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Mr. Chris Scieszka
DTE Electric Company
Environmental Management & Safety
One Energy Plaza, 410 G.O.
Detroit, MI 48226

CCR Impoundment Hazard Potential Classification Assessment - Bottom Ash Impoundment, Monroe Power Plant, DTE Energy, Monroe, Michigan

Dear Mr. Scieszka:

As requested by DTE Electric Company (DTE), AECOM is pleased to present the result of the hazard potential classification assessment for the Monroe Power Plant Bottom Ash Impoundment.

Background

On April 17, 2015, the US Environmental Protection Agency (USEPA) published rule 40 CFR Part 257 titled Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule). The CCR Rule requires that periodic updates to the hazard potential classification assessment for inactive CCR surface impoundments be completed every 5-years. 40 CFR §257.73(a)(2) specifically states:

> *- 40 CFR §257.73(a)(2)*
>
> *(2) Periodic hazard potential classification assessments.*
>
> *(i) The owner or operator of the CCR unit must conduct initial and periodic hazard potential classification assessments of the CCR unit according to the timeframes specified in paragraph (f) of this section. The owner or operator must document the hazard potential classification of each CCR unit as either a high hazard potential CCR surface impoundment, a significant hazard potential CCR surface impoundment, or a low hazard potential CCR surface impoundment. The owner or operator must also document the basis for each hazard potential classification.*
>
> *(ii) The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating that the initial hazard potential classification and each subsequent periodic classification specified in paragraph (a)(2)(i) of this section was conducted in accordance with the requirements of this section.*

The Bottom Ash Impoundment is an inactive CCR surface impoundment as defined by 40 CFR §257.53. The impoundment is bordered by Lake Erie to the east and the Plant cooling water discharge channel to the west, which discharges cooling water from the Monroe Power Plant to Lake Erie. The impoundment is separated from the cooling water discharge channel and Lake Erie by a perimeter dike. The southern boundary of the ash pond is formed by an earthen divider berm constructed of aggregate material, which separates the ash pond from the process waste and stormwater basin to the south. The normal water surface elevation of the bottom ash impoundment is approximately 575 ft (NAVD88) and of Lake Erie/the cooling water discharge channel is 572 ft (NAVD88).

Hazard Classification

In AECOM's opinion the Bottom Ash Impoundment CCR unit at the Monroe Power Plant should be classified as a **significant** hazard potential CCR surface impoundment.

The definitions section of the CCR Rule states the following (40 CFR §257.53):

> *Hazard potential classification means the possible adverse incremental consequences that result from the release of water or stored contents due to failure of the diked CCR surface impoundment or mis-operation of the diked CCR surface impoundment or its appurtenances. The hazardous potential classifications include high hazard potential CCR surface impoundment, significant hazard potential CCR surface impoundment, and low hazard potential CCR surface impoundment, which terms mean:*
>
> *High hazard potential CCR surface impoundment means a diked surface impoundment where failure or misoperation will probably cause loss of human life.*
>
> *Low hazard potential CCR surface impoundment means a diked surface impoundment where failure or misoperation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment owner's property.*
>
> *Significant hazard potential CCR surface impoundment means a diked surface impoundment where failure or misoperation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.*

The reason the Bottom Ash Impoundment is **not** a **high** hazard potential CCR surface impoundment is that it is unlikely that failure of the unit and a resulting release of the impounded water would result in the loss of human life. The impounded water would either be released directly into Lake Erie to the east or into the cooling water discharge channel to the west which would then drain directly into Lake Erie. Neither scenario is likely to cause loss of human life.

The reason the Bottom Ash Impoundment is **not** a **low** hazard potential CCR surface impoundment is that losses due to an uncontrolled release would not be principally limited to DTE's property. As stated above, the impounded water would either be released directly into Lake Erie to the east or into the cooling water discharge channel to the west which would then drain directly into Lake Erie.

There are, however, environmental concerns with a release from the impoundment. A release of water from the impoundment into Lake Erie would likely be accompanied by a release of at least some of the CCR residuals from the impoundment. This would result in a considerable amount of siltation to the lake and environmental damage. This is the primary reason AECOM regards the unit as a significant hazard potential CCR impoundment.

Conclusion

AECOM's opinion is that the Bottom Ash Impoundment at the Monroe Power Plant falls under the definition of the rule as a significant hazard potential CCR surface impoundment.

AECOM appreciates this opportunity to provide assistance to DTE at the Monroe Power Plant. Please contact us if you have any questions.

Sincerely,

AECOM Technical Services, Inc.

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Professional Engineer Certification

Scott G. Hutsell, being a Registered Professional Engineer, in accordance with the Michigan Professional Engineer's Registration.do hereby certify to the best of my knowledge, information and belief. that this Hazard Potential Classification Assessment, dated March 4, 2024, meets the requirements of 40 CFR § 257.73, is true and correct, and has been prepared in accordance with generally accepted good engineering practices.

Signature: _____ Date: 03/04/24