EXISTING LINER DESIGN CRITERIA
DTE ENERGY LLC
MONROE POWER PLANT
INACTIVE BOTTOM ASH IMPOUNDMENT
April 2018
Revision 1: August 2019

AECOM Technical Services of Michigan, Inc. ("Consultant") has been retained by DTE Electric Company, to prepare the following assessment of whether the Inactive Bottom Ash Impoundment at the DTE Monroe Plant is constructed with a liner meeting the design requirements of Section 257.71 of the HAZARDOUS AND SOLID WASTE MANAGEMENT SYSTEM; DISPOSAL OF COAL COMBUSTION RESIDUALS FROM ELECTRIC UTILITIES; FINAL RULE, 80 Fed. Reg. 21302 (Apr. 17, 2015). Presented below are the project background, summary of findings, limitations and certification.

1.0 BACKGROUND

Pursuant to 40 C.F.R. § 257.71(a)(1), owners and operators of an existing CCR surface impoundment must document whether or not such unit was constructed with any one of the following:

(i) A liner consisting of a minimum of two feet of compacted soil with a hydraulic conductivity of no more than1 × 10^{-7} cm/sec;
(ii) A composite liner that meets the requirements of 40 C.F.R. *§ 257.70(b); or*
(iii) An alternative composite liner that meets the requirements of 40 C.F.R. *§ 257.70(c).*

Pursuant to 40 C.F.R. § 257.71(a)(2), the hydraulic conductivity of the compacted soil must be determined using recognized and generally accepted methods.

In accordance with 40 C.F.R. § 257.71(a)(3), an existing CCR surface impoundment is considered to be an existing unlined CCR surface impoundment if the owner or operator determines that the unit does not meet any of the requirements set forth in subparagraphs (i) through (iii) of 40 C.F.R. § 257.71(a)(1) above, or fails to document whether the unit was constructed with a liner that meets any of the requirements set forth in those subparagraphs (i) through (iii) above.

In support of the above assessment, the Consultant completed a desk-top evaluation of existing and available design and construction documentation for the Inactive Bottom Ash Impoundment at the DTE Monroe Plant. Information was gathered through the review of historical documents.

2.0 ASSESSMENT .

Based upon a review of applicable information, the Consultant has identified the following information about the Inactive Bottom Ash Impoundment at the Monroe Power Plant.

CCR Unit	Liner Construction	Hydraulic Conductivity of the Compacted Soil
Inactive Bottom Ash Impoundment	Unlined (Pursuant to 40 C.F.R § 257.71 (a)(1))	n/a

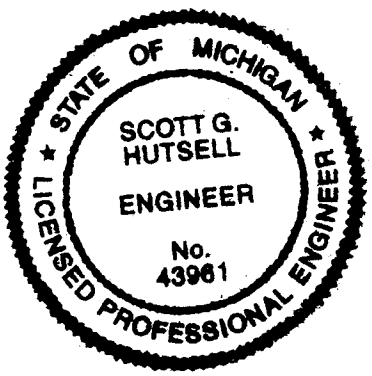
3.0 LIMITATIONS

The signature of the Consultant's authorized representative on this document represents that to the best of the Consultant's knowledge, information and belief in the exercise of its professional judgment, it is the Consultant's professional opinion that the aforementioned information is accurate as of the date of such signature. Any opinion or decisions by the Consultant are made on the basis of the Consultant's experience, qualifications, and professional judgment and are not to be construed as warranties or guaranties. In addition, opinions relating to environmental, geologic, and geotechnical conditions or other estimates are based on available data, and actual conditions may vary from those encountered at the times and locations where data are obtained, despite the use of due care.

4.0 CERTIFICATION

I, Scott G. Hutsell, being a Registered Professional Engineer, in accordance with the State of Michigan Professional Engineer's Registration, do hereby certify to the best of my knowledge, information and belief, that the liner design documentation contained in this report dated August 30, 2019, does not meet the requirements of 40 C.F.R. § 257.71, is true and correct, and has been prepared in accordance with generally accepted good engineering practices.

SIGNATURE _____ DATE 08/30/19



Revision Log

The table below provides a description of revisions to the Liner Design Criteria.

REVISION #	REVISION DATE	DESCRIPTION OF REVISION
1	08/30/2019	Changed text on pages 1 and 2.