1</sup>
Initiation of Closure / Coordinating with and obtaining necessary approvals and permits from other agencies	Year 1 – 5
Mobilization	Year 1
Dewater and remove CCR	Year 1 - 5
Year all closure activities for the CCR unit will be completed	Year 1 - 5 <sup>2</sup>

Notes

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

## SECTION 3

### AMENDMENT OF CCR CLOSURE PLAN

This owner or operator may amend the initial or any subsequent written closure plan developed pursuant to 40 CFR 257.102 (b) (1) at any time.

The Plan must be amended whenever:

- There is a change in the operation of the CCR unit that would substantially affect the written closure plan in effect; or
- Before or after closure activities have commenced, unanticipated events necessitate a revision of the written closure plan.

The written closure plan must be amended at least 60 days prior to a planned change in the operation of the facility or CCR unit, or no later than 60 days after an unanticipated event requires the need to revise an existing written closure plan. If a written closure plan is revised after closure activities have commenced for a CCR unit, the current closure plan must be amended no later than 30 days following the triggering event.

A written certification from a qualified professional engineer that the initial and any amendment of the written closure plan meets the requirements of § 257.102 (b) must be obtained.

Plan changes will be documented using the Revision History which prefaces this Plan. Substantial changes to this plan will be certified by a Qualified Professional Engineer.

## SECTION 4

### ENGINEERING CERTIFICATION

Pursuant to 40 CFR 257.102 (b) (4) and by means of this certification, I attest that:

- (i) I am a Qualified Professional Engineer licensed in the State of Missouri;
- (ii) I am familiar with the requirements of the CCR Rule (40 CFR 257);
- (iii) I, or my agent, have visited and examined the Montrose Generating Station South Ash Impoundment;
- (iv) I do hereby certify to the best of my knowledge, information, and belief that this Closure Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of the CCR Rule;
- (v) this CCR Closure Plan meets the requirements of 40 CFR 257.102 (b); and
- (vi) the pages certified herein include Pages i, ii, 1 through 7, altogether a total of 9 pages in a protected Adobe™ document.

Walter J. Martin, P.E.

Printed Name of Qualified Professional Engineer  
1200 Main St, Kansas City, MO 64105, 816-556-2200

P.E. SEAL, STATE OF MISSOURI



ATTACHMENT 2

Certification of CCR Removal in Preparation of Closure by Removal  
Montrose North and South Ash Impoundments

# Memorandum



Date: January 20, 2021

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

From: Kira Wylam, P.E., Burns & McDonnell Engineering Co., Inc.

Subject: Certification of CCR Removal in Preparation of Closure by Removal  
Montrose North and South Ash Impoundments

The purpose of this memorandum is to present the results of construction observation, documentation, and work performed by Burns & McDonnell (BMcD) during the removal of coal combustion residuals (CCR) from the Montrose North and South Ash Impoundments (referred to collectively herein as “the Impoundments”) at the Montrose Generating Station (Station) and to certify the removal of the disposed CCR waste materials in accordance with the Impoundments’ CCR closure plans. These CCR surface impoundments are subject to Federal Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments per 40 CFR 257 Subpart D and are owned and operated by Eversource Energy, Inc. (Eversource).

Eversource retained Kissick Construction to remove ponded CCR waste from the Station’s Impoundments. Eversource retained BMcD as certifying engineer to certify that, upon completion of construction, the ponded CCR waste in the Impoundments had been removed in accordance with Section 2.1 of the October 14, 2016 documents respectively titled, *CCR Closure Plan, Montrose North Ash Impoundment*, and *CCR Closure Plan, Montrose South Ash Impoundment*, which are referred to herein as “Closure Plans”. It is BMcD’s opinion that removal of CCR material from the Impoundments was performed in accordance with the Closure Plans and with the CCR removal requirement of 40 CFR 257.102(c), for reasons described herein.

CCR was removed from the Impoundments in preparation for closure using a phased approach, with a site evaluation and certified survey that followed both material removal phases. The North and South Ash Impoundment areas are described below, delineated in the attached third-party survey verification documentation and documented with photographs.

CCR removal was planned within the boundary of the Limits of Excavation as indicated in Figure No. 1, which represents the known extents of the North and South Ash Impoundments. Figure No. 1 indicates the pre-construction surface contours as surveyed by BMcD, the planned side slope excavation, and the planned base excavation. Side slope excavation was completed at an approximate 3:1 grade down to an elevation of 741 feet NGVD. The separation berm between the North and South Impoundments was composed predominantly of CCR material and was therefore removed. In areas where native clay was encountered prior to reaching the planned bottom elevation, excavation was terminated. If native clay was not encountered at or before an elevation of 741 feet, excavation continued until native clay was located at which point excavation was terminated. A constructed clay liner is not known to have been installed in the base of the North or South Ash Impoundments.

January 20, 2021

Page 2

Figure No. 2 is provided to indicate the final contours and the location of the top of clay/bottom of excavation as surveyed by Boundary Construction and Surveying, Inc. and as observed and certified by Burns & McDonnell Engineering Co., Inc., for both the side slope and base excavation areas.

Through the course of the project, a total of approximately 75,600 cubic yards of CCR were removed and disposed in an on-site CCR facility. Following CCR removal, the area will be used for impoundment of site runoff.

#### Closure and Certification – Phase 1 (North Impoundment)

The North Impoundment was surveyed following an onsite inspection by BMcD on June 6, 2020. The certifying engineer witnessed the existing subgrade, which consisted of clay, had been reached via excavation and confirmed the material was clay through visual observation and hand texturing.

#### Closure and Certification – Phase 2 (South Impoundment)

The South Impoundment was surveyed following an onsite inspection by BMcD on June 29, 2020. The certifying engineer witnessed the existing North/ South Impoundment separation berm had been removed and the existing clay subgrade had been reached via excavation. The certifying engineer confirmed this based on visual observation and hand texturing of the subgrade material.

Following the completion of Phases 1 and 2, a ramp remained on the west perimeter boundary that allowed the contractor access to the bottom of the Impoundments. Prior to completion of the survey of this area on July 14, 2020, this area as indicated as Phase 3 on the attached verification survey was witnessed by an onsite BMcD engineer who verified the removal of the ramp on July 9, 2020.

The CCR was removed and the above phases were completed within five years of closure initiation (40 CFR 257.102(f)(ii)).

January 20, 2021

Page 3

CERTIFICATION

As required by 40 CFR 257.102(f)(3), I hereby certify that removal of CCR from the North and South Ash Impoundments at the Montrose Generating Station was completed in accordance with the written closure plan as required by 40 CFR 257.102(b) and the CCR removal requirement of 40 CFR 257.102(c).

*Kira E. Wylam*

\_\_\_\_\_  
Kira E. Wylam

1/20/2021

Date



Jan 20 2021 1:51 PM

KEW/kew

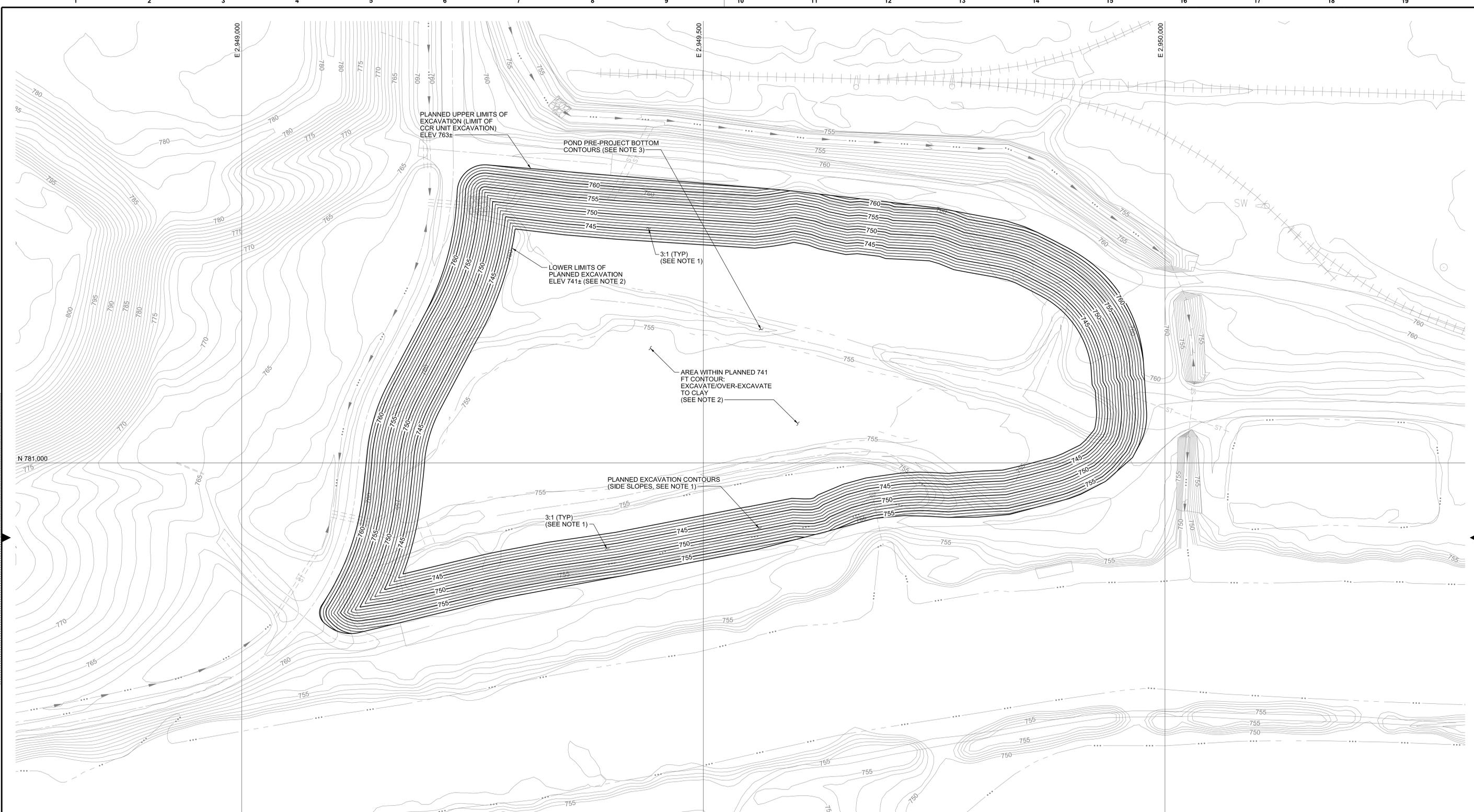
Attachments –

Figures No. 1 and 2

Third Party Verification Surveys

Photographs

Attachment -  
Figures No. 1 and 2



**NOTES:**

1. SIDE SLOPES: EXCAVATION PROCEEDED AT PLANNED 3:1 SLOPES TO 741 FT ELEVATION (APPROX) UNLESS IN-SITU CLAY WAS LOCATED FIRST, IN WHICH CASE EXCAVATION WAS TERMINATED WITH APPROVAL OF CQA REPRESENTATIVE. PLANNED EXCAVATION CONTOURS WERE AS SHOWN ON DRAWINGS M-CG026 AND M-CG028 BY BURNS AND McDONNELL, DATED 11/15/2018.
2. BASE: IN LOCATIONS WHERE CLAY WAS LOCATED BEFORE REACHING ELEV 741 FT± EXCAVATION WAS TERMINATED AT TOP OF CLAY. WHERE CLAY WAS NOT LOCATED AT OR BEFORE PLANNED ELEV 741 FT±, EXCAVATION PROCEEDED BELOW UNTIL IN-SITU CLAY WAS LOCATED AND EXCAVATION WAS TERMINATED. BURNS & McDONNELL OBSERVED AND CONFIRMED TERMINATIONS OF ALL EXCAVATIONS AS CLAY.
3. PRE-EXISTING SURVEYED CONTOURS DATED 11/15/2018 WERE BY BURNS & McDONNELL FOR DESIGN PURPOSES. CONTOURS WERE GENERATED BY CAD AND ARE THEREFORE APPROXIMATE.

**LEGEND**

- PRE-PROJECT CONTOURS
- 850— PLANNED EXCAVATION CONTOURS (MAJOR CONTOUR)
- PLANNED EXCAVATION CONTOURS (MINOR CONTOUR)



0 20 40 80  
SCALE IN FEET

**NOT FOR  
CONSTRUCTION**

no.	date	by	ckd	description	no.	date	by	ckd	description
A	01/07/21	AMM	KEW	INITIAL ISSUE					

**BURNS  
MCDONNELL**  
9400 WARD PARKWAY  
KANSAS CITY, MO 64114  
Burns & McDonnell Engineering Co., Inc.  
CERTIFICATE OF AUTHORITY NO. 000165

designed  
A. MYERS

detailed  
J. BRUNKHORST

**EVERGY METRO, INC.**

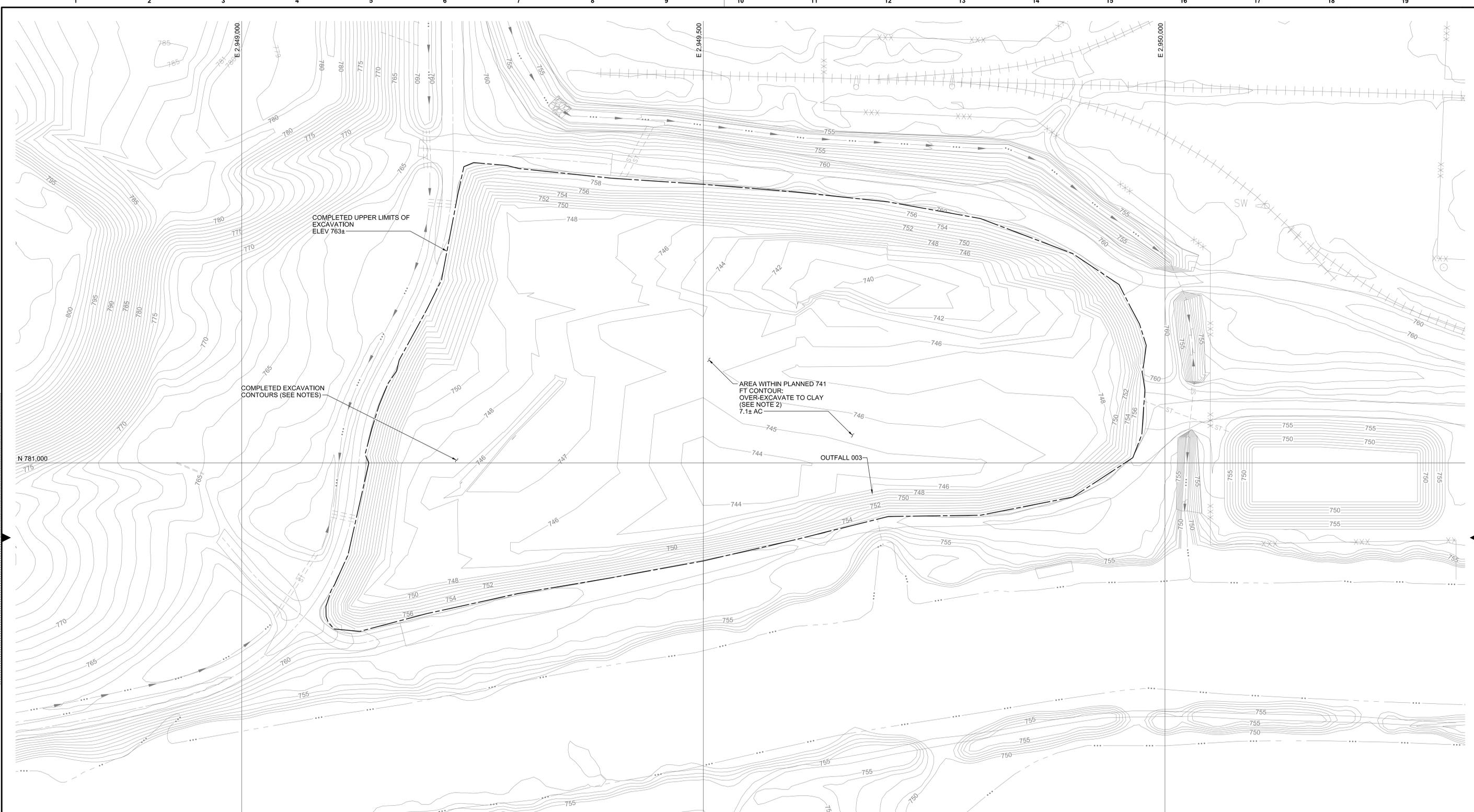
MONTROSE GENERATING STATION  
IMPOUNDMENT CLOSURE & SITE RESTORATION  
HENRY COUNTY, MO

**EXCAVATION PLAN**

project 103871 | contract

drawing | rev.  
**FIGURE NO. 1— A**

sheet of sheets  
file SK-M-007.dgn



- NOTES:**
1. SIDE SLOPES: EXCAVATION PROCEEDED AT PLANNED 3:1 SLOPES TO 741 FT ELEVATION (APPROX) UNLESS IN-SITU CLAY WAS LOCATED FIRST, IN WHICH CASE EXCAVATION WAS TERMINATED WITH APPROVAL OF CQA REPRESENTATIVE.
  2. BASE: IN LOCATIONS WHERE CLAY WAS LOCATED BEFORE REACHING ELEV 741 FT± EXCAVATION WAS TERMINATED AT TOP OF CLAY. WHERE CLAY WAS NOT LOCATED AT OR BEFORE PLANNED ELEV 741 FT±, EXCAVATION PROCEEDED BELOW UNTIL IN-SITU CLAY WAS LOCATED AND EXCAVATION WAS TERMINATED. BURNS & McDONNELL OBSERVED AND CONFIRMED TERMINATIONS OF ALL EXCAVATIONS AS CLAY.
  3. SURVEY COMPLETED AND CONTOURS PROVIDED BY BOUNDARY CONSTRUCTION AND SURVEYING, INC. FIELD WORK COMPLETED AUGUST 17, 2020. CONTOURS INDICATED AND CALCULATED AREA WERE GENERATED BY COMPUTER AND THEREFORE APPROXIMATE.

**LEGEND**

— COMPLETED EXCAVATION CONTOURS

**NORTH**

0 20' 40' 80'

SCALE IN FEET

**NOT FOR CONSTRUCTION**

no.	date	by	ckd	description	no.	date	by	ckd	description
A	01/07/21	AMM	KEW	INITIAL ISSUE					

**BURNS & McDONNELL**

9400 WARD PARKWAY  
KANSAS CITY, MO 64114  
Burns & McDonnell Engineering Co., Inc.  
CERTIFICATE OF AUTHORITY NO. 000165

designed: A. MYERS  
detailed: J. BRUNKHORST

**EVERGY METRO, INC.**

MONTROSE GENERATING STATION  
IMPOUNDMENT CLOSURE & SITE RESTORATION  
HENRY COUNTY, MO

**EXCAVATION RECORD DRAWING**

project 103871 | contract

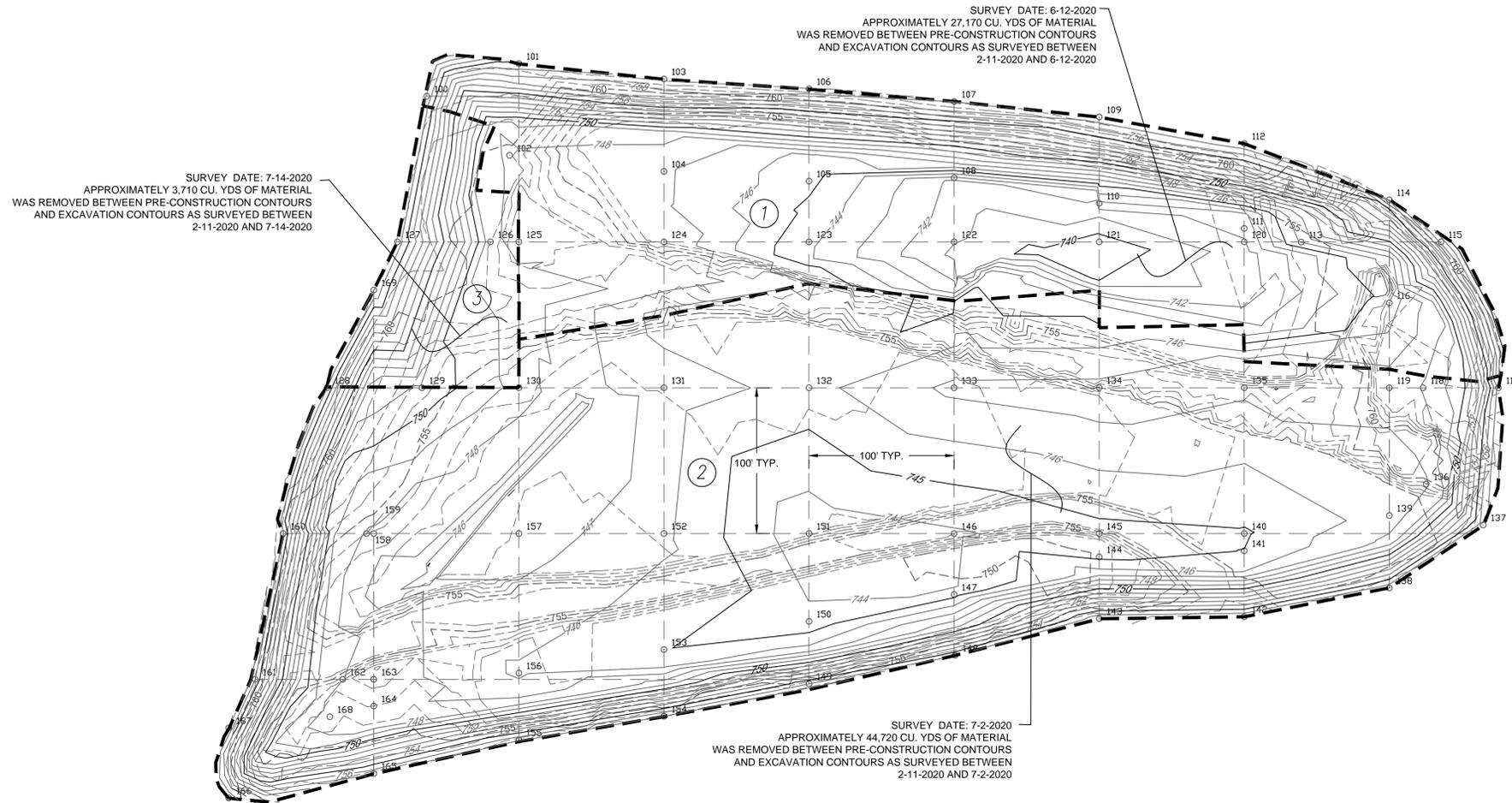
drawing | rev.

**FIGURE NO. 2— A**

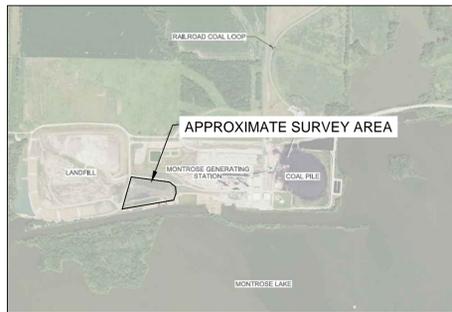
sheet of sheets

file SK-M-008.dgn

# Attachment - Verification Survey



PT ID	Northing	Easting	Excavation Surveyed Subgrade	Existing Surface	Difference	Date Surveyed
100	781300.00	2949236.44	761.89	762.79	-0.90	06/12/20
101	781322.27	2949300.00	759.69	763.22	-3.53	06/12/20
102	781259.36	2949293.53	747.58	759.39	-11.81	06/12/20
103	781311.82	2949400.00	758.62	763.40	-4.78	06/12/20
104	781248.33	2949400.00	747.14	752.54	-5.40	06/12/20
105	781241.68	2949500.00	745.90	752.67	-7.67	06/12/20
106	781305.06	2949500.00	758.67	763.86	-4.19	06/12/20
107	781296.33	2949600.00	758.04	763.20	-5.16	06/12/20
108	781244.05	2949600.00	741.90	752.87	-10.97	06/12/20
109	781285.71	2949700.00	757.78	763.07	-5.29	06/12/20
110	781226.57	2949700.00	742.15	752.56	-10.41	06/12/20
111	781209.32	2949800.00	742.31	753.23	-10.92	06/12/20
112	781267.51	2949800.00	757.91	762.18	-4.27	06/12/20
113	781199.89	2949839.21	742.20	754.44	-12.24	06/12/20
114	781228.86	2949899.87	756.09	761.29	-5.20	06/12/20
115	781200.00	2949935.54	758.25	760.73	-2.48	06/12/20
116	781158.24	2949900.00	745.54	757.05	-11.51	06/12/20
117	781100.00	2949975.15	757.31	759.30	-1.99	07/02/20
118	781100.00	2949923.11	748.06	756.29	-8.23	07/02/20
119	781100.00	2949900.00	747.25	756.22	-8.97	07/02/20
120	781200.00	2949800.00	741.89	753.20	-11.31	06/12/20
121	781200.00	2949700.00	739.51	752.52	-13.01	06/12/20
122	781200.00	2949600.00	741.94	752.83	-11.79	06/12/20
123	781200.00	2949500.00	744.21	752.50	-8.29	06/12/20
124	781200.00	2949400.00	747.83	752.65	-4.82	06/12/20
125	781200.00	2949300.00	747.67	756.45	-8.78	06/12/20
126	781200.00	2949280.39	748.33	759.05	-10.72	07/14/20
127	781200.00	2949216.28	761.69	761.95	-0.26	07/14/20
128	781100.00	2949167.82	760.99	761.71	-0.72	07/02/20
129	781100.00	2949233.11	750.77	756.39	-5.62	07/02/20
130	781100.00	2949300.00	748.66	753.70	-5.04	07/02/20
131	781100.00	2949400.00	746.49	752.06	-5.57	07/02/20
132	781100.00	2949500.00	745.67	752.23	-6.56	07/02/20
133	781100.00	2949600.00	747.24	751.66	-4.42	07/02/20
134	781100.00	2949700.00	747.28	754.94	-7.66	07/02/20
135	781100.00	2949800.00	747.19	758.43	-11.24	07/02/20
136	781034.05	2949825.31	746.89	758.89	-12.00	07/02/20
137	781005.89	2949964.68	756.73	757.94	-1.21	07/02/20
138	780962.70	2949900.00	756.73	757.02	-0.29	07/02/20
139	781012.37	2949900.00	746.46	754.76	-8.30	07/02/20
140	781000.00	2949800.00	744.90	754.34	-9.44	07/02/20
141	780988.20	2949800.00	745.02	754.39	-9.37	07/02/20
142	780942.92	2949800.00	756.87	757.51	-0.64	07/02/20
143	780941.65	2949700.00	756.91	756.82	0.09	07/02/20
144	780984.05	2949700.00	744.71	750.45	-5.74	07/02/20
145	781000.00	2949700.00	744.89	753.94	-9.25	07/02/20
146	781000.00	2949600.00	743.86	758.00	-12.14	07/02/20
147	780958.20	2949600.00	744.59	750.24	-5.65	07/02/20
148	780916.53	2949600.00	755.87	756.74	-0.87	07/02/20
149	780896.98	2949500.00	755.97	756.39	-0.42	07/02/20
150	780939.78	2949500.00	744.22	750.59	-6.37	07/02/20
151	781000.00	2949500.00	743.32	751.38	-8.06	07/02/20
152	781000.00	2949400.00	746.21	751.10	-4.89	07/02/20
153	780920.43	2949400.00	745.05	750.61	-5.56	07/02/20
154	780874.69	2949400.00	757.08	757.04	0.04	07/02/20
155	780858.31	2949300.00	756.72	757.19	-0.47	07/02/20
156	780904.36	2949300.00	745.84	750.73	-4.89	07/02/20
157	781000.00	2949300.00	747.58	750.86	-3.28	07/02/20
158	781000.00	2949200.00	747.86	753.85	-5.99	07/02/20
159	781000.00	2949194.94	747.88	754.03	-6.15	07/02/20
160	781000.00	2949137.48	761.12	760.58	0.54	07/02/20
161	780900.00	2949118.20	760.93	761.03	-0.10	07/02/20
162	780900.00	2949178.58	748.03	753.29	-5.26	07/02/20
163	780900.00	2949200.00	747.60	751.52	-3.92	07/02/20
164	780881.68	2949200.00	747.37	753.03	-5.66	07/02/20
165	780835.38	2949200.00	756.87	757.17	-0.30	07/02/20
166	780818.69	2949100.00	760.60	760.80	-0.20	07/02/20
167	780866.68	2949100.00	761.78	761.92	-0.14	07/02/20
168	780874.35	2949169.70	747.33	753.49	-6.16	07/02/20
169	781167.01	2949200.00	762.01	762.06	0.01	07/14/20



LOCATION MAP

**NOTES**

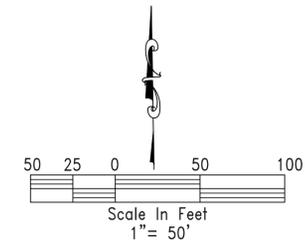
1. APPROXIMATELY 75,600 CU YDS OF MATERIAL WAS REMOVED BETWEEN THE PRE-CONSTRUCTION CONTOURS AND THE EXCAVATION CONTOURS AS SURVEYED BETWEEN 2/11/20 AND 7/14/20. THIS VOLUME IS THE TOTAL MATERIAL REMOVED DURING THE PROJECT.
2. CONTOUR ELEVATIONS WERE GENERATED BY 3-D CAD SOFTWARE AND ARE THEREFORE APPROXIMATE.
3. SURVEY COORDINATES ARE IN FEET.
4. PRE-CONSTRUCTION GROUND FIELD SURVEY WAS COMPLETED BY BOUNDARY & CONSTRUCTION SURVEYING ON FEBRUARY 11, 2020.

**BENCHMARK**

BM MJ04  
 N=781949.51  
 E=2950096.72  
 ELEVATION=861.42  
 BM MJO4 SHOWN ON PLANS  
 PREPARED BY BURNS & MCDONNELL,  
 PROJECT 103871.  
 MISSOURI STATE PLANE  
 COORDINATES.  
 ELEVATION DATUM NAVD-88

**LEGEND**

- 1000 REF PT NUM.
- ① PHASE NUMBER
- APPROXIMATE PHASE LIMITS OF CCR REMOVAL
- - - 800 - - PRE-CONSTRUCTION SURFACE ELEVATION
- 800 — EXCAVATION SURVEYED SUBGRADE ELEVATION



**MONTROSE GENERATING STATION**

NORTH AND SOUTH ASH IMPOUNDMENTS  
 CCR REMOVAL DOCUMENTATION  
 BOUNDARY & CONSTRUCTION SURVEYING, INC.  
 821 NE COLUMBUS STREET SUITE 100, LEE'S SUMMIT, MO. 64063  
 PH.# 816/554-9798, FAX # 816/554-0337  
 PROJECT NO. 20-156 SHEET 1 OF 1  
 DATE: JANUARY 04, 2021 ENERGY METRO, INC.

## Attachment - Photographs

Phase 1  
June 9, 2020

(Looking East to South)



Photo was taken on June 9, 2020, from the west side of the Ash Impoundment looking east and south, following the completion of CCR removal operations of the North Ash Impoundment. Clay is observed at the base of the unit and a portion of the separation berm is observed on the eastern end. Survey information for this phase was taken on June 12, 2020.



Phase 2  
June 29, 2020

(Looking East to South)



(Looking North to East)



Photos were taken on June 29, 2020, from the west side of the Ash Impoundment looking east and south and north and east, respectively, following the completion of CCR removal operations of the South Ash Impoundment. Clay is observed at the base of the unit. Survey information for this phase was taken on July 2, 2020.



Phase 2  
June 29, 2020  
(Looking West to North)



Photo was taken on June 29, 2020, from the south-east corner of the South Ash Impoundment looking west to north, following the completion of CCR removal operations of the South Ash Impoundment. Clay is observed at the base of the unit. Survey information for this phase was taken on July 2, 2020.



July 9, 2020  
(Looking East)



Photo was taken on July 9, 2020, from the west side of the North and South Ash Impoundments looking east, following the completion of removal of the access ramp (Phase 3). Clay was observed at the base of the unit in all locations. Survey information for this phase was taken on July 14, 2020.

