

Notification of Intent to Initiate Closure of Inactive CCR Surface Impoundments at Dale Power Plant



A Touchstone Energy Cooperative 

East Kentucky Power Cooperative

EKPC Fleet CCR Implementation

Compliance Plan
October 16, 2015

Notification of Intent to Initiate Closure of Inactive CCR Surface Impoundments at Dale Power Plant

Prepared for

**East Kentucky Power Cooperative
EKPC Fleet CCR Implementation
Winchester, Kentucky**

**Compliance Plan
October 16, 2015**

Prepared by

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

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INDEX AND CERTIFICATION

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Certification

I hereby certify, as a Professional Engineer in the Commonwealth of Kentucky, that the information in this document was assembled under my direct supervisory control. This report is not intended or represented to be suitable for reuse by the East Kentucky Power Cooperative or others without specific verification or adaptation by the Engineer.

I hereby certify, as a Professional Engineer in the Commonwealth of Kentucky that closure of East Kentucky Power Cooperative's Dale Power Station coal combustion residual surface impoundments is technically feasible by April 17, 2018.

Kira Wylam, KY #30195
BMcD Engineer, P.E. (state & license)

Date: 10/16/2015

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LIST OF ABBREVIATIONS

<u>Abbreviation</u>	<u>Term/Phrase/Name</u>
BMcD	Burns & McDonnell
CCR	Coal Combustion Residual
CFR	Code of Federal Regulations
CY	Cubic Yards
EKPC	East Kentucky Power Cooperative
EPA	Environmental Protection Agency
KDWM	Kentucky Division of Waste Management

1.0 INTRODUCTION

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

After conducting a preliminary study to review existing conditions and current plant operations and to identify a recommended closure plan for the surface impoundments at East Kentucky Power Cooperative's (EKPC's) Dale Power Station (Dale), Burns & McDonnell (BMcD) was retained to provide permit support, engineering design and construction support for the permanent closure of the existing surface impoundments, as well as for site restoration following completion of the surface impoundment closures. The existing surface impoundments, which no longer receive CCR material, will be clean closed (i.e. removing all CCR), per 40 Code of Federal Regulations (CFR) §257.100(b)(5), over the course of three construction seasons occurring at intervals from 2015 to 2017. All CCR material removed from the Dale site will be transported and disposed of at the existing CCR landfill at EKPC's J.K. Smith Station (Smith) which has been constructed with a composite liner system. A composite cover system will be added at Smith's landfill. Both the liner and cover systems are in accordance with Kentucky Division of Waste Management (KDWM) Permit No. sw02500022. The former impoundment areas will be regraded in order to manage storm water runoff. The final site design requires selective demolition of existing utilities as well as the extension of the existing storm sewer system. CCR removal is scheduled to be complete by October 16, 2017 with construction completion by November 1, 2017. This timeline is several months ahead of the April 17, 2018 inactive closure date required by the CCR Rule.

The purpose of this document is to indicate EKPC's intent to initiate closure of the inactive CCR surface impoundments (Ash Ponds 2, 3, and 4) at Dale. It is also a declaration that these CCR surface impoundments at Dale (Ash Ponds 2, 3 and 4) are both inactive (not receiving CCR) and closing pursuant to the CCR Rule with closure completion on or before April 17, 2018. The intent to initiate closure of inactive CCR surface impoundments must contain the following per §257.100(c)(1):

- Declaration that CCR surface impoundment is inactive
- Declaration that CCR surface impoundment is closing under §257.100(b)
- Narrative description indicating how the CCR surface impoundment will be closed

- Schedule for completing closure activities
- Certification from a qualified professional engineer that closure of the CCR surface impoundment is technically feasible by April 17, 2018.

Additionally, for inactive CCR surface impoundments being closed by leaving CCR in place, 40 CFR §257.100(b)(4) requires a written certification from a qualified professional engineer stating that the design of the final cover system meets applicable requirements. As indicated above, the inactive CCR surface impoundments at Dale are being clean closed. As such, this requirement does not apply and has been omitted from this document.

2.0 SITE CONDITIONS / EXISTING IMPOUNDMENTS

The total amount of CCR material to be removed from Dale is estimated to be 511,000 cubic yards (CY). CCR material is contained among three existing CCR surface impoundments – Ash Pond 2, Ash Pond 3, and Ash Pond 4 – as well as in the northern area surrounding Ponds 2 and 3. A site layout detailing the existing impoundments and CCR material removal extents can be found in Appendix A. The existing impoundments were not constructed with engineered liner systems; however, Ash Pond 4 contains a partial liner system along the northern berm. The partial liner system at Ash Pond 4 will be removed along with the CCR material in the impoundment.

3.0 CLOSURE PLAN

CCR material removal will be sequenced over three construction seasons in order to conduct hauling during the typical construction seasons of each year, accommodate construction operations (such as pumping between the impoundments), and coordinate with Owner activities. The seasons indicated below typically last from Spring to Fall for each calendar year. The following general sequence is applied:

- Season 1 (2015): Dewater as needed, load and haul CCR material from Pond 2, and stabilize disturbed Site prior to end of season. A contractor is already onsite commencing these activities.
- Season 2 (2016): Dewater as needed; selective tree removal; load and haul CCR material from remainder of Pond 2, partial north area, and Pond 4; back haul fill material from Smith to Dale; develop Dale site for future activities; modify existing storm sewer system; and stabilize disturbed Site prior to end of season.
- Season 3 (2017): Dewater as needed, load and haul CCR material from Pond 3 and remaining north area, back haul fill material from Smith to Dale, finish site work/site grading, demolish spray cooling field, stabilize, and seed site.

All CCR material will be mechanically excavated from the impoundments to the level of underlying existing soils. Removal will be certified by a third party professional engineer and verified by visual inspection performed by KDWM representatives.

Material removed from the impoundments will be dewatered before loading onto haul trucks. The contractor intends to use long-reach excavators in order to stack the CCR material into fingers within the impoundment footprints for dewatering purposes. Smaller pumps placed throughout the impoundment will collect water draining from the fingers and transfer the water to a main sump area where it can be pumped from the impoundment. Dry CCR material from the top of the fingers will then be loaded onto haul vehicles for transport to the Smith Landfill.

The Paint Filter Liquids Test will be performed before loading CCR material onto haul trucks in order to demonstrate that the CCR material is in a dewatered condition before transport. The Paint Filter Liquids Test is an EPA Method (Test Method 9095B) for determining if free liquids are present in a waste sample. Testing will be performed before the start of haul each day, every half hour thereafter, and as directed by EKPC. A portion of CCR material excavated each season may be sold for beneficial reuse if possible.

The haul route to the Smith Landfill is comprised of state highways and interstates, apart from the plant roads, and follows Kentucky Transportation Cabinet designated coal routes. The haul route is approximately 27.3 miles in one direction. All haul vehicles are required under contract to be capable of containing fine sediment and must be equipped with tarps, truck bed seals, and backup gate safety mechanisms.

4.0 CLOSURE SCHEDULE

Construction documents prepared by BMCD included a primary milestone schedule (see Appendix B) outlining the critical scope and timeline necessary for the CCR surface impoundment closure and site restoration at Dale. This schedule indicates milestones, tied by contract to liquidated damages, for the completion of key construction activities, including loading and hauling CCR material, by specified dates. The executed construction contract requires all CCR material be removed from the Dale inactive surface impoundments by October 16, 2017. Per §257.100(b) of the CCR Rule, the deadline to complete closure of inactive surface impoundments is April 17, 2018. The detailed construction schedule, as provided by the successful bidder, meets EKPC's primary milestone requirements and the CCR Rule deadline.

Based on the Contractor's provided schedule and review of that schedule by BMCD and EKPC, the completion of the closure prior to April 17, 2018, is technically feasible.

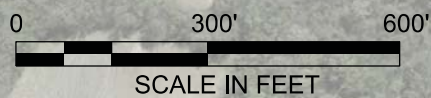
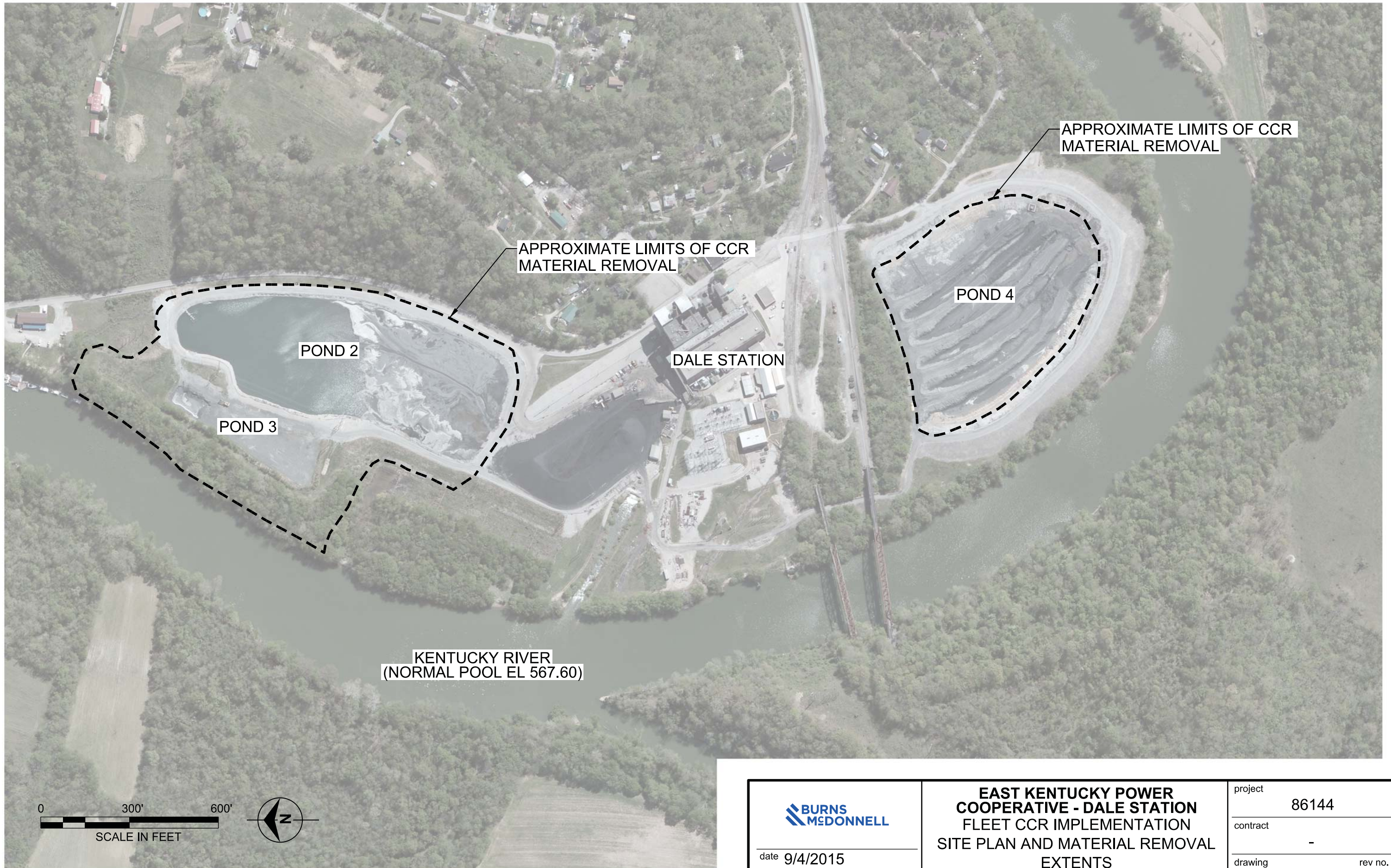
5.0 CLOSURE NOTICES AND PROGRESS REPORTS

There are several closure notices and progress reports that will be required throughout the Dale existing surface impoundment closure process according to 40 CFR §257.100(c). Closure documentation will include the following (CCR Rule compliance dates in parentheses):

- Notification of intent to close (December 17, 2015)
 - EKPC will place this document in the CCR Operating Record and on the CCR public website on October 19, 2015, with notification sent to appropriate State and/or Tribal Authority on the same day.
- Annual progress reports summarizing closure progress and projected closure activities:
 - First annual progress report 13 months after completing the notification of intent to close document (January 17, 2017)
 - The first annual progress report for Dale will be required on November 19, 2016 based on placing the intent to close document in the CCR Operating Record on October 19, 2015.
 - Second annual progress report 12 months after completing the first annual progress report (January 17, 2018)
 - The second annual progress report for Dale will be required on November 19, 2017 based on placing the intent to close document in the CCR Operating Record on October 19, 2015.
- Notification of completion of closure (60 days after closure completion)

The closure notices and progress reports will be placed in EKPC's CCR Operating Record, will be sent to the relevant State Director and/or Tribal Authority before close of business on the respective compliance dates, and will be placed on EKPC's CCR public website within 30 days of placing said information in EKPC's CCR Operating Record.

Appendix A – SITE PLAN



date 9/4/2015

designed A. MYERS

**EAST KENTUCKY POWER
COOPERATIVE - DALE STATION
FLEET CCR IMPLEMENTATION
SITE PLAN AND MATERIAL REMOVAL
EXTENTS**

project
86144

contract
-

drawing
SK - CIVIL - 001

rev no.
-

Appendix B – PROJECT SCHEDULE

ID	Task Mode	Task Name	Start	Finish	2nd Half		1st Half		2nd Half		1st Half		2nd Half		1st Half		2nd Half					
					Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4			
1		Permitting & Design Support	Thu 5/1/14	Fri 3/27/15																		
2		Engineering Design	Thu 5/1/14	Wed 10/1/14																		
3		General Construction Season 1	Mon 4/13/15	Fri 11/20/15																		
4		<i>Load and Haul Ash (Pond 2)</i>	<i>Tue 9/8/15</i>	<i>Mon 11/2/15</i>																		
5		Winter Construction Shutdown 1	Mon 11/23/15	Fri 4/1/16																		
6		General Construction Season 2	Mon 4/4/16	Fri 11/11/16																		
7		<i>Load and Haul Ash (remaining Pond 2)</i>	<i>Mon 5/2/16</i>	<i>Fri 8/5/16</i>																		
8		<i>Load and Haul Ash (Pond 4)</i>	<i>Mon 5/2/16</i>	<i>Fri 11/4/16</i>																		
9		Winter Construction Shutdown 2	Mon 11/14/16	Mon 4/3/17																		
10		General Construction Season 3	Tue 4/4/17	Fri 10/27/17																		
11		<i>Load and Haul Ash (Pond 3, North Area)</i>	<i>Mon 5/1/17</i>	<i>Mon 8/28/17</i>																		
12		<i>Load and Haul Ash (Pond 4 liner)</i>	<i>Mon 5/1/17</i>	<i>Mon 10/16/17</i>																		
13		Project Completion	Fri 10/27/17	Fri 10/27/17																		

10/27

Project: Dale Site Restoration - As
Date: Thu 10/15/15

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
Split		External Tasks		Inactive Summary		Manual Summary		Progress	
Milestone		External Milestone		Manual Task		Start-only			
Summary		Inactive Task		Duration-only		Finish-only			



CREATE AMAZING.

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