# Diversion Basin Closure Plan

## Belle River Power Plant

DTE Electric Company
Project No. 153316

Revision 0
5/18/2023

# Diversion Basin Closure Plan

prepared for

DTE Electric Company
Belle River Power Plant
China Township, Michigan

Project No. 153316

Revision 0
5/18/2023

prepared by

Burns & McDonnell Michigan, Inc.
Detroit Michigan

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### Certification

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


This document has been digitally signed and sealed. May 18, 2023

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Date: 5/18/2023

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# LIST OF ABBREVIATIONS

| Abbreviation | Term/Phrase/Name |
|---|---|
| Belle River | Belle River Power Plant |
| Burns & McDonnell | Burns & McDonnell Michigan, Inc. |
| CCR | Coal Combustion Residuals |
| CFR | Code of Federal Regulations |
| DTE | DTE Electric Company |
| EPA | Environmental Protection Agency |
| RCRA | Resource Conservation and Recovery Act |
| U.S.C. | United States Code |

# 1.0 INTRODUCTION

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

The existing CCR surface impoundment (herein referred to as the Diversion Basin) at DTE Electric Company's (DTE's) Belle River Power Plant (Belle River) is subject to the CCR Rule, and as such, DTE is required to develop and maintain a Closure Plan per 40 Code of Federal Regulations (CFR) §257.102. This report serves as the Closure Plan for the Diversion Basin at Belle River.

# 2.0 PLAN OBJECTIVES

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

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

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

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

# 3.0 EXISTING CONDITIONS

Belle River is a two unit, 1,270-megawatt (summer rated capacity) coal-fired facility located in China Township, Michigan. The site contains two CCR surface impoundments: the Bottom Ash Impoundment and the Diversion Basin. Note, the Closure Plan for the Bottom Ash Impoundment is covered in a separate document.

The Diversion Basin is approximately 1.03 acres and receives overflow from the Bottom Ash Impoundment as well as intermittent pumped discharge from the Range Road Landfill storm water pond. Discharge from the Diversion Basin is directed to NDPES Outfall 001B and ultimately to the St. Clair River.

## 3.1 CCR Inventory

The maximum inventory of CCR material that can be stored within the Diversion Basin over the active life of the unit is estimated to be 6,300 cubic yards. The impoundment no longer receives CCR waste streams.

# 4.0 CLOSURE METHOD

The Diversion Basin will be closed by removing CCR. Procedures for closing the surface impoundment are described in detail herein.

## 4.1 Removal of CCR

Prior to commencing closure activities, incoming flows to the Diversion Basin will be diverted and/or temporarily controlled. The Range Road Landfill Storm Water Pond level will be drawn down to allow for onsite storage during CCR removal activities. Flows from the Bottom Ash Impoundment will be isolated upstream of the basin and temporarily pumped to the Diversion Basin outfall structure. Vegetation within the basin limits will be removed to support clean out efforts. Free water within the basin will be drained through the outfall structure to allow for removal of CCR material as well as over excavation of 6 inches of underlying subgrade material. Material will be removed from the basin using standard earthmoving equipment and loaded into dump trucks to be hauled to the Range Road Landfill north of the plant. The Diversion Basin subgrade will be visually inspected by a professional engineer to confirm CCR removal.

## 4.2 Post-Closure Conditions

The bottom of CCR and over excavation grades will be documented by survey. Groundwater monitoring will be conducted to confirm that CCR removal and decontamination has been completed pursuant to §257.102(c) of the CCR Rule.

The impoundment will be repurposed as a non-CCR impoundment and resume receiving non-CCR waste streams after closure is completed.

# 5.0 CLOSURE SCHEDULE

An estimated schedule for completing the CCR surface impoundment closure at Belle River is included in Table 5-1. Per 40 CFR §257.102(f) of the CCR Rule, closure must be completed within five years of initiating closure activities unless extensions are granted per 40 CFR 257.102(e)(2).

**Table 5-1: Closure Schedule**

| | |
|---|---|
| Notification of Intent to Close Placed in Operating Record | 2nd Quarter 2023 |
| Mobilization | 2nd Quarter 2023 |
| General Construction | 2nd Quarter 2023 |
| Project Completion | 2nd Quarter 2023 |

For the purposes of this Closure Plan, closure of the Diversion Basin will be considered complete when CCR has been removed from the unit and placed in the landfill. Within 30 days of completion of closure, a Notification of Closure of the CCR surface impoundment will be prepared and placed in the facility's CCR Operating Record. This Notification of Closure will be posted on DTE's public CCR website within 30 days of placement in the Operating Record. This notification will include certification by a qualified professional engineer in the State of Michigan verifying that closure has been completed in accordance with this Closure Plan and the requirements of 40 CFR §257.102.

# 6.0 REVISIONS AND AMENDMENTS

The initial Closure Plan was placed in the CCR Operating Record October 17, 2016. If the Closure Plan is revised, the written Closure Plan will be amended no later than 30 days following the triggering event. The initial Closure Plan and any amendment will be certified by a qualified professional engineer in the State of Michigan for meeting the requirements of §257.102 of the CCR Rule. All amendments and revisions must be posted on the CCR public website within 30 days following placement in the facility's CCR Operating Record. A record of revisions made to this document is included in Section 7.0 of this document.

# 7.0 RECORD OF REVISIONS AND UPDATES

| Revision Number | Date | Revisions Made | By Whom |
|---|---|---|---|
| 0 | 10/17/2016 | Initial Issue | AECOM |
| 1 | 05/18/2023 | Revised to reflect current plan and closure schedule | Burns & McDonnell |
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