September 25, 2020 File No. 27213169.20

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 La Cygne Generating Station Bottom Ash Impoundment Groundwater Monitoring Concentrations Evaluation and Closure

This memorandum presents the results of groundwater monitoring performed by SCS Engineers following the removal of coal combustion residuals (CCR) from the Bottom Ash Impoundment (Impoundment) at the La Cygne Generating Station (Station) and certification of final closure. The Station's CCR surface impoundment is subject to Federal Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments per 40 CFR 257 Subpart D and is owned and operated by Evergy. A document "Notification of Intent to Close" was placed in the CCR Operating Record on January 28, 2020. This was communicated to the Kansas Department of Health and Environment on February 27, 2020.

Evergy retained Kissick Construction to remove bottom ash (CCR) from the Station's Impoundment through the method of excavation while not disturbing the existing slopes at the edges outside the Impoundment, in order to maintain separation from the surrounding lake. Evergy retained Burns & McDonnell (BMcD) as certifying engineer to certify that, upon completion of construction, the CCR in the Impoundment has been removed in accordance with Section 2.1 of the facility closure plan titled *"CCR Closure Plan, La Cygne Bottom Ash Impoundment, La Cygne Generating Station"* (Closure Plan, Attachment 1) 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 Impoundment was performed in accordance with the Closure Plan and 40 CFR 257.102(c) per 40 CFR 257.102(f)(3). Removal of CCR from the Impoundment was certified September 9, 2020 (Attachment 2).

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 Impoundment 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.
- For cobalt 6 μg/L, lead 15 μg/L, lithium 40 μg/L, and molybdenum 100 μg/L (40 CFR 257.95(h)(2)) (these values adopted from EPA Regional Screening Levels [RSLs]).
- 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 June 2016 and October 2017. Appendix IV constituent background results were reported in the "2017 Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Impoundment, La Cygne Generating Station" dated January 30, 2018.

The following Appendix IV constituents were detected in at least one of the Impoundment monitoring wells: antimony, arsenic, barium, chromium, cobalt, fluoride, lead, lithium, molybdenum, and radium combined (radium 226 and 228). All other Appendix IV constituents were sampled and analyzed but were not detected. All of the detected constituents were present in background below their MCL or RSL with the exception of lithium in each of the five monitoring wells. Based on these results, the GWPSs for all parameters excluding lithium are the applicable MCL or 40 CFR 257.95(h)(2) RSL value. The GWPS for lithium in each well is the background concentration for lithium.

Closure confirmation samples were collected on May 19, 2020 during CCR removal activities from the Impoundment. 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) RSL values, 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 La Cygne Bottom Ash Impoundment do not exceed the groundwater protection standards determined for the 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 (without

MEMORANDUM September 25, 2020 Page 3

independent verification) and no exceedance of the groundwater protection standards, the La Cygne Bottom Ash Impoundment is 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, La Cygne Bottom Ash Impoundment, La Cygne Generating Station

Attachment 2 – Certification of CCR Removal in Preparation of Closure by Removal, La Cygne Bottom Ash Impoundment

TABLE 1

Summary of Detected CCR Appendix IV Constituents and Corresponding GWPS Values

					Det	ected Appen	dix IV Consti	tuents			
Well Number	Sample Date	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Molybdenum (mg/L)	Radium Combined (pCi/L)
Γ	MCL	0.006	0.010	2	0.1	0.006	4.0	0.015*	NA	NA	5
40 CFR 25	57.95(h) RSL	NA	NA	NA	NA	NA	NA	0.015*	0.040	0.100	NA
	MW-901 Background Data										
MW-901	6/8/2016	0.00251	<0.002	0.167	<0.002	<0.002	0.543	<0.002	0.0819	<0.005	2.14
MW-901	8/11/2016	<0.002	0.00237	0.0987	<0.002	<0.002	0.533	<0.002	0.0636	0.00716	2.191
MW-901	10/14/2016	<0.002	<0.002	0.155	<0.002	<0.002	0.497	<0.002	0.0865	<0.005	0.407
MW-901	12/12/2016	<0.002	<0.002	0.195	<0.002	<0.002	0.413	<0.002	0.0443	<0.005	0.932
MW-901	2/9/2017	<0.002	<0.002	0.186	<0.002	<0.002	0.520	<0.002	0.0548	<0.005	0.986
MW-901	4/4/2017	<0.002	<0.002	0.192	<0.002	<0.002	0.493	<0.002	0.0521	<0.005	0.639
MW-901	6/16/2017	<0.002	<0.002	0.193	<0.002	<0.002	0.489	<0.002	0.0586	<0.005	1.63
MW-901	8/11/2017	<0.002	<0.002	0.182	<0.002	<0.002	0.511	<0.002	0.0567	<0.005	0.641
MW-901	10/3/2017	<0.002	<0.002	0.192	<0.002	<0.002	0.483	<0.002	0.0519	<0.005	1.17
MW-901 PL/BG		0.00251	0.00237	0.225	0.002	0.002	0.570	0.002	0.0912	0.00716	2.58
GWPS		0.006	0.010	2	0.1	0.006	4.0	0.015	0.0912	0.100	5
MW-901	5/19/2020	<0.004	<0.002	0.165	<0.01	<0.002**	0.572	<0.005	0.0604	<0.005	1.90

					Det	ected Appen	dix IV Consti	tuents			
Well Number	Sample Date	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Molybdenum (mg/L)	Radium Combined (pCi/L)
ſ	MCL	0.006	0.010	2	0.1	0.006	4.0	0.015*	NA	NA	5
40 CFR 25	57.95(h) RSL	NA	NA	NA	NA	NA	NA	0.015*	0.040	0.100	NA
	MW-902 Background Data										
MW-902	6/7/2016	<0.002	<0.002	0.119	<0.002	<0.002	0.532	<0.002	0.0412	<0.005	2.71
MW-902	8/11/2016	<0.002	<0.002	0.118	<0.002	<0.002	0.531	<0.002	0.0353	<0.005	1.458
MW-902	10/13/2016	<0.002	<0.002	0.106	<0.002	<0.002	0.490	<0.002	0.0386	<0.005	0.320
MW-902	12/12/2016	<0.002	<0.002	0.111	<0.002	<0.002	0.404	<0.002	0.0326	<0.005	0.168
MW-902	2/10/2017	<0.002	<0.002	0.112	<0.002	<0.002	0.510	<0.002	0.0436	<0.005	0.791
MW-902	4/4/2017	<0.002	<0.002	0.116	<0.002	<0.002	0.481	<0.002	0.0396	<0.005	1.23
MW-902	6/15/2017	<0.002	<0.002	0.112	<0.002	<0.002	0.467	<0.002	0.0397	<0.005	1.05
MW-902	8/11/2017	<0.002	<0.002	0.106	<0.002	<0.002	0.530	<0.002	0.0369	<0.005	1.500
MW-902	10/3/2017	<0.002	<0.002	0.114	<0.002	<0.002	0.466	<0.002	0.0389	<0.005	1.270
MW-9	02 PL/BG	0.002	0.0020	0.123	0.002	0.002	0.568	0.002	0.0454	0.005	2.75
GWPS		0.006	0.010	2	0.1	0.006	4.0	0.015	0.0454	0.100	5
MW-902	5/19/2020	<0.004	<0.002	0.126	<0.01	<0.002**	0.521	<0.005	0.0333	<0.005	1.33

			Detected Appendix IV Constituents								
Well Number	Sample Date	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Molybdenum (mg/L)	Radium Combined (pCi/L)
Γ	MCL	0.006	0.010	2	0.1	0.006	4.0	0.015*	NA	NA	5
40 CFR 25	57.95(h) RSL	NA	NA	NA	NA	NA	NA	0.015*	0.040	0.100	NA
	MW-903 Background Data										
MW-903	6/8/2016	<0.002	<0.002	0.0285	0.00409	0.00515	<0.100	<0.002	0.0809	<0.005	0.783
MW-903	8/11/2016	<0.002	<0.002	0.017	<0.002	0.00306	<0.100	<0.002	0.0539	<0.005	0.857
MW-903	10/13/2016	<0.002	<0.002	0.0232	0.00315	0.00424	<0.100	<0.002	0.0546	<0.005	0.911
MW-903	12/9/2016	<0.002	<0.002	0.016	<0.002	0.00294	0.104	<0.002	0.0462	<0.005	1.24
MW-903	2/10/2017	<0.002	<0.002	0.0146	<0.002	0.00272	<0.100	<0.002	0.0505	<0.005	0.850
MW-903	4/4/2017	<0.002	<0.002	0.0151	<0.002	0.00204	<0.100	<0.002	0.0502	<0.005	1.450
MW-903	6/16/2017	<0.002	<0.002	0.0148	<0.002	0.00207	0.132	<0.002	0.0539	<0.005	2.020
MW-903	8/10/2017	<0.002	<0.002	0.014	<0.002	0.00214	0.114	<0.002	0.0517	<0.005	1.010
MW-903	10/3/2017	<0.002	<0.002	0.0146	<0.002	0.00241	<0.100	<0.002	0.0506	<0.005	1.24
MW-9	03 PL/BG	0.002	0.002	0.029	0.00409	0.00524	0.132	0.002	0.0809	0.005	1.99
GWPS		0.006	0.010	2	0.1	0.006	4.0	0.015	0.0809	0.100	5
MW-903	5/19/2020	<0.004	<0.002	0.0157	<0.01	<0.002**	<0.150	<0.005	0.0506	<0.005	0.509

					Det	ected Appen	dix IV Consti	tuents			
Well Number	Sample Date	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Molybdenum (mg/L)	Radium Combined (pCi/L)
Γ	VICL	0.006	0.010	2	0.1	0.006	4.0	0.015*	NA	NA	5
40 CFR 25	57.95(h) RSL	NA	NA	NA	NA	NA	NA	0.015*	0.040	0.100	NA
				ſ	/IW-904 Bac	kground Da	ata				
MW-904	5/3/2017	<0.002	<0.002	0.124	<0.002	<0.002	0.375	<0.002	0.0503	0.0116	0.562
MW-904	5/18/2017										0.332
MW-904	5/24/2017	<0.002	<0.002	0.147	0.00206	<0.002	0.411	<0.002	0.0463	0.0113	
MW-904	6/12/2017	<0.002	0.00508	0.191	0.0159	0.0096	0.366	0.00451	0.0744	0.0119	1.52
MW-904	6/30/2017	<0.002	<0.002	0.13	<0.002	<0.002	0.385	<0.002	0.0525	0.0102	0.762
MW-904	7/21/2017	<0.002	<0.002	0.108	<0.002	<0.002	0.430	<0.002	0.0446	0.00948	3.78
MW-904	8/7/2017	<0.002	<0.002	0.0951	<0.002	<0.002	0.432	<0.002	0.0521	0.00962	0.155
MW-904	9/1/2017	<0.002	<0.002	0.0944	<0.002	<0.002	0.346	<0.002	0.0432	0.00956	0.560
MW-904	9/22/2017	<0.002	<0.002	0.0974	<0.002	<0.002	0.412	<0.002	0.0458	0.00857	0.664
MW-904	10/5/2017	<0.002	0.00212	0.101	<0.002	0.00508	0.290	<0.002	0.0463	0.00947	0.807
MW-9	04 PL/BG	0.002	0.00508	0.189	0.0159	0.0096	0.470	0.00451	0.0708	0.0126	3.49
G	WPS	0.006	0.010	2	0.1	0.006	4.0	0.015	0.0708	0.100	5
MW-904	5/19/2020	<0.004	<0.002	0.0729	<0.01	<0.002**	0.418	<0.005	0.0411	0.00864	0.215

					Det	ected Appen	dix IV Consti	tuents			
Well Number	Sample Date	Antimony (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Fluoride (mg/L)	Lead (mg/L)	Lithium (mg/L)	Molybdenum (mg/L)	Radium Combined (pCi/L)
Γ	MCL	0.006	0.010	2	0.1	0.006	4.0	0.015*	NA	NA	5
40 CFR 2	57.95(h) RSL	NA	NA	NA	NA	NA	NA	0.015*	0.040	0.100	NA
				Ν	/IW-905 Bac	kground Da	ita				
MW-905	6/9/2016	0.00326	0.00387	0.104	0.0031	0.00283	0.542	<0.002	0.0607	0.0165	0.695
MW-905	8/12/2016	<0.002	<0.002	0.171	<0.002	<0.002	0.506	<0.002	0.0751	<0.005	1.208
MW-905	10/14/2016	<0.002	<0.002	0.0985	<0.018	<0.002	0.535	<0.002	0.0639	<0.005	1.37
MW-905	12/9/2016	<0.002	<0.002	0.105	<0.002	<0.002	0.444	<0.002	0.0591	<0.005	0.529
MW-905	2/8/2017	<0.002	<0.002	0.104	<0.002	<0.002	0.562	<0.002	0.0705	<0.005	0.396
MW-905	4/4/2017	<0.002	<0.002	0.119	0.00327	0.00214	0.522	<0.002	0.0703	<0.005	0.953
MW-905	6/14/2017	<0.002	<0.002	0.115	<0.002	<0.002	0.567	<0.002	0.0706	<0.005	0.98
MW-905	8/9/2017	<0.002	<0.002	0.106	<0.002	<0.002	0.582	<0.002	0.0647	<0.005	0.161
MW-905	10/3/2017	<0.002	<0.002	0.126	0.00428	0.00257	0.569	<0.002	0.0715	<0.005	1.290
MW-905 PL/BG		0.00326	0.00387	0.164	0.018	0.00283	0.612	0.00200	0.0790	0.0165	1.74
G	WPS	0.006	0.010	2	0.1	0.006	4.0	0.015	0.0790	0.100	5
MW-905	5/19/2020	<0.004	<0.002	0.136	<0.01	<0.002**	0.565	<0.005	0.0633	<0.005	0.281

* EPA Action Level

** Sample collected 7/29/20 because original sample reporting limt was greter than the GWPS.

CCR - Coal Combustion Residuals

GWPS - Groundwater Protection Standard

MCL - Maximum Contaminant Level

RSL - Regional Screening Level (adopted by 40 CFR 257.95(h)(2))

PL/BG - Prediction Limit / Background Level

mg/L - Miligrams per Liter

pCi/L - Picocuries per Liter

NA - Not Applicable

ATTACHMENT 1

CCR Closure Plan, La Cygne Bottom Ash Impoundment, La Cygne Generating Station



CCR CLOSURE PLAN La Cygne Bottom Ash Impoundment La Cygne Generating Station

25166 East 2200th Rd. La Cygne, KS 66040

Kansas City Power & Light Company

October 14, 2016

TABLE OF CONTENTS

SECTION 1	BACKO	GROUND	1						
1.1	Facility	cility Information							
1.2	Regulat	ory Requirements	1						
SECTION 2	CLOSU	RE 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	AMEN	DMENT OF CCR CLOSURE PLAN	7						
SECTION 4	ENGIN	EERING CERTIFICATION	8						

LA CYGNE GENERATING STATION

BOTTOM ASH IMPOUNDMENT

CCR CLOSURE PLAN

REVISION HISTORY

Revision Number	Revision Date	Section Revised	Summary of Revisions

Revisions are accomplished in accordance with Section 3.

La Cygne Generating Station Bottom Ash Impoundment Closure Plan

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 La Cygne Generating Station (La Cygne) Bottom 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:	La Cygne Generating Station
Name of CCR Unit:	Bottom Ash Impoundment
Name of Operator:	Kansas City Power & Light Company (KCP&L)
Facility Mailing Address:	25166 East 2200 th Rd., La Cygne, KS 66040
Location:	Approximately seven miles east of La Cygne, Kansas.
Facility Description:	The La Cygne Generating Station has two coal-fired units that produce fly ash, economizer ash, bottom ash and gypsum. Unit 2 bottom ash is sluiced to the Bottom Ash Impoundment where it is dredged, dewatered, loaded into trucks then transported to the landfill for storage or disposal. Related facilities include a groundwater monitoring system, storm water management system, and haul/access roads.

1.2 <u>Regulatory Requirements</u>

This plan has been developed for the La Cygne Generating Station Bottom 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

La Cygne Generating Station Bottom Ash Impoundment Closure Plan

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 La Cygne Bottom 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 <u>Closure Description</u>

2.1.1 Description

The La Cygne Bottom 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 <u>Volume Estimates</u>

The estimated maximum inventory of CCR and impounded water ever planned on-site over the active life of the CCR unit is approximately 19,000 cubic yards¹.

La Cygne Generating Station Bottom Ash Impoundment Closure Plan

Coal Combustion Waste Impoundment, Round 7 – Dam Assessment Report, La Cygne Generating Station Bottom Ash Settling, Upper and Lower AQC Ponds, Kansas City Power & Light Company, La Cygne, Kansas, by Dewberry & Davis, LLC, Fairfax, Virginia, June 2011.

2.3 <u>Closure Schedule</u>

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).

La Cygne Generating Station Bottom Ash Impoundment Closure Plan Revision 0 October 14, 2016

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.

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 $40 \text{ CFR } 257.102 \text{ (e).}^1$
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 - 5^2

Estimated Closure Schedule

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 Kansas;
- (ii) I am familiar with the requirements of the CCR Rule (40 CFR 257);
- (iii) I, or my agent, have visited and examined the La Cygne Generating Station Bottom 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 AdobeTM document.

V	Valter J. Mar	tin, P.E.
		Professional Engineer 105, 816-556-2200
P.E. SEAL, STATE OF		Digitally signed by Walter J Martin DN: cn=Walter J Martin, o=Kansas City Power & Light, ou=KCP&L, email=jay.martin@kcpl.
10-14-2016	Martin	com, c=US Date: 2016.10.14 07:44:12 -05'00'

La Cygne Generating Station Bottom Ash Impoundment Closure Plan

Revision 0 October 14, 2016

ATTACHMENT 2

Certification of CCR Removal in Preparation of Closure by Removal, La Cygne Bottom Ash Impoundment

Memorandum



Date:	September 9, 2020
То:	Jared Morrison, Director Water and Waste Programs Evergy Metro, Inc. (f/k/a Kansas City Power & Light Co., Inc.)
From:	Kira Wylam, Burns & McDonnell Engineering Co., Inc.
Subject:	Certification of CCR Removal in Preparation of Closure by Removal La Cygne Bottom Ash Impoundment

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 Bottom Ash Impoundment (referred to herein as "Impoundment") at the La Cygne Generating Station (Station) and to certify the removal of the disposed CCR waste materials in accordance with the Impoundment's CCR closure plan. This CCR surface impoundment is subject to Federal Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments per 40 CFR 257 Subpart D and is owned and operated by Evergy Metro, Inc. (Evergy).

Evergy retained Kissick Construction to remove ponded CCR waste from the Station's Impoundment while not disturbing the existing slopes at the edges outside the Impoundment, in order to maintain separation from the surrounding lake. Evergy retained BMcD as certifying engineer to certify that, upon completion of construction, the ponded CCR waste in the Impoundment had been removed in accordance with Section 2.1 of the October 14, 2016 document titled, *CCR Closure Plan, La Cygne Bottom Ash Impoundment, La Cygne Generating Station*, which is referred to herein as "Closure Plan". It is BMcD's opinion that removal of CCR material from the Impoundment was performed in accordance with the Closure Plan and with the CCR removal requirement of 40 CFR 257.102(c), for reasons described herein.

CCR was removed in preparation for closure using a phased approach, with a site evaluation and certified survey that followed each material removal phase. The Impoundment's phased 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 Bottom Ash Impoundment. Figure No. 1 indicates the pre-construction surface contours as surveyed by Tukuh Technologies, LLC, the planned side slope excavation, and the planned base excavation. Side slope excavation was completed at an approximate 1:1 grade down to an elevation of 837 feet NGVD. In areas where clay was encountered prior to reaching the planned bottom elevation, excavation was terminated. If clay was not encountered at or before an elevation of 837 feet, excavation continued until insitu clay was located at which point excavation was terminated. A constructed clay liner is not known to have been installed in the base of this unit.

Memorandum (cont'd)



September 9, 2020 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.

Prior to the start of the project, a volume of approximately 27,000 cubic yards of CCR was estimated for removal from the Impoundment. Through the course of the project, approximately 50,000 cubic yards of CCR were removed and disposed in on-site CCR facilities. The perimeter road and surrounding surface and subsurface areas were left in place to serve as a physical/ hydraulic barrier from La Cygne Lake. Following CCR removal, the Impoundment was filled and graded to serve as a staging area for plant materials and operations.

Closure and Certification - Phase 1

The south-east corner of the Impoundment was surveyed following an onsite inspection by BMcD on February 11, 2020. The certifying engineer witnessed the existing subgrade, which consisted of clay, had been reached via excavation and confirmed the material was clay through hand texturing. A further excavated test pit confirmed the clay layer was not superficial but instead continuous.

Closure and Certification - Phase 2

The south-west area adjacent and north of Phase 1 of the Impoundment was surveyed following an onsite inspection by BMcD on March 5, 2020. The certifying engineer witnessed the existing clay subgrade had been reached via excavation and confirmed this based on visual observation and hand texturing of the subgrade material.

Closure and Certification - Phase 3

The north-west corner of the Impoundment was surveyed following an onsite inspection by BMcD on March 12, 2020. The certifying engineer witnessed the existing clay subgrade had been reached via excavation and confirmed this based on visual observation and hand texturing of the subgrade material.

Closure and Certification - Phase 4

The north-central and north-east portions of the Impoundment were surveyed following an onsite inspection by BMcD on May 8, 2020. The certifying engineer witnessed the existing clay subgrade had been reached via excavation and confirmed this based on visual observation and hand texturing of the subgrade material.

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

Memorandum (cont'd)



September 9, 2020 Page 3

CERTIFICATION

As required by 40 CFR 257.102(f)(3), I hereby certify that removal of CCR from the Bottom Ash Impoundment at the La Cygne 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).

fira E. Wylam Kira E. Wylam

9/9/2020

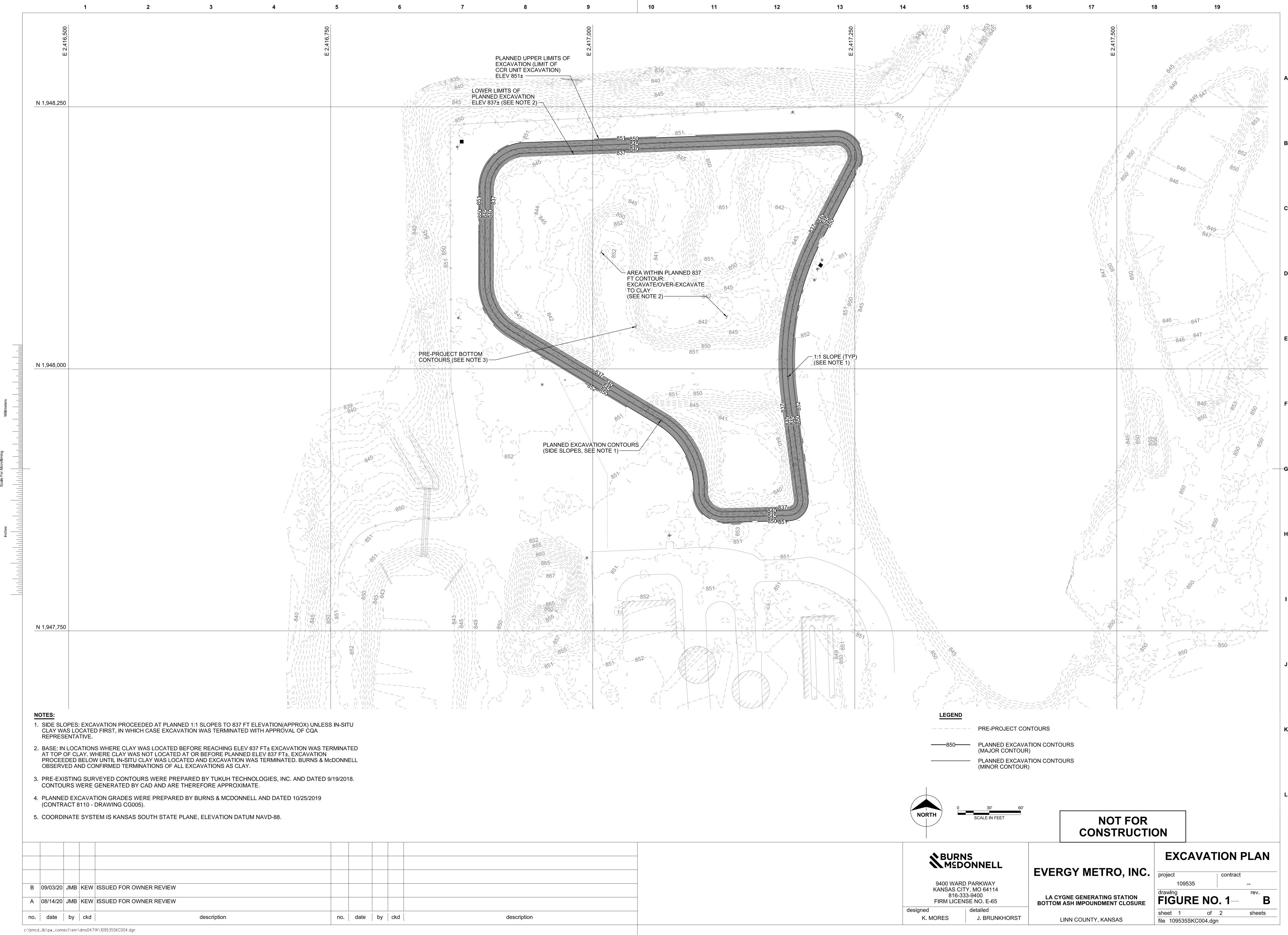
Date



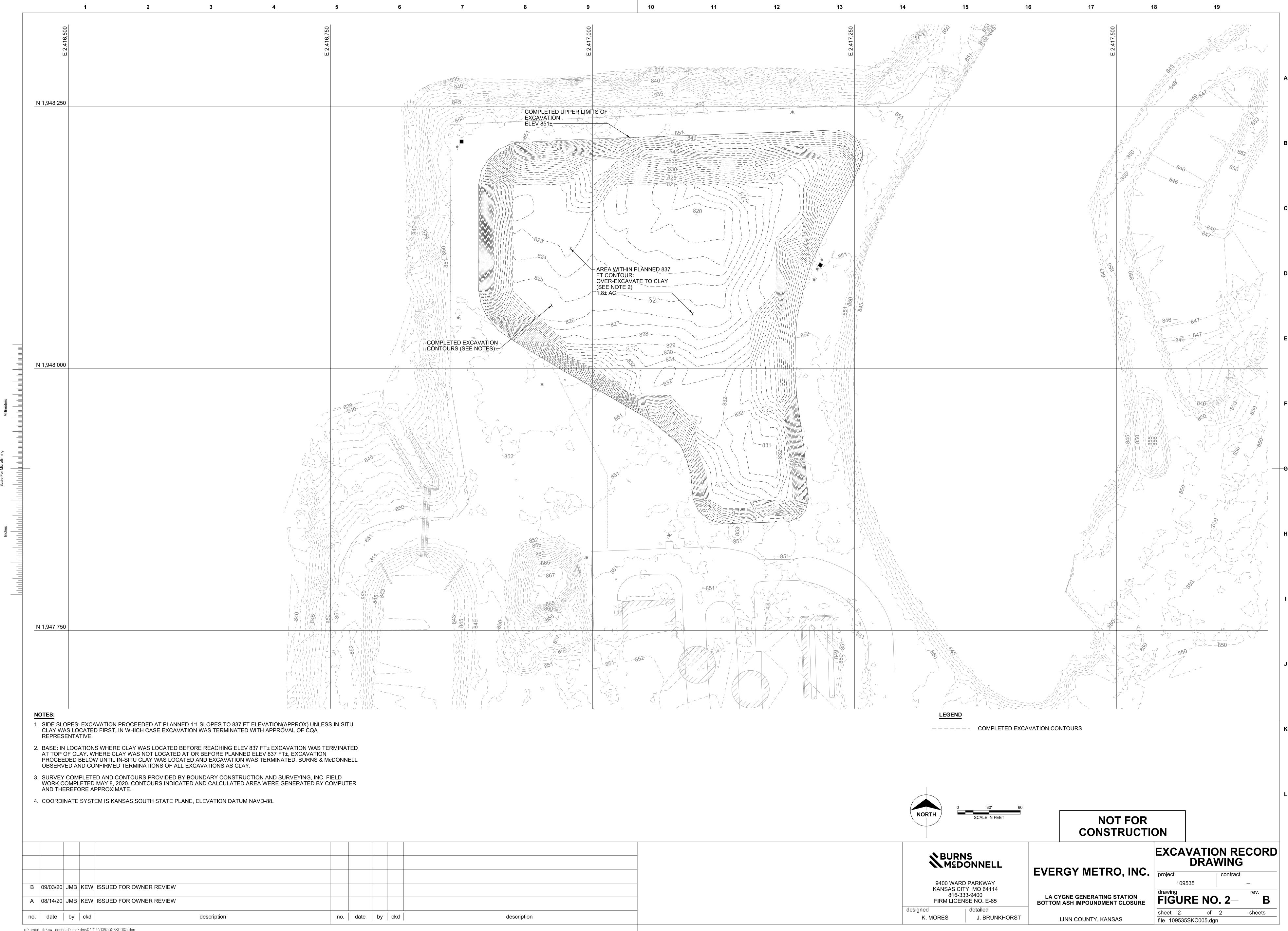
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Attachments – Figures No. 1 and 2 Third Party Verification Surveys Photographs Attachment - FIGURES NO. 1 and NO. 2



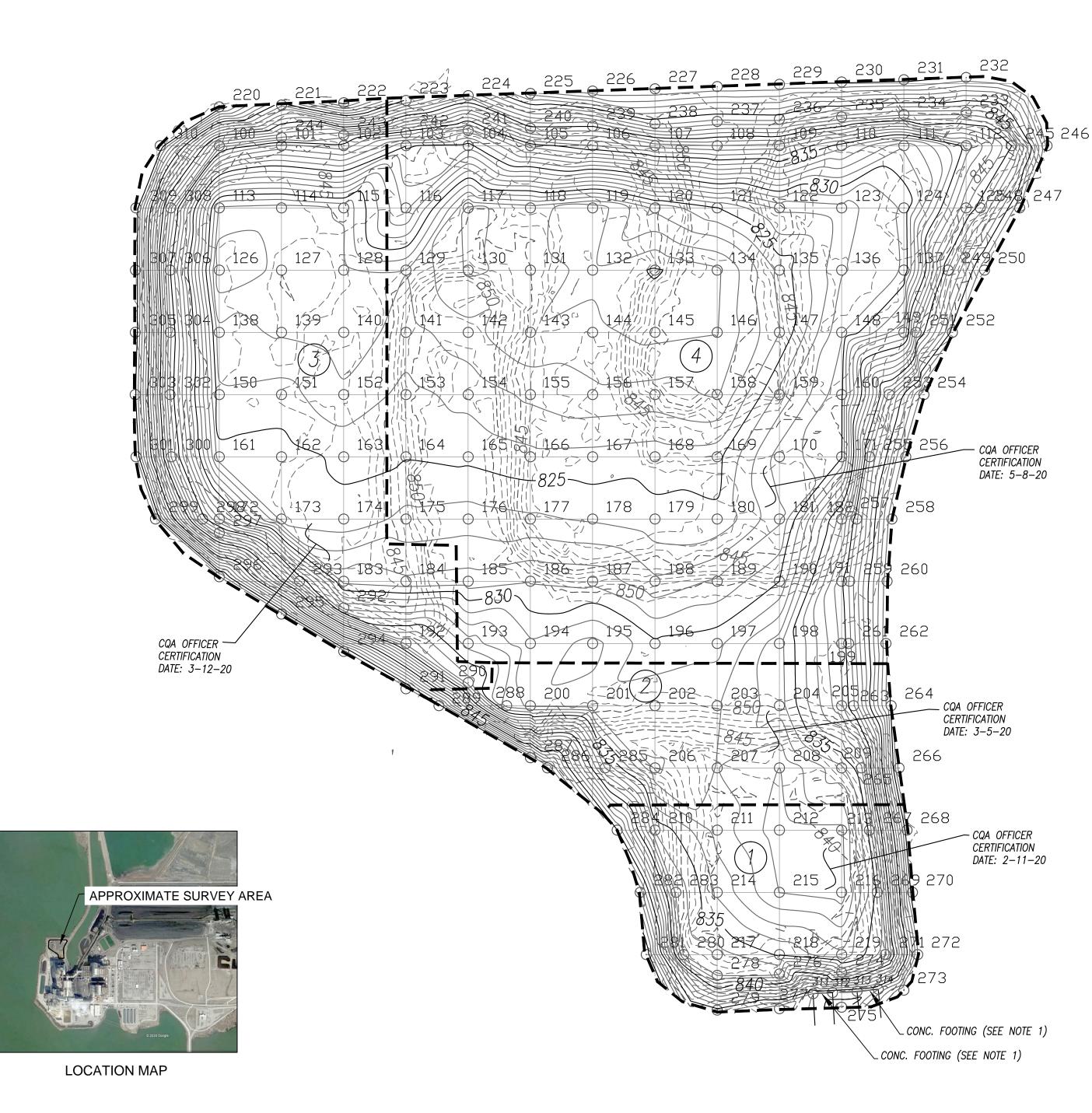
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Attachment -Third Party Verification Survey



NOTES

1. EXCAVATION TERMINATED AT EXISTING CONCRETE FOOTING. CONCRETE FOOTING LEFT IN PLACE.

2. APPROXIMATELY 49,843 CU YDS OF MATERIAL WAS REMOVED BETWEEN THE PRE-CONSTRUCTION CONTOURS (BY OTHERS) AND THE EXCAVATION CONTOURS AS SURVEYED BETWEEN (2/20/20 AND 5/8/20).THIS VOLUME IS THE TOTAL MATERIAL REMOVED DURING THE PROJECT.

3. CONTOUR ELEVATIONS WERE GENERATED BY 3-D CAD SOFTWARE AND ARE THEREFORE APPROXIMATE.

4. SURVEY COORDINATES ARE IN FEET.

5. PRE-CONSTRUCTION CONTOURS ARE SHOWN FROM PLANS PREPARED BY BURNS & MCDONNEL, PROJECT NO. 109535.

BENCHMARK

KCPL CP NO. 3 **3" BRASS MONUMENT CAP SET** IN CONCRETE N=1948225.23 E=2416874.15 ELEVATION=850.50

KCPL CP NO. 3 WAS PROVIDED BY MCCLURE ENGINEERING COMPANY

KANSAS SOUTH STATE PLANE COORDINATES.

ELEVATION DATUM NAVD-88

TID	NORTHING	EASTING	Excavation Surveyed Subgrade	Existing Ground (By Others)	Difference	DATE SURVEYED	PT ID	NORTHING	EASTING	Excavation Surveyed Subgrade	Existing Ground (By Others)	Difference	DATE SURVEY
100	1948200.00	2416925.00	836.60	848.08	11.48	03/13/20	208	1947950.00	2417150.00	831.00	841.46	10.46	02/20/
101 102	1948200.00 1948200.00	2416950.00 2416975.00	833.65 834.68	<u>845.85</u> 846.31	12.20 11.63	03/13/20 03/13/20	209 210	1947950.00 1947925.00	2417175.00 2417100.00	833.78 835.95	843.50 850.35	9.72	02/20/ 02/20/
103	1948200.00	2417000.00	830.09	845.62	15.53	05/08/20	211	1947925.00	2417125.00	832.58	840.35	7.77	02/20/
104 105	1948200.00 1948200.00	2417025.00 2417050.00	829.57 834.35	<u>845.05</u> 844.98	15.48 10.63	05/08/20 05/08/20	212 213	1947925.00 1947925.00	2417150.00 2417175.00	830.44 830.73	840.00 839.02	9.56 8.29	02/20/ 02/20/
106	1948200.00	2417075.00	835.93	843.71	7.78	05/08/20	214	1947900.00	2417125.00	833.77	840.00	6.23	02/20/
107 108	1948200.00 1948200.00	2417100.00 2417125.00	837.42 837.96	847.30 850.93	9.88 12.97	05/08/20 05/08/20	215 216	1947900.00 1947900.00	2417150.00 2417175.00	830.98 830.50	<u>840.00</u> 840.00	9.02 9.50	02/20/ 02/20/
109	1948200.00	2417150.00	837.64	847.85	10.21	05/08/20	217	1947875.00	2417125.00	836.49	841.60	5.11	02/20,
110 111	1948200.00 1948200.00	2417175.00 2417200.00	834.51 831.19	843.59 844.56	9.08 13.37	05/08/20 05/08/20	218 219	1947875.00 1947875.00	2417150.00 2417175.00	834.85 833.23	<u>841.82</u> 842.15	6.97 8.92	02/20, 02/20,
112	1948200.00	2417225.00	835.39	845.00	9.61	05/08/20	219	1947875.00	2416925.00	850.79	850.83	0.04	02/20
113	1948175.00	2416925.00	822.77	844.00	21.23	03/13/20	221	1948216.33	2416950.00	844.25	850.51	6.26	03/13
114 115	1948175.00 1948175.00	2416950.00 2416975.00	822.47 823.15	<u>844.00</u> 845.00	21.53 21.85	03/13/20 03/13/20	222 223	1948217.25 1948218.16	2416975.00 2417000.00	850.45 844.79	850.32 850.53	-0.13 5.74	03/13, 05/08,
116	1948175.00	2417000.00	828.37	844.00	15.63	05/08/20	224	1948220.10	2417025.00	841.91	851.00	9.09	05/08
L17 L18	1948175.00 1948175.00	2417025.00 2417050.00	820.78 821.47	<u>844.75</u> 843.00	23.97 21.53	05/08/20 05/08/20	225 226	1948221.02 1948221.93	2417050.00 2417075.00	847.43 849.69	851.00 850.76	3.57	05/08, 05/08,
19	1948175.00	2417075.00	820.22	842.00	21.78	05/08/20	227	1948222.84	2417100.00	850.03	851.00	0.97	05/08
20 21	1948175.00 1948175.00	2417100.00 2417125.00	823.28 824.95	<u>844.63</u> 851.00	21.35 26.05	05/08/20 05/08/20	228 229	1948223.76 1948224.67	2417125.00 2417150.00	849.74 849.90	851.00 851.00	1.26 1.10	05/08/ 05/08/
.22	1948175.00	2417123.00	824.93	845.30	18.10	05/08/20	229	1948225.58	2417150.00	849.90	851.13	0.93	05/08
.23	1948175.00	2417175.00	827.56	843.00	15.44	05/08/20	231	1948226.50	2417200.00	850.44	851.25	0.81	05/08,
24 25	1948175.00 1948175.00	2417200.00 2417225.00	829.16 838.90	844.00 845.11	14.84 6.21	05/08/20 05/08/20	232 233	1948227.41 1948213.40	2417225.00 2417225.00	849.74 842.58	851.67 849.20	1.93 6.62	05/08/ 05/08/
26	1948150.00	2416925.00	821.25	844.22	22.97	03/13/20	234	1948212.48	2417200.00	842.16	848.85	6.69	05/08,
27 28	1948150.00 1948150.00	2416950.00 2416975.00	822.26 822.65	<u>844.80</u> 843.24	22.54 20.59	03/13/20 03/13/20	235 236	1948211.56 1948210.65	2417175.00 2417150.00	842.67 844.30	846.99 850.06	4.32 5.76	05/08/ 05/08/
.8 .9	<u>1948150.00</u> 1948150.00	2416975.00	822.65	843.24 844.26	20.59	05/08/20	236	1948210.65	2417150.00	844.30	850.06	7.17	05/08/
30	1948150.00	2417025.00	820.84	848.57	27.73	05/08/20	238	1948208.81	2417100.00	844.22	849.10	4.88	05/08
1 2	1948150.00 1948150.00	2417050.00 2417075.00	821.34 820.79	<u>845.03</u> 841.18	23.69 20.39	05/08/20 05/08/20	239 240	1948207.90 1948206.98	2417075.00 2417050.00	840.08 839.59	846.60 847.54	6.52 7.95	05/08, 05/08,
3	1948150.00	2417100.00	819.89	844.34	24.45	05/08/20	241	1948206.06	2417025.00	832.41	847.75	15.34	05/08
34 35	1948150.00	2417125.00	820.79	850.80	30.01	05/08/20	242	1948205.15	2417000.00	834.45	846.60	12.15	05/08
35 36	1948150.00 1948150.00	2417150.00 2417175.00	824.28 827.88	845.51 842.00	21.23 14.12	05/08/20 05/08/20	243 244	1948204.23 1948203.31	2416975.00 2416950.00	836.40 836.95	847.67 846.51	<u>11.27</u> 9.56	03/13/ 03/13/
37	1948150.00	2417200.00	829.10	843.00	13.90	05/08/20	245	1948200.00	2417243.34	839.98	845.82	5.84	05/08/
38 39	1948125.00 1948125.00	2416925.00 2416950.00	823.34 822.87	<u>844.35</u> 844.00	21.01 21.13	03/13/20 03/13/20	246 247	1948200.00 1948175.00	2417257.53 2417246.50	849.26 846.81	851.00 850.84	1.74 4.03	05/08/ 05/08/
40	1948125.00	2416975.00	822.40	842.23	19.83	03/13/20	248	1948175.00	2417230.72	840.51	845.45	4.94	05/08/
11 12	1948125.00 1948125.00	2417000.00 2417025.00	823.42 822.37	848.26 851.00	24.84 28.63	05/08/20 05/08/20	249 250	1948150.00 1948150.00	2417217.78 2417232.43	841.00 846.89	846.95 851.17	5.95 4.28	05/08/ 05/08/
3	1948125.00	2417050.00	821.05	844.21	23.16	05/08/20	251	1948125.00	2417204.98	838.51	846.03	7.52	05/08/
1	1948125.00	2417075.00	821.23	841.19	19.96	05/08/20	252	1948125.00	2417219.50	845.40	849.72	4.32	05/08,
5 6	1948125.00 1948125.00	2417100.00 2417125.00	820.69 820.94	849.62 850.00	28.93 29.06	05/08/20 05/08/20	253 254	1948100.00 1948100.00	2417194.17 2417208.07	842.35 848.67	846.80 850.45	4.45	05/08/ 05/08/
7	1948125.00	2417150.00	823.95	848.03	24.08	05/08/20	255	1948075.00	2417186.28	841.91	846.43	4.52	05/08/
18 19	1948125.00 1948125.00	2417175.00 2417200.00	828.89 832.92	842.31 845.62	13.42 12.70	05/08/20 05/08/20	256 257	1948075.00 1948050.00	2417200.75 2417181.02	848.64 840.75	<u> </u>	2.36 6.46	05/08, 05/08,
0	1948100.00	2416925.00	832.32	843.82	19.63	03/13/20	258	1948050.00	2417195.23	848.78	851.01	2.23	05/08
51	1948100.00	2416950.00	824.42	842.93	18.51	03/13/20	259	1948025.00	2417178.22	841.19	851.52	10.33	05/08
52 53	1948100.00 1948100.00	2416975.00 2417000.00	823.20 824.32	842.00 849.13	18.80 24.81	03/13/20 05/08/20	260 261	1948025.00 1948000.00	2417193.26 2417177.81	848.64 840.49	852.00 852.00	3.36 11.51	05/08, 05/08,
1	1948100.00	2417025.00	823.66	851.00	27.34	05/08/20	262	1948000.00	2417192.82	848.65	852.00	3.35	05/08
5 6	1948100.00 1948100.00	2417050.00 2417075.00	822.77 822.25	843.09 841.00	20.32 18.75	05/08/20 05/08/20	263 264	1947975.00 1947975.00	2417179.78 2417194.90	840.80 850.25	852.00 852.00	11.20 1.75	03/06, 03/06,
57	1948100.00	2417100.00	822.41	848.55	26.14	05/08/20	265	1947950.00	2417182.97	835.75	845.54	9.79	02/28
8 9	1948100.00	2417125.00	821.88	850.00	28.12	05/08/20	266	1947950.00	2417198.09	852.50	852.00	-0.50	02/20
)	1948100.00 1948100.00	2417150.00 2417175.00	826.28 829.76	849.37 844.01	23.09 14.25	05/08/20 05/08/20	267 268	1947925.00 1947925.00	2417186.17 2417201.28	835.20 850.76	<u>844.80</u> 851.52	9.60	02/28/ 02/20/
1	1948075.00	2416925.00	825.34	843.76	18.42	03/13/20	269	1947900.00	2417189.37	835.16	845.11	9.95	02/28/
2 3	1948075.00 1948075.00	2416950.00 2416975.00	825.47 824.77	843.00 842.00	17.53 17.23	03/13/20 03/13/20	270 271	1947900.00 1947875.00	2417203.48 2417192.58	850.73 836.62	<u>851.46</u> 845.11	0.73 8.49	02/20/ 02/28/
4	1948075.00	2417000.00	824.93	847.43	22.50	05/08/20	272	1947875.00	2417205.56	849.07	850.44	1.37	02/20,
5 6	1948075.00	2417025.00	824.75	851.00	26.25	05/08/20	273	1947860.70	2417200.00	850.01	850.49	0.48	02/28
5 7	1948075.00 1948075.00	2417050.00 2417075.00	824.27 824.32	842.78 841.00	18.51 16.68	05/08/20 05/08/20	274 275	1947867.84 1947853.85	2417175.00 2417175.00	837.01 843.88	845.45 851.00	8.44 7.12	02/28/ 02/20/
3	1948075.00	2417100.00	824.54	844.85	20.31	05/08/20	276	1947867.22	2417150.00	836.98	842.63	5.65	02/28
9 0	1948075.00 1948075.00	2417125.00 2417150.00	824.65 828.46	<u>844.61</u> 843.66	19.96 15.20	05/08/20 05/08/20	277 278	1947853.28 1947866.68	2417150.00 2417125.00	847.88 836.97	850.55 844.36	2.67 7.39	02/20, 02/28,
L	1948075.00	2417175.00	829.86	844.84	14.98	05/08/20	279	1947852.71	2417125.00	845.35	851.07	5.72	02/20
23	1948050.00 1948050.00	2416925.00 2416950.00	833.02 825.69	845.98 843.50	12.96 17.81	03/13/20 03/13/20	280 281	1947875.00 1947875.00	2417111.52 2417096.51	836.89 851.03	845.56 851.00	8.67	02/28, 02/28,
ł	1948050.00	2416975.00	825.29	841.63	16.34	03/13/20	281	1947900.00	2417096.51	851.03	851.00	3.35	02/28
	1948050.00	2417000.00 2417025.00	826.30 826.49	846.66	20.36	05/08/20	283	1947900.00	2417108.43	836.79	846.60	9.81	02/28
5	1948050.00 1948050.00	2417025.00	826.49	851.00 842.78	24.51 16.59	05/08/20 05/08/20	284 285	1947925.00 1947950.00	2417084.83 2417079.98	845.08 837.01	851.00 847.69	5.92	02/20, 02/28,
	1948050.00	2417075.00	825.86	841.88	16.02	05/08/20	286	1947950.00	2417056.81	849.84	850.29	0.45	02/20,
))	1948050.00 1948050.00	2417100.00 2417125.00	825.31 825.17	841.68 842.55	16.37 17.38	05/08/20 05/08/20	287 288	1947954.09 1947975.00	2417050.00 2417040.43	849.94 832.54	850.34 851.00	0.40	03/06/ 03/06/
	1948050.00	2417150.00	827.80	843.00	15.20	05/08/20	289	1947975.00	2417013.25	850.56	851.69	1.13	03/06,
	1948050.00 1948025.00	2417175.00	836.63	846.00	9.37	05/08/20	290	1947984.27	2417025.00	836.50	851.00	14.50	03/13
3	1948025.00	2416975.00 2417000.00	828.68 828.18	843.92 844.72	15.24 16.54	03/13/20 03/13/20	291 292	1947981.78 1948014.29	2417000.00 2416975.00	851.60 832.76	<u>852.00</u> 848.95	0.40	03/13 03/13
	1948025.00	2417025.00	828.41	851.00	22.59	05/08/20	293	1948025.00	2416957.16	836.22	847.48	11.26	03/13/
	1948025.00 1948025.00	2417050.00 2417075.00	828.91 828.73	850.88 847.77	21.97 19.04	05/08/20 05/08/20	294 295	1947996.79 1948011.80	2416975.00 2416950.00	851.42 851.41	851.56 851.88	0.14 0.47	03/13/ 03/13/
	1948025.00	2417100.00	827.20	848.29	21.09	05/08/20	296	1948026.80	2416925.00	852.12	852.00	-0.12	03/13,
	1948025.00	2417125.00	828.18	849.40	21.22	05/08/20	297	1948044.44	2416925.00	836.70	847.44	10.74	03/13/
	1948025.00 1948025.00	2417150.00 2417175.00	829.99 839.69	848.95 851.27	18.96 11.58	05/08/20 05/08/20	298 299	1948050.00 1948050.00	2416918.28 2416899.34	835.58 851.56	847.41 851.69	11.83 0.13	03/13/ 03/13/
	1948000.00	2417000.00	837.73	850.97	13.24	03/13/20	300	1948075.00	2416905.71	836.93	846.67	9.74	03/13/
	1948000.00 1948000.00	2417025.00 2417050.00	833.60 831.20	851.00 851.00	17.40 19.80	05/08/20 05/08/20	301 302	1948075.00 1948100.00	2416891.53 2416905.17	851.23 835.91	851.25 847.08	0.02	03/13/ 03/13/
4 5	1948000.00	2417075.00	832.36	851.48	19.12	05/08/20	303	1948100.00	2416891.17	850.31	851.00	0.69	03/13,
96	1948000.00	2417100.00	830.23	851.65	21.42	05/08/20	304	1948125.00	2416905.21	836.29	847.13	10.84	03/13,
97 98	1948000.00 1948000.00	2417125.00 2417150.00	830.66 833.61	851.00 851.27	20.34 17.66	05/08/20 05/08/20	305 306	1948125.00 1948150.00	2416891.21 2416905.25	850.89 835.05	<u>851.00</u> 846.60	0.11 11.55	03/13/ 03/13/
99	1948000.00	2417175.00	839.23	852.00	12.77	05/08/20	307	1948150.00	2416891.26	850.94	851.00	0.06	03/13,
0	1947975.00 1947975.00	2417050.00 2417075.00	831.81 831.54	851.00 850.81	19.19 19.27	03/06/20 03/06/20	308 309	1948175.00 1948175.00	2416905.47 2416891.46	837.28 850.92	846.85 851.02	9.57 0.10	03/13/ 03/13/
01 02	1947975.00	2417100.00	831.76	849.60	19.27	03/06/20	309	1948175.00	2416891.46	850.92	851.02	0.10	03/13/ 03/13/
3	1947975.00	2417125.00	831.89	850.27	18.38	03/06/20	311	1947859.30	2417163.58	846.06	850.09	4.03	02/28/
4 5	1947975.00 1947975.00	2417150.00 2417175.00	833.51 838.76	<u> </u>	16.86 13.24	03/06/20 03/06/20	312 313	1947859.77 1947860.24	2417171.37 2417181.20	845.97 846.08	<u>850.04</u> 850.34	4.07 4.26	02/28/ 02/28/
-	1947950.00	2417100.00	830.85	845.04	14.19	02/20/20	314	1947861.12	2417189.70	845.95	850.09	4.14	02/28/

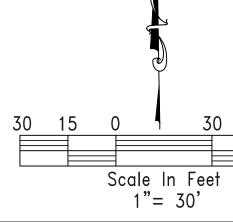
LEGEND

1000 REF PT NUM.

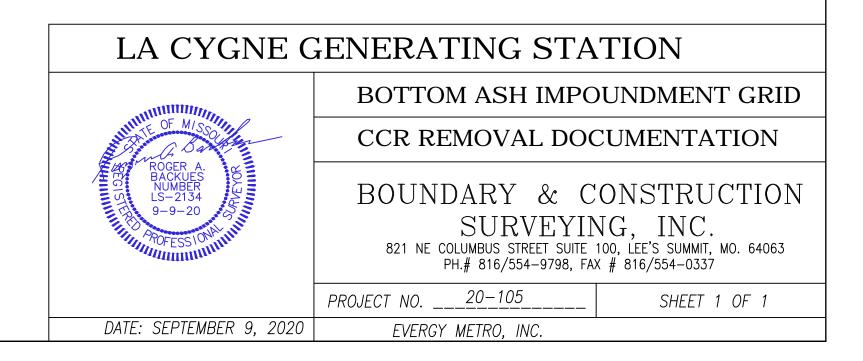
(1) PHASE NUMBER

APPROXIMATE PHASE LIMITS OF CCR REMOVAL

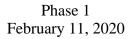
--800-- PRE-CONSTRUCTION GROUND ELEVATION (BY OTHERS)



60



Attachment - Photographs



(Looking South/ South-West)



Phase

Phase 2 March 5, 2020

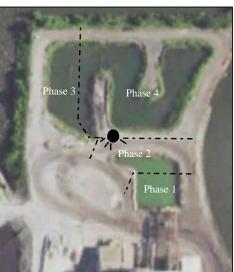
(Looking South-East)



(Looking South-West)



Photos were taken on March 5, 2020, from a centrally-located point on the west side of the Impoundment looking south-east and south-west, during a pause in CCR removal operations. The photo looking south-west shows a closer view of the clay that was observed at the base of the unit. Survey information for this phase was taken on March 6, 2020.



Phase 3 March 12, 2020

(Looking North/ North-East)





(Looking North/ North-East)



Photo was taken on May 8, 2020, at a centrally-located point from within the Impoundment, looking north/ north-east, at the completion of CCR removal. Backfill of the Phase 3 area can be seen to the west of the viewpoint. Clay was observed at the base of the unit. Survey information for this phase was taken on May 8, 2020.

