November 29, 2021

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BARR

Christopher Scieszka
DTE Electric Company
Environmental Management and Safety
One Energy Plaza
Detroit, MI 48226

Re: St. Clair Power Plant – No Alternative CCR Storage Capacity and Bottom Ash Basin Closure Annual Progress Report

Dear Mr. Scieszka:

In accordance with 40 CFR §257.103(f)(2), in November 2020 DTE Electric Company (DTE Electric) submitted to the United States (US) Environmental Protection Agency (EPA), a request for a Site-Specific Alternative Deadline to Initiate Closure of the St. Clair Power Plant (SCPP) Bottom Ash Basins (BABs). Although the EPA has not yet issued a final decision on the request, they have determined that the annual progress report documenting the continued lack of alternative coal combustion residual (CCR) management capacity is still required and must be submitted no later than November 30, 2021.

This letter provides an annual progress report in accordance with the information requirements set forth in 40 CFR §257.103(f)(2), consisting of:

- Documentation of the continued lack of alternative CCR management capacity
- Progress towards the closure of the St. Clair Power Plant Bottom Ash Basins

Continued Lack of Alternative CCR Management Capacity

Current SCPP CCR management conditions remain consistent with conditions documented in the November 2020 request to the EPA for a Site-Specific Alternative Deadline to Initiate Closure. DTE Electric does not have alternative on-site or off-site capacity for the CCR and non-CCR waste streams currently managed in the SCPP BABs. A detailed discussion regarding the alternative capacity analysis for the SCPP BABs, including a discussion of the BAB system layout, a summary of the CCR and non-CCR waste streams currently managed in the BABs, and descriptions of the various alternative disposal capacity options reviewed by DTE Electric was provided with the November 2020 demonstration. Considering conditions at SCPP remain unchanged since the November 2020 request was submitted it is DTE Electric's finding that there continues to be no alternative CCR management capacity to use in place of the BABs at the SCPP.

Progress Toward Closure

DTE Electric continues progress toward date-certain permanent cessation of coal-fired boiler operation at SCPP. Preparation of a conceptual closure plan for the SCPP BABs has begun the formal process of developing detailed closure documents for use in contractor bidding and execution of BAB closure. The conceptual closure plan for each of the BABs is summarized in Table 1.

Table 1 SCPP Bottom Ash Basin Closure

Closure Summary	Closure Sequence
East Basin Discharge to the east basin will cease, basin dewatering will commence, and CCR will be removed by excavation and transport to the DTE Electric Range Road Landfill for permanent disposal. Clean closure (CCR removal and groundwater quality) will be confirmed and documented. The Closure Sequence content of this table and the East Basin Closure Plan Summary attached to this letter provide additional information.	• Basin will be dewatered to facilitate CCR removal and decontamination of the unit. • CCR removal by excavation. • Removal or decontamination of any areas affected by releases of CCR. • Demolition/abandonment of associated non-earthen features. • Regrading to desired final grades using borrow soil for fill. • Establishment of surface vegetation.
West Basin Discharge to the west basin will cease, basin dewatering will commence, and CCR will be removed by excavation and transport to the DTE Electric Range Road Landfill for permanent disposal. Clean closure (CCR removal and groundwater quality) will be confirmed and documented. The Closure Sequence content of this table and the West Basin Closure Plan Summary attached to this letter provide additional information.	• Basin will be dewatered to facilitate CCR removal and decontamination of the unit. • CCR removal by excavation. • Removal or decontamination of any areas affected by releases of CCR. • Demolition/abandonment of associated non-earthen features. • Regrading to desired final grades using borrow soil for fill. • Establishment of surface vegetation.

The following schedule is being followed by DTE Electric to achieve SCPP BAB closure:

- June 2021 – Issued Request for Proposal (RFP) to engineering firms to develop detailed BAB closure documents
- July 2021 – Awarded closure document contract to engineer (Barr Engineering)
- February 2022 – Target date for closure documents completed
- March 2022 – Closure documents out to bid to contractors
- June 2022 – Cessation of coal-fired operations and final unit wash downs
- July 2022 – Begin dewatering, CCR removal, and closure of BABs
- September 2022 – Closure construction complete
- November 2022 (approximate) – Post final closure construction documentation

Preparation of BAB closure documents for use in bidding to contractors has been initiated, inclusive of conducting borings to confirm overall CCR depth within each basin. Based on these borings, the attached Bottom Ash Basin Closure Summaries provide current estimates of CCR quantity within each basin. These estimates supersede any previous quantity estimates. In-basin CCR quantities will fluctuate through the remaining life of the BABs as CCR deposition and periodic removal for landfilling continue up to the June 2022 cessation of coal-fired operations. All closure activities are estimated to be complete in, or before, 2023.

If you have questions or would like additional information, please contact Tom (952-240-4051 or tradue@barr.com).

Sincerely,

Thomas J. Radue

Tom Radue, P.E.
Sr. Geotechnical Engineer
Vice President

Certification

I, the undersigned Michigan Professional Engineer, hereby certify that I am familiar with the technical requirements of Title 40 Code of Federal Regulations Part 257 Subpart D (§257). I also certify that it is my professional opinion that, to the best of my knowledge, information, and belief, the information in this progress report is in accordance with current good and accepted engineering practice(s) and standard(s) and meets the requirements of §257.103.

Thomas J. Radue

November 29, 2021
Thomas J. Radue, P.E.

Attachments

SCPP East Bottom Ash Basin Closure Summary

SCPP West Bottom Ash Basin Closure Summary

SCPP East Bottom Ash Basin Closure Summary

CLOSURE PLAN FOR EXISTING CCR SURFACE IMPOUNDMENT PER 40 CFR 257.102 (b)			
SITE INFORMATION			
Site Name / Address	DTE Energy St. Clair Power Plant Bottom Ash Basin #2 (east) / 4877 M-29, East China, MI 48054		
Owner Name / Address	DTE Electric Company / One Energy Plaza, Detroit, MI 48226		
CCR Unit	Bottom Ash Basin	Final Cover Type	N/A
Reason for Initiating Closure	Date-Certain Cessation of Coal-Fired Operations	Closure Method	Closure by Removal
CLOSURE PLAN DESCRIPTION			
(b)(1)(i) – Narrative description of how the CCR unit will be closed in accordance with this section.	The East Bottom Ash Basin will be dewatered to facilitate CCR removal and decontamination of the unit. Closure operations will involve: (i) CCR removal by excavation of the bottom ash, (ii) removal or decontamination of any areas affected by releases of CCR, (iii) demolition/abandonment of associated non-earthen features directed for removal by DTE, and (iv) regrading to final desired grades using borrow soil for fill, as needed. In accordance with 257.102(b)(3), this written closure plan will be amended to provide additional details after the final engineering design for the closure by removal is completed. This closure plan reflects the best information available to date.		
(b)(1)(ii) If closure of the CCR unit will be accomplished through removal of CCR from the CCR unit, a description ofthe procedures to removethe CCR and decontaminate the CCR unit in accordance with paragraph (c) of this section.	The East Bottom Ash Basin includes an interlocking sheet pile perimeter wall and underlying low permeability clay for CCR containment. CCR will be removed by excavation of the bottom ash basin. The underlying soils will be removed or decontaminated. If necessary, the upper-most usable aquifer will be flushed, pumped, and/or treated. Based on current groundwater monitoring, such activities are not anticipated to be required. Wastes generated will be disposed in DTE's Range Road Landfill, in compliance with applicable regulations.		
INVENTORY AND AREA ESTIMATES			
(b)(1)(iv) – Estimate of the maximum inventory of CCR ever on-site over the active life of the CCR unit	18,500 cubic yards (order-of-magnitude estimate)		
(b)(1)(v) – Estimate of the largest area of the CCR unit ever requiring a final cover	No final cover will be placed as the CCR is being removed.		
CLOSURE SCHEDULE			
(b)(1)(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.			
The milestone and the associated timeframes are estimates. Some of the activities associated with the milestones will overlap. Amendments to the milestones and timeframes will be made as more information becomes available.			
Written Closure Plan Placed in Operating Record	November 25, 2020, Updated November 25, 2021		
Notification of Intent to Close Placed in Operating Record	November 25, 2020		
Agency coordination and permit acquisition Coordinating with state agencies for compliance Acquiring state permits	 Fall 2021 through Spring 2022 Fall 2021 through Summer 2022		
Mobilization	Summer 2022		
Dewater ash pond	Summer 2022		
CCR removal and decontamination	Summer/Fall 2022		
Estimate of Year in which all closure activities will be completed	2023		
Certification by Qualified Professional Engineer Accompanies this Plan			

SCPP West Bottom Ash Basin Closure Summary

CLOSURE PLAN FOR EXISTING CCR SURFACE IMPOUNDMENT PER 40 CFR 257.102 (b)			
SITE INFORMATION			
Site Name / Address	DTE Energy St. Clair Power Plant Bottom Ash Basin #1 (west) / 4877 M-29, East China, MI 48054		
Owner Name / Address	DTE Electric Company / One Energy Plaza, Detroit, MI 48226		
CCR Unit	Bottom Ash Basin	Final Cover Type	N/A
Reason for Initiating Closure	Date-Certain Cessation of Coal-Fired Operations	Closure Method	Closure by Removal

CLOSURE PLAN DESCRIPTION	
(b)(1)(i) – Narrative description of how the CCR unit will be closed in accordance with this section.	The West Bottom Ash Basin will be dewatered to facilitate CCR removal and decontamination of the unit. Closure operations will involve: (i) CCR removal by excavation of the bottom ash, (ii) removal or decontamination of any areas affected by releases of CCR, (iii) demolition/abandonment of associated non-earthen features directed for removal by DTE, and (iv) regrading to final desired grades using borrow soil for fill, as needed. In accordance with 257.102(b)(3), this written closure plan will be amended to provide additional details after the final engineering design for the closure by removal is completed. This closure plan reflects the best information available to date.
(b)(1)(ii) If closure of the CCR unit will be accomplished through removal of CCR from the CCR unit, a description ofthe procedures to removethe CCR and decontaminate the CCR unit in accordance with paragraph (c) of this section.	The West Bottom Ash Basin includes an interlocking sheet pile perimeter wall and underlying low permeability clay for CCR containment. CCR will be removed by excavation of the bottom ash basin. The underlying soils will be removed or decontaminated. If necessary, the upper-most usable aquifer will be flushed, pumped, and/or treated. Based on current groundwater monitoring, such activities are not anticipated to be required. Wastes generated will be disposed in DTE's Range Road Landfill, in compliance with applicable regulations.

INVENTORY AND AREA ESTIMATES	
(b)(1)(iv) – Estimate of the maximum inventory of CCR ever on-site over the active life of the CCR unit	17,500 cubic yards (order-of-magnitude estimate)
(b)(1)(v) – Estimate of the largest area of the CCR unit ever requiring a final cover	No final cover will be placed as the CCR is being removed.

CLOSURE SCHEDULE	
(b)(1)(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.	
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