Prepared for

DTE Electric Company
One Energy Plaza
Detroit, Michigan 48226

2025 ANNUAL INSPECTION REPORT
VERTICAL EXTENSION LANDFILL

MONROE POWER PLANT

Monroe, Michigan

Prepared by

Geosyntec consultants
Geosyntec Consultants of Michigan

3011 West Grand Blvd, Suite 2300
Detroit, MI 48202

CHE1067A

January 2026

Geosyntec consultants
Geosyntec Consultants of Michigan

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

Geosyntec consultants
Geosyntec Consultants of Michigan

1. INTRODUCTION

1.1 Overview

This 2025 Annual Inspection Report (AIR) was prepared by Geosyntec Consultants of Michigan, Inc. (Geosyntec) to provide the results of the annual inspection of the coal combustion residuals (CCR) vertical extension landfill (Landfill) at DTE Electric Company's (DTE) Monroe Power Plant disposal facility. The annual inspection has been prepared to comply with the United States Environmental Protection Agency (USEPA) CCR Rule published on April 17, 2015, as amended. Under the CCR Rule, the Landfill is an "existing landfill" per 40 CFR 257.53 and must be inspected by a qualified professional engineer on a periodic basis, not to exceed one year.

The Landfill is constructed on top of fly ash that was previously deposited in the Monroe Ash Basin (Ash Basin) (Figure 1). The Ash Basin is a separate CCR surface impoundment located about one mile southwest of the Monroe Power Plant near Monroe, Michigan, and is bounded on the east by Lake Erie and the Plant discharge canal, on the west by Interstate Highway 75 (I-75), on the south by an agricultural field, and on the north by residential properties and Plum Creek. The combined Landfill and Ash Basin are considered the "Permitted Area".

Landfill Phase 1 construction began in August 2015. The Michigan Department of Environment, Great Lakes, and Energy (EGLE, formerly Michigan Department of Environmental Quality [MDEQ]), licensed the area for disposal via email communication on October 14, 2015, and CCR was placed in the unit beginning October 16, 2015. As of December 29, 2023, DTE ceased receipt of CCR within the Landfill.

1.2 Purpose

The objective of the inspection is to detect indications of instability in time to allow planning, design, and implementation of appropriate mitigation measures. The purpose of the inspection under the CCR Rule [40 CFR 257.84(b)(1)] is:

"…to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards."

The inspection must, at a minimum, include:

(i) A review of the available information regarding the status and condition of the CCR unit, including, but not limited to, files available in the operating record (e.g., the results of an inspection by a qualified person, and results of previous annual inspections); and

(ii) A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit.

The purpose is accomplished through periodic visual inspection (and photo-documentation) of the Landfill, review of the previous inspection, review of instrumentation monitoring data, and discussions with site personnel about the history of the site and general operations at the Landfill. Observations from the visual inspection, document and instrumentation data review, and discussions are summarized in an inspection report. The inspection report addresses the following under the CCR Rule [40 CFR 257.84(b)(2)]:

(i) Any changes in geometry of the structure since the previous annual inspection;

(ii) The approximate volume of CCR contained in the unit at the time of the inspection;

(iii) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit; and

(iv) Any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.

1.3 Report Organization

The remainder of this report is organized as follows:

- Section 2 – Review of Available Information: summarizes various historical documents that were reviewed as part of this inspection.
- Section 3 – Facility Description: provides information about the facility.
- Section 4 – Observations from Annual Inspection: summarizes visual observations recorded during the 2025 inspection of the Landfill.
- Section 5 – Instrumentation Monitoring: provides information about the instrumentation monitoring of the Landfill.
- Section 6 – Current Operations: describes DTE's current operations.
- Section 7 – Evaluation of Observations: based on the inspection results, evaluates if the design, construction, operation, and maintenance of the Landfill are consistent with recognized and generally accepted good engineering standards.

- Section 8 – Conclusions: provides the overall conclusions of the annual inspection and certification of the AIR.

1.4 Terms of Reference

The annual visual inspection was performed on May 6, 2025, by Dr. Clinton Carlson, Ph.D., P.E., and Dr. Jorge Romaña Giraldo, Ph.D. of Geosyntec, with assistance from DTE staff. This report was prepared by Dr. Carlson and Dr. Romaña Giraldo with input by Mr. John Seymour, P. E. of Geosyntec. Dr. Carlson is the qualified professional engineer per the requirements of §257.53 of the CCR Rule. He has over ten years of experience with coal ash related projects and his resume is provided in Appendix A.

2. REVIEW OF AVAILABLE INFORMATION

Geosyntec reviewed the following documents for the annual inspection. These documents are summarized in the table below.

Table 1: Available Information Reviewed for Annual Inspection

Title	Prepared by	Date	Content
Post-Closure Plan	AECOM	October 17, 2016	Documenting how the plan will meet the CCR Rule. Plan remains unchanged.
Groundwater Monitoring System Summary Report	TRC	October 2017	Information on groundwater monitoring system components and details for the Monroe Ash Basin and Vertical Extension Landfill.
Groundwater Statistical Evaluation Plan	TRC	October 2017	Basis for statistical evaluation for groundwater monitoring events for the Monroe Ash Basin and Vertical Extension Landfill.
Location Restrictions Demonstration	TRC	September 2018	Provides details of location restrictions demonstration for the Landfill per the CCR Rule.
Run-on/Run-off Control System Plan for CCR Disposal Facility - Monroe Fly Ash Basin Vertical Extension, Existing Landfill	AECOM	October 15, 2021	Describes the run-on and run-off control features for the vertical extension. Documenting how the plan meets the CCR Rule. Provides a five-year update to the original plan submitted in October 2016.
Fugitive Dust Control Plan	DTE	November 9, 2021	Presents fugitive dust control measures. Added operating license information, updated process for the inactive bottom ash impoundment, and further defined activities for assessing and monitoring effectiveness of dust control measures.
Closure Plan	Burns & McDonnell	October 5, 2023	Documenting how the plan will meet the CCR Rule.

Geosyntec consultants
Geosyntec Consultants of Michigan

Table 1: Available Information Reviewed for Annual Inspection

Title	Prepared by	Date	Content
Notice of Intent to Close CCR Unit	DTE	January 25, 2024	DTE provided Notice of Intent to Close (NOI) for the DTE Monroe Power Plant Fly Ash Basin and Vertical Extension Landfill. Completed pursuant to 40 CFR §257.102(g).
Instrumentation Monitoring and Maintenance Manual Rev. E	Geosyntec	December 2024	Provides details of operations, monitoring, action levels and items for the Landfill. Updated for changes in continuous monitoring system and operations at the Facility.
2025 Annual Inspection Report	Geosyntec	January 9, 2025	Provides the result of the 2024 annual inspection.
Annual Groundwater Monitoring Report	DTE	January 31, 2025	Summary of annual groundwater monitoring results for 2024 for the Monroe Ash Basin and Vertical Extension Landfill.
Weekly Inspection Reports	DTE	May 2024 to November 2025	Qualified person inspections from May 2024 through November 2025.
Annual Fugitive Dust Report	DTE	November 19, 2025	Annual report of dust control actions, any complaints, and corrective actions taken, if any. Completed pursuant to 40 CFR 257.80(c).

3. FACILITY DESCRIPTION

3.1 Overall Site Description

The facility includes a 79-acre vertical extension landfill (Landfill) and a 331-acre fly ash basin impoundment (Ash Basin) for a permitted area of 410 acres. The permitted area is in Section 16, Township 7 South, Range 9 East, of Monroe Township, Michigan shown in Figure 1. The Landfill is a coal ash landfill, and the Ash Basin is a coal ash surface impoundment under Michigan Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994, Operating License No. 9725. The entire Landfill, including the perimeter berms and swales, are located within the interior drainage area of the Ash Basin. Any potential sediments from erosion will be deposited in the Ash Basin. Any potential run-off will be managed under the NPDES permit for the Ash Basin.

The Landfill is designated as a 79-acre "dry" disposal area located on top of an area of the Ash Basin filled with CCR approximately to the originally planned final grade. The site investigation conducted in 2015 identified the fly ash below the Landfill to be approximately 50 feet thick to an elevation of approximately 563 feet[1]. The water level in the Ash Basin is maintained at or below an elevation of 609 feet.

The Landfill is licensed to receive bottom ash, fly ash, flue gas desulfurization (FGD) scrubber wastewater sludge (solidified with fly ash or bottom ash), synthetic gypsum, inert material, and any other waste allowed by the CCR Rule or obtained through specific regulatory approval. The Permit Modification Report, prepared by Golder & Associates (Golder) dated April 16, 2015, includes regulatory requests for placement of materials within the Landfill.

3.2 Design

The design was provided by Golder in the Permit Modification Report. The components of the Landfill include the following.

- Prepared subgrade consisting of in-situ sluiced fly ash and general fill.
- 30-inch-thick pore pressure relief layer, comprised of (from top to bottom):
    - 24-inch-thick layer of bottom ash or limestone aggregate;
    - Perforated collection pipes encased in a filter fabric ("sock") within the 24-inch-thick bottom ash/limestone aggregate layer;

[1] Elevations in this AIR are reported in the National Geodetic Vertical Datum of 1929 (NGVD29).

  - Separation geotextile made of non-woven, needle-punched geotextile; and
  - 6-inch-thick embedment layer.

- Monitoring system consisting of 12 settlement plates, 13 vibrating wire piezometers, and six slope inclinometers.
- Perimeter berm.
- Perimeter collection swale.

3.3 Construction

Phase 1 of the Landfill is the western 11-acre portion shown in Figure 1. Construction of Phase 1 of the Landfill was certified by David List, P.E., of Golder on September 16, 2015; the certification is contained in the Phase 1 Construction Documentation Report. Record drawings of the construction were provided in Appendix B of the 2015 AIR.

Construction for Phase 2 of the Landfill, the remaining 68 acres shown in Figure 1, has been completed and the certification report was sent to EGLE in November 2017. EGLE provided approval on January 24, 2018, for CCR disposal. CCR material began being placed within Phase 2 of the Landfill in 2020.

As of December 29, 2023, DTE ceased receipt of CCR material within the Landfill. DTE provided a NOI to close the Landfill to EGLE on January 25, 2024. The total estimated volume of CCR in the Landfill above the geotextile separation embedment layer after ceasing receipt of CCR material is approximately 365,000 cubic yards (cy), based on data provided by DTE.

Geosyntec consultants
Geosyntec Consultants of Michigan

4. OBSERVATIONS FROM ANNUAL INSPECTION

Inspection results and photographs from the annual visual inspection are provided in Appendix B. The key observations from the inspection are summarized below.

1. The paved and aggregate access roads on the north side of the Landfill were in good condition with no observed ruts or erosion (Photographs #30, #32). One low spot was observed on the aggregate access road (Photograph #32).

2. Dense vegetation was observed within the perimeter swales along the north (Photographs #1, #4, #7, #27, #28), east (Photograph #8), south (Photographs #9, #18, #19, #25), and west (Photograph #23) sides of the Landfill. The dense vegetation did not appear to affect the flow of stormwater.

3. The perimeter berms along the north (Photographs #1, #4, #27), east (Photograph #8), south (Photographs #9, #19, #25) and west (Photograph #23) sides of the Landfill had some vegetation but were overall in satisfactory condition. No apparent signs of slope instability or erosion along the perimeter berms were observed.

4. Water was observed in the perimeter swales around the Landfill (R1 through R4), but minimal flow was observed during the inspection (R1 in Photograph #28, R2 in Photograph #7, R3 and R4 in Photograph #18). The water level in the north, east, southeast, southwest, and west perimeter swales (R1, R2, and R3) was lower than the pore pressure relief pipe outlets and top of the culverts. In the south perimeter swale, R4, the water level partially submerged some of the pore pressure relief pipe outlets (Photograph #17).

5. Geosyntec located some of the pore pressure relief pipe outlets despite many outlets being obscured by the dense vegetation and water levels within the perimeter swales (Photographs #6, #17). The outlets located were examined for flow or blockages. The pressure relief pipes that were observed during the inspection had no obstructions and generally no sediments or vegetation (Photograph #11). Below are specific observations related to the pore pressure relief pipes.

    - Some flow was observed from pipes on the northeast and southeast sides of the Landfill below Phase 2 (Photographs #5, #12, #13, #16) likely due to precipitation prior to and during the inspection.

    - Two pipes on the northwest side of the Landfill below Phase 1 had minimal flow during the inspection (Photograph #29). The pipes in this location have historically had minimal flow due to active filling in Phase 1 above these pipes. Algae were also observed along the outlets of these pipes.

- Some of the pressure relief pipes were partially submerged by the water within the perimeter swale (Photograph #17).

- Some of the pressure relief pipes had some vegetation or sediments within the outlets (Photographs #21, #26).

6. The culverts within the perimeter swales were generally in good condition (Photographs #10, #24, #31). Although dense vegetation was observed within the perimeter swales adjacent to the culverts, the vegetation did not appear to impact the ability of the culverts to convey stormwater flow. During the inspection, flow was observed into the culvert located on the southeast side of the Landfill (Photograph #10). Some vegetation was observed in the riprap around the reinforced concrete culvert on the north side of the Landfill, but the riprap was generally in good condition (Photograph #31).

7. The pore pressure relief layer constructed for Phase 2 of the Landfill was in good condition with minimal vegetation (Photographs #3, #14).

8. The enclosures for the dataloggers (DL) showed signs of previous moisture intrusion and ants. The current conditions of the enclosures, desiccant canisters, and wiring were satisfactory (Photograph #2). The outside of the enclosures, solar panels, battery boxes, and antennae were in satisfactory condition (Photograph #15). Some vegetation was present around the DL locations, but it did not appear to obstruct the solar panels.

9. The slope inclinometers (SI), many of the settlement plates (SP) (Photograph #14), and some of the piezometers (PZ) are intact and functioning.

10. The CCR placed within the Landfill appears to have been placed and stacked in accordance with generally accepted engineering practices (Photograph #20).

11. CCR has eroded onto the crest of the perimeter berm at one location on the southwest side of the Landfill (Photograph #22). During this annual inspection, no observable increase in the extent of eroded CCR was observed compared to the 2024 inspection.

5. INSTRUMENTATION MONITORING

5.1 Slope Inclinometers

Six SIs are present along the west and south sides of the Landfill perimeter. The SIs were constructed within the existing CCR material in the Monroe Ash Basin. The SIs are designated as FI-1 through FI-4, SI-9, and SI-10, as shown on Figure 2. Readings for the SIs are generally collected twice per month.

The cumulative movements measured by the manual inclinometers as of approximately the 2025 annual visual inspection (May 2, 2025) are less than approximately 1.3 inches. Incremental movements measured by the manual inclinometers since the 2024 annual inspection are less than 0.2 inches. These measurements are below the alert levels established for the manual inclinometers.

5.2 Piezometers

There are 13 PZs present below the Landfill pressure relief layer at the locations shown on Figure 2. PZs have been incorporated into the existing continuous monitoring system established for the Monroe Ash Basin. PZ readings are collected and automatically uploaded to the Cloud system and interpreted as part of the continuous monitoring system for the Monroe Ash Basin. Readings for the PZs are collected and reviewed at least every other week (minimum of twice per month).

Multiple PZs have issues with the sensors, wiring, and/or communication with online servers; however, there are currently six piezometers below the Landfill that are actively reporting readings. Geosyntec has recommended no actions be taken to replace or repair the PZs and equipment with the issues because the Landfill is no longer active and is in the process of being closed.

The measurements from the functioning PZs since the 2024 annual inspection were generally below the established alert level elevations (i.e., 0.5 feet above the bottom of the pore pressure relief layer or lower). The measured elevations are expected to continue to decrease as the Landfill and Ash Basin are closed.

5.3 Settlement Plates

There are 12 SPs present within the footprint of the Landfill and along the northwestern perimeter as shown on Figure 2. The SPs are founded on the surface of the Landfill pressure relief layer and generally co-located with the PZs. Readings for the SPs are generally collected twice per month.

SP-04 and SP-06 were damaged by equipment in December 2023 and could not be repaired. Geosyntec has recommended no actions are taken to replace these SPs because the Landfill is no longer active and in the process of being closed.

The cumulative settlements as of approximately the 2025 annual inspection (May 2, 2025) are less than approximately 5 inches. Incremental settlements since the 2024 annual inspection were less than 3 inches between each quarter, which is below the established alert level measurement.

6. CURRENT OPERATIONS

The Landfill has ceased receipt of CCR material and is in the process of being closed. There are no current operations. However, inspection, monitoring, and maintenance operations will still occur while the Landfill is being closed.

6.1 Operations Organization

The Landfill is operated by DTE. The responsible personnel include:

- Dan Casey – DTE Energy Supply, Plant Manager, Monroe Site Operations
- Adam Frank - DTE Project Management Organization, Project Manager
- Jason Logan and Claire Souder – DTE Environmental Management and Safety (EM&S), Monroe Power Plant

6.2 Operation Activities

Operation details are provided in the Inspection, Monitoring, and Maintenance Manual (IMMM) Rev. E and Operations Plan Drawings Rev. E (Geosyntec, 2024). The following were completed as required by the CCR Rule:

- Weekly inspections by a qualified person.
- Dust control in accordance with the Fugitive Dust Control Plan.
- Annual Fugitive Dust Control Report.
- Annual Groundwater Monitoring and Corrective Action Report.

Weekly inspections are completed and documented by qualified personnel. Personnel were initially trained in April 2015, and new inspectors have been trained by DTE personnel as they have been hired. Weekly inspections for the Landfill are conducted concurrently with the inspections for the Ash Basin.

6.3 Run-On/Run-Off Control System Plan

Run-on and run-off for the Landfill is controlled by the perimeter berms and swales, which had dense vegetation but appeared to be in satisfactory condition at the time of the visual inspection.

6.4 Observations

The activities specified in the Operations Plan Drawings appear to have been properly followed at the Landfill. The Annual Fugitive Dust Report from November 1, 2024 to October 31, 2025, was reviewed. No citizen complaints were received and, as a result, no corrective actions were required. The weekly inspection reports through November 2025 were reviewed by Geosyntec, and only maintenance activities at the Landfill were noted..

7. EVALUATION OF OBSERVATIONS

Active operations at the Landfill stopped in December 2023. The design, construction, maintenance, and operations of the Landfill prior to December 2023 aligned with recognized and generally accepted engineering standards, as supported by the available information. Routine maintenance of the Landfill (e.g., mowing) has continued while the Landfill proceeds through closure by removal in accordance with the Closure Plan.

The annual inspection of the Landfill indicated no structural weaknesses or potential safety concerns. One maintenance condition beyond routine was identified during the annual inspection.

1. CCR near the southwest corner of the Landfill has eroded onto the crest of the perimeter berm. It appears that this CCR material has not migrated to the perimeter swale. This condition was documented during the 2024 annual inspection. The extent of the eroded CCR has not increased based on visual observations during the 2025 annual inspection. In August 2025, DTE removed the CCR material from the crest of the perimeter berm and regraded the CCR surface in the southwest corner of Phase 1 of the Landfill (Photograph #33) to address this condition.

Some of the piezometers and settlement plates are no longer functional, and there are no plans to replace these instruments, as noted in Section 5. However, maintenance on components of the instrumentation system that are functional will continue to be completed through closure of the Landfill until such time that the instrumentation system is decommissioned. For example, Geosyntec replaced the insect traps and desiccant canisters within the datalogger enclosures in August 2024.

Geosyntec consultants
Geosyntec Consultants of Michigan

8. CONCLUSIONS AND CERTIFICATION

The design, construction, operation, and maintenance of the Landfill is consistent with recognized and generally accepted good engineering standards in accordance with the CCR Rule [40 CFR 257.84(b)(1)]. DTE ceased receipt of CCR material in the Landfill in December 2023, so there are no active operations at the Landfill. The 2025 annual visual inspection did not identify any structural instabilities or potential safety concerns. Geosyntec identified a maintenance condition that was subsequently addressed by DTE in August 2025 following the visual inspection as detailed in Section 7.

Certified by:

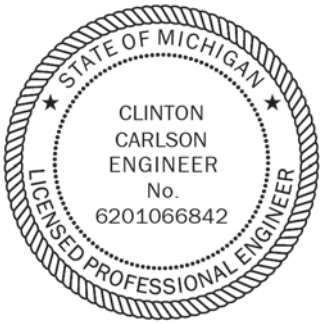
Clinton Carlson Digitally signed by Clinton Carlson
Date: 2026.01.09 12:06:36 -05'00'

_____ Date January 9, 2026

Clinton Carlson, Ph.D., P.E.

Michigan P.E. License Number 6201066842

Project Engineer

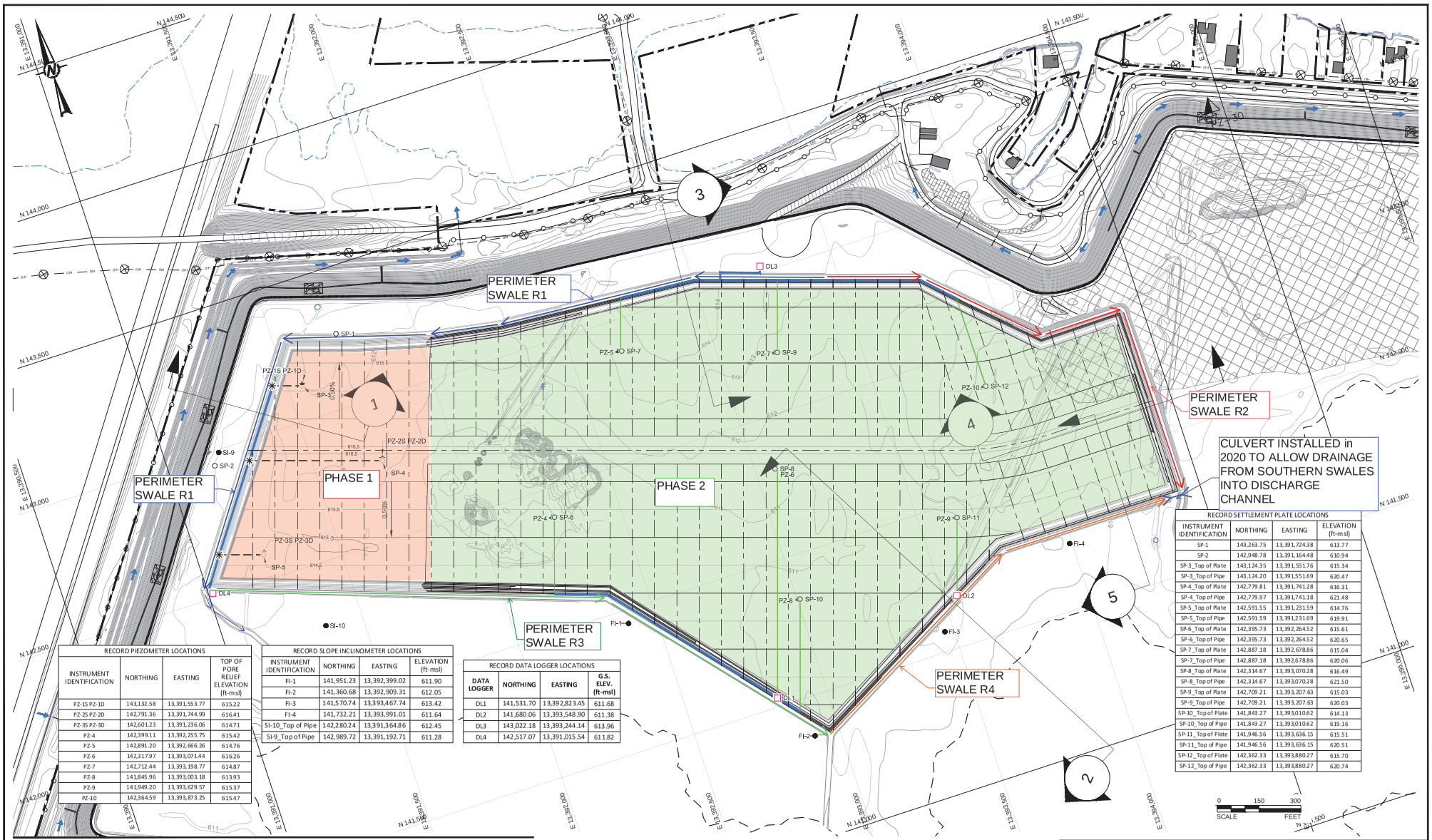


MONROE POWER PLANT
VERTICAL EXTENSION LANDFILL SITE LOCATION

Geosyntec consultants
DETROIT, MICHIGAN

FIGURE 1

PROJECT: CHE1067A | JANUARY 2026



RECORD PIEZOMETER LOCATIONS

INSTRUMENT IDENTIFICATION	NORTHING	EASTING	TOP OF PORE RELIEF ELEVATION (ft-msl)
PZ-1S PZ-1D	143,132.58	13,391,553.77	615.22
PZ-2S PZ-2D	142,791.36	13,391,744.99	616.41
PZ-3S PZ-3D	142,601.23	13,391,236.06	614.71
PZ-4	142,399.11	13,392,255.75	615.42
PZ-5	142,891.20	13,392,666.26	614.76
PZ-6	142,317.97	13,393,071.44	616.26
PZ-7	142,712.44	13,393,198.77	614.87
PZ-8	141,845.96	13,393,003.18	613.93
PZ-9	141,949.20	13,393,629.57	615.37
PZ-10	142,364.59	13,393,873.25	615.47

RECORD SLOPE INCLINOMETER LOCATIONS

INSTRUMENT IDENTIFICATION	NORTHING	EASTING	ELEVATION (ft-msl)
FI-1	141,951.23	13,392,399.02	611.90
FI-2	141,360.68	13,392,909.31	612.05
FI-3	141,570.74	13,393,467.74	613.42
FI-4	141,732.21	13,393,991.01	611.64
SI-10_Top of Pipe	142,280.24	13,391,364.86	612.45
SI-9_Top of Pipe	142,989.72	13,391,192.71	611.28

RECORD DATA LOGGER LOCATIONS

DATA LOGGER	NORTHING	EASTING	G.S. ELEV. (ft-msl)
DL1	141,531.70	13,392,823.45	611.68
DL2	141,680.06	13,393,548.90	611.38
DL3	143,022.18	13,393,244.14	613.96
DL4	142,517.07	13,391,015.54	611.82

RECORD SETTLEMENT PLATE LOCATIONS

INSTRUMENT IDENTIFICATION	NORTHING	EASTING	ELEVATION (ft-msl)
SP-1	143,263.75	13,391,724.38	613.77
SP-2	142,948.78	13,391,164.48	610.94
SP-3_Top of Plate	143,124.35	13,391,551.76	615.34
SP-3_Top of Pipe	143,124.20	13,391,551.69	620.47
SP-4_Top of Plate	142,779.81	13,391,741.28	616.31
SP-4_Top of Pipe	142,779.97	13,391,741.18	621.48
SP-5_Top of Plate	142,591.55	13,391,231.59	614.76
SP-5_Top of Pipe	142,591.59	13,391,231.69	619.91
SP-6_Top of Plate	142,395.73	13,392,264.52	615.61
SP-6_Top of Pipe	142,395.73	13,392,264.52	620.65
SP-7_Top of Plate	142,887.18	13,392,678.86	615.04
SP-7_Top of Pipe	142,887.18	13,392,678.86	620.06
SP-8_Top of Plate	142,314.67	13,393,070.28	616.49
SP-8_Top of Pipe	142,314.67	13,393,070.28	621.50
SP-9_Top of Plate	142,709.21	13,393,207.63	615.03
SP-9_Top of Pipe	142,709.21	13,393,207.63	620.03
SP-10_Top of Plate	141,843.27	13,393,010.62	614.13
SP-10_Top of Pipe	141,843.27	13,393,010.62	619.16
SP-11_Top of Plate	141,946.56	13,393,636.15	615.51
SP-11_Top of Pipe	141,946.56	13,393,636.15	620.51
SP-12_Top of Plate	142,362.33	13,393,880.27	615.70
SP-12_Top of Pipe	142,362.33	13,393,880.27	620.74

LEGEND

- SI-1 PHASE 1 SLOPE INCLINOMETER
- PZ-1D / PZ-1S PHASE 1 VIBRATING WIRE PIEZOMETER (VWP) PAIR (DEEP & SHALLOW)
- SP-1 PHASE 1 SETTLEMENT PLATE
- PHASE 1 REMOTE (CABLED) DATA LOGGER LOCATION FOR VWP
- DATA LOGGER CABLE
- RECORD LOCATION OF DRAINAGE PIPING
- FI-1 2017 SLOPE INCLINOMETER
- 2017 VIBRATING WIRE PIEZOMETER (VWP) PAIR (DEEP & SHALLOW) AND SETTLEMENT PLATE
- DATA TRANSMISSION LOCATION
- CABLING OUTSIDE OVERLINER
- CABLING INSIDE OVERLINER

MONROE POWER PLANT
VERTICAL EXTENSION LANDFILL
LANDFILL LAYOUT

Geosyntec consultants
DETROIT, MICHIGAN

PROJECT: CHE1067A | JANUARY 2026

FIGURE 2

APPENDIX A

Resume of Clinton Carlson, Ph.D., P.E.
(Qualified Professional Engineer)

Clinton P. Carlson, PhD, PE

Qualifications

Dr. Carlson is a geotechnical engineer with eleven years of experience on projects related to design and remediation of landfills and coal combustion residual (CCR) impoundments, dam safety, and geotechnical instrumentation. He is a Senior Engineer with Geosyntec and part of the firm's dams and levees practice area. His work has included managerial responsibilities for project budgets and schedules and has primarily supported federal and power clients for both small and large projects. Clinton has managed and supported projects for risk assessments, slope stability analyses, and instrumentation for landfills and dams.

Specialties

Landfill and CCR Design and Remediation
Dam Safety
Geotechnical Instrumentation

Education

PhD, Civil Engineering, University of Michigan, Ann Arbor, MI, 2014
MSE, Civil Engineering, University of Michigan, Ann Arbor, MI, 2010
BSE, Civil & Environmental Engineering, University of Michigan, Ann Arbor, MI, 2009

Licenses/Certifications

Professional Engineer: IN, MI

Relevant Project Experience

Annual Inspections of CCR Units, Confidential Client, Midwest US | Inspections of CCR units are conducted annually as part of the United States Environmental Protection Agency (USEPA) CCR Rule to identify any site conditions that pose a concern to the safe operation and stability of the CCR units. Project manager in charge of financials and engineer in charge of performing annual inspections for three CCR units for a client in the Midwest United States. As the qualified professional engineer, prepared inspection reports to summarize observed conditions at the three CCR units. Interacted with client representatives to discuss necessary actions to address potential concerns. (Mar. 2022–Present)

Monitoring and Maintenance for CCR Units, Confidential Client, Midwest US | Project manager in charge of financials and engineer in charge of overseeing inspections, monitoring, and maintenance of geotechnical instrumentation system of two CCR units for a client in the Midwest United States. The geotechnical instrumentation system included multiple monitoring wells, settlement plates, vibrating wire piezometers, manual inclinometers, and ShapeArray inclinometers. Instrumentation data were evaluated to identify near real-time concerns for the safe operation and stability of the CCR units. Provided monthly summary reports to the client representatives and met with them to discuss the monitoring data on a bi-monthly basis. Conducted site inspections of observed conditions posing concerns for the safe operation and stability of the CCR units on at the request of the client. (Mar. 2022–Present)

Initial Safety Factor Assessment for CCR Units, Confidential Client, Southeast US | The USEPA CCR Rule requires periodic safety factor assessments are performed to assess the stability of perimeter embankments for existing CCR surface impoundments. A confidential client in the Southeast United States has a site with four CCR units impounded by earthen embankment dams. Safety factor assessments in accordance with the CCR Rule had not been previously performed for these four earthen embankment dams. Led the geotechnical team performing the initial safety factor assessments for the four CCR units. Reviewed available information, developed models for slope stability analyses, calculated safety factors, and prepared reports to summarize the results. The analyses included development of pseudostatic coefficients to represent seismic loading conditions. (June 2025–Present)

FERC Part 12D External Audits of Owner's Dam Safety Programs, Multiple Clients, MI and OH | The FERC regulations require dam owners periodically have an external consultant audit the Owner's Dam Safety Program (ODSP), which includes dam safety documents like the Dam Safety Surveillance and Monitoring Plan (DSSMP) and Emergency Action Plan (EAP). The City of Ann Arbor and American Municipal Power, Inc. contracted Geosyntec to perform the audits of the ODSP for their portfolio of dams

(two and four, respectively) in 2024. Performed reviews of the dam safety documents, conducted interviews with dam safety personnel to evaluate their understanding of the dam safety program, observed site inspections conducted by personnel as part of the dam safety program, and prepared a report with the findings and conclusions on the content and implementation of the ODSP. Project manager in charge of the project financials and schedule and the point-of-contact with the owners. (Jan. 2024-Dec. 2024)

FERC Part 12D Periodic Inspections for Barton and Superior Dams, City of Ann Arbor, Ann Arbor, MI | The City of Ann Arbor owns and operates the Barton and Superior Hydroelectric Projects (Barton and Superior Dams) in Ann Arbor, Michigan. Barton and Superior Dams are used by the City of Ann Arbor for power generation and thus, are under regulation by the Federal Energy Regulatory Commission (FERC). FERC regulations require dam safety inspections are performed every five years by Independent Consultant (IC) Teams. Geosyntec served as the IC Team for the City of Ann Arbor for the Ninth FERC Part 12D Periodic Inspections of Barton and Superior Dams performed in 2023. Served as the project manager and point-of-contact with the City of Ann Arbor on behalf of the IC Team. Member of the IC Team (geotechnical engineering support and field inspection team) that performed the document review, developed the Inspection Plans, prepared the Pre-Inspection Preparation Reports, performed the field inspections, and prepared the Periodic Inspection Reports. The Periodic Inspection Reports were completed and submitted to FERC before the December 2023 deadline. (Jan. 2023–Dec. 2023)

Landfill Stability Evaluation, Confidential Client, Southeast US | Contacted by the client to evaluate an instability at an existing landfill including the implementation of instruments to measure and evaluate progression of instability. Project manager in charge of financials and engineer in charge of developing instrumentation plan and evaluating measurements of instrumentation. Conventional surveying stakes and an automated monitoring total station were implemented to measure progression of instability. Evaluation of measurements was used to inform the client on progression of instability and provide recommendations for implementation of mitigation measures. Weekly summary reports of instrumentation measurements were provided to the client while implementing mitigation measures. Additional support was provided to the client in discussions with the state regulator. The monitoring systems were also utilized to provide additional safety measures during the staged temporary removal of a buttress berm in order to tie-in liner systems for new landfill cells to the existing liner system. Monitoring data are currently summarized in monthly reports and provided to the client. (Aug. 2019–Present)

Landfill Design Projects for Power Company, Confidential Client, Southeast US | Engineer in charge of coordinating and performing the geotechnical analyses for the permitting and closure of multiple sites for a power company. Geotechnical analyses performed for the sites included subsurface investigation and geotechnical material properties interpretation, slope stability analyses (including veneer and liner stability), settlement calculations for liner and cover systems, and hydrologic evaluations for liner and cover systems. The computer programs Slide and HELP were used to perform the slope stability analyses and hydrologic evaluations, respectively. (June 2015–Present)

Portsmouth Gaseous Diffusion Plant On-Site Waste Disposal Facility, Fluor-BWXT Portsmouth, Piketon, OH | The Department of Energy's Portsmouth On-Site Waste Disposal Facility is being constructed for the disposal of on-site hazardous waste materials. Engineer that aided geotechnical analyses for the design and construction of the facility. Geotechnical analyses performed during the design phase included slope stability analyses (including veneer and liner stability), settlement calculations for liner and cover systems under variable loads, and foundation design for leachate conveyance systems. During construction, performed slope stability analyses for excavation conditions and geo-structural calculations and reinforcement detailing for reinforced concrete valve houses constructed as part of a leachate transmission system and a footing for an interim transfer ramp. The computer program Slide was used to perform the slope stability analyses. (Apr. 2015–Present)

Inspections and Mitigation for CCR Landfill, Confidential Client, Midwest US | Probabilistic slope stability analyses for a CCR landfill in Southeast Michigan identified unsatisfactory conditions for existing slopes that required mitigation measures. Project manager in charge of project financials and schedule and engineer in charge of developing inspection and construction plans to mitigate unsatisfactory conditions. Developed an inspection plan to identify indicators of slope instabilities and allow for safe

operation conditions. The inspection plan was carried out by site personnel prior to and during construction and supported by Geosyntec. Developed a construction plan to regrade the slopes and mitigate the unsatisfactory conditions. Performed site inspections and met with client representatives and contractors during construction to verify safe working conditions and satisfactory slope conditions were achieved. (Feb. 2022–May 2022).

Probabilistic Slope Stability Assessment for CCR Landfill, Confidential Client, Midwest US | Previous site inspections identified potentially unstable slopes at a CCR landfill in the Midwest United States, so probabilistic slope stability analyses were performed to evaluate the reliability of the slope conditions given limited site information. Engineer that aided in review of probabilistic slope stability analyses and slope stability assessment report. Recommendations were developed and provided to the client to address unsatisfactory conditions for existing slopes identified in the probabilistic site response analyses. (Nov. 2021–May 2022).

Quantitative Risk Assessment for Dam in Southeast US, Confidential Client, Southeast US | The project further refines estimates of risk developed from previous potential failure mode analyses and semi-quantitative risk analyses performed for an embankment dam and its primary and auxiliary spillways located in the Southeastern U.S. Project manager in charge of financials and schedule for the Quantitative Risk Assessment (QRA) of the dam. The main objectives of the QRA are to estimate the risk, in terms of annual failure probabilities and downstream consequences, for seismic, internal erosion, and spillway hydrologic failure modes and the uncertainties associated with the risks. Actively participated in the expert elicitation process to develop risk models and meetings with the client to present the models and results of the QRA. Prepared calculation packages and reports summarizing the methods used in the QRA and the results for the client. Aided in the ground motion selection, internal erosion evaluation, and evaluation of the erodibility of the embankment soils. (May 2018–Apr. 2022)

Field Investigation of Primary Spillway for Dam in Southeast US, Confidential Client, Southeast US | Field engineer for oversight of a visual inspection and investigation of the foundation of the primary spillway slabs and control structure for a dam in the Southeast U.S. Observations from the field investigation were used to inform a QRA performed for the dam and its spillways. The visual inspection was performed to identify vertical offsets and gaps in the joints between the slabs of the primary spillway. A field investigation consisting of shallow cores through the concrete slabs of the spillway and deep borings into competent rock below the control structure was performed to evaluate the foundation materials of the primary spillway and the presence of voids. (Jan. 2021–May 2021)

Landfill Stability Evaluation, Confidential Client, Southeast US | Contacted by the client to evaluate an instability at an existing landfill including the root cause of the instability. Project manager in charge of financials and engineer in charge of coordinating and performing slope stability analyses. Slope stability analyses were performed to evaluate the root cause of the instability and mitigation measures required to stabilize the landfill. Results of the analyses were used to support the client in discussions with the state regulator and advise the client on a path forward for stabilizing the landfill. A facility-wide stability plan was also developed based on the stability of the landfill for the existing conditions and the final planned conditions. Analyses were also performed for a staged temporary removal of a buttress berm in order to tie-in liner systems for new landfill cells to the existing liner system. Aiding in ongoing annual landfill stability assessments. (Aug. 2019–Dec. 2020)

Onondaga Lake Geotechnical Monitoring, Honeywell, Syracuse, NY | Contaminated sediments were dredged from Onondaga Lake and consolidated within geotextile tubes at an off-site landfill as part of a Superfund project. Geotechnical instrumentation systems were implemented to monitor (i) a sheetpile wall around a portion of the Lake dredged for remediation and (ii) a landfill closure comprised of geotextile tubes filled with sediments dredged from the Lake. Manager in charge of financials and engineer in charge of monitoring the instrumentation data. The monitoring systems included manual and automated inclinometers, settlement cells, vibrating wire piezometers, and surface monitoring points. (Feb. 2015–Oct. 2018)

APPENDIX B

2025 Annual Inspection Forms and Photos

Monroe Power Plant
Vertical Extension Landfill
2025 Annual Inspection Report

Name of Landfill: **Monroe Vertical Extension Landfill** **Qualified Professional Engineer:** Clinton Carlson, PhD, PE
EGLE Landfill ID 397800 **Date:** 5/6/2025 **Time:** 2:20 pm to 4:40 pm
Owner: **DTE Electric Company** **Weather:** Upper 50s, cloudy, light rain
Operator: **DTE Electric Company** **Precipitation (past week):** 2.1 in.
Site Conditions: Wet with some vegetation on the perimeter berms and denser vegetation within the perimeter swales

I. Landfill Condition

1. Describe operations in the Landfill:
Operations at the Landfill concluded in December 2023. A summary of historical operations is provided below. Bottom ash and flue gas desulfurization sludge (i.e., CCR) were deposited in Phases 1 and 2 of the Landfill. The placement and stacking of the CCR appeared aligned with generally accepted engineering practices (Photograph #20). The pore pressure relief layer for the Landfill in Phase 2 was in good condition, with some vegetation (Photographs #3, #14). The access roads on the north side of the Landfill were in good condition (Photographs #30, #32), along with the reinforced concrete culvert and the riprap surrounding the culvert (Photograph #31).

2. Are any stormwater swales obstructed? ___ Yes X No
If 'Yes', describe (type of debris, reason for obstruction, etc.)
Denser vegetation was present throughout the perimeter swales on all sides of the Landfill (Photographs #1, #4, #7-#10, #18, #19, #23-#25, #27, #28, #31), but it did not appear to affect the flow of stormwater. Water was observed within the swales during the inspection, but minimal flow was observed during the inspection (Photographs #7, #18, #28). The culverts within the perimeter swales were generally in good condition and did not appear to be obstructed (Photographs #10, #24, #31). Flow into the culvert on the southeast side of the Landfill was observed during the inspection.

3. Are there indications of erosion on the Landfill perimeter berm? ___ Yes X No
If 'Yes', describe what type and its condition (rill, gully, dimensions, etc.)
The perimeter berms on all sides of the Landfill were in good condition (Photographs #1, #4, #8, #9, #19, #23, #25, #27). Some vegetation was observed on the perimeter berms but no apparent signs of slope instability (e.g., cracks) or erosion were observed.

4. Is run-off from the Landfill surface contained by the perimeter ditch or Ash Basin? X Yes ___ No
If 'No', describe where runoff flow is not contained.
The CCR placed in the Landfill has eroded onto the crest of the perimeter berm near the southwest corner of the landfill (Photograph #22). Based on visual observations, the extent of the eroded CCR has not significantly changed since the last inspection.

5. Is run-on prevented from entering the Landfill area? X Yes ___ No
If 'No', describe where runoff flow is not contained.
Run-on is prevented by perimeter swales and berms.

6. Is the underdrain collection system draining? X Yes ___ No
Describe flow conditions.
Not all pressure relief pipe outlets were located during the inspection due to the denser vegetation within the perimeter swales obscuring the outlets (Photograph #6). Some flow was observed from pipes on the northeast and southeast sides below Phase 2 of the Landfill (Photographs #5, #12, #13, #16) likely due to precipitation prior to and during the inspection. A couple pipes on the northwest side of the Landfill below Phase 1 were observed to have minimal flow during the inspection and some algae (Photograph #29). Historically, these pipes have had minimal flow as a result of active filling in this part of the Landfill. The pressure relief pipes observed during the inspection had no obstructions and generally no sediments or vegetation (Photograph #11). However, some of the pressure relief pipes were either partially submerged by the water within the perimeter swale (Photograph #17), had some vegetation within the outlets (Photograph #21), and in one pipe on the west side of the Landfill had some sediments within the outlet (Photograph #26). It did not appear that flow out of these pipes was obstructed.

Monroe Power Plant
Vertical Extension Landfill
2025 Annual Inspection Report

Name of Landfill: **Monroe Vertical Extension Landfill** **Qualified Professional Engineer:** Clinton Carlson, PhD, PE
EGLE Landfill ID 397800 **Date:** 5/6/2025 **Time:** 2:20 pm to 4:40 pm

7. Is there any unusual settlement causing "birdbaths"? ___ Yes X No
If 'Yes', describe.

8. Other observations around the Landfill (changes since last inspection): ___ Yes X No
If 'Yes', describe.

II. Repairs, Maintenance, Action Items

1. Has any routine maintenance been conducted since the last inspection? X Yes ___ No
If 'Yes', describe.
Routine maintenance (e.g., mowing, instrumentation enclosures) was performed based on visual observations.

2. Have any repairs been made since the last inspection? ___ Yes X No
If 'Yes', describe.

3. Has this inspection identified any need for repair or maintenance? X Yes ___ No
If 'Yes', describe and state the urgency of maintenance. "Urgent" for maintenance that should be conducted as soon as possible, "Moderate" for maintenance that should be conducted within two years, and "Not Urgent" for maintenance that can be conducted within five years.
Not Urgent - Regrade the eroded CCR near the southwest corner of the Landfill to be within the perimeter berm. The CCR eroded onto the crest of the perimeter berm was removed and the southwest corner of Phase 1 of the Landfill was regraded in August 2025 (Photograph #33).

4. Are the instruments for the continuous monitoring system intact and functioning? X Yes X No
If 'No', describe conditions of instrumentation.
The enclosures for the dataloggers (DL) show signs of previous moisture intrusion and ants. Current conditions of the enclosures, dessicant canisters, and wiring were satisfactory (Photograph #2). The locations of the DL had some vegetation around them, but it did not appear to obstruct the solar panels. The exterior of the enclosures, solar panels, battery boxes, and antennae appeared to be in satisfactory condition (Photograph #15).
The slope inclinometers (SI), many of the settlement plates (SP) (Photograph #14), and six of the piezometers (PZ) are intact and functioning. Multiple PZs have issues with the sensors, wiring, and/or communication with online servers. SP-04 and SP-06 were damaged by equipment in December 2023 and could not be repaired. For the instruments that are not functioning, Geosyntec has recommended no actions are taken because the Landfill is no longer active and in the process of being closed.

III. Photography

Photographs can be taken of notable features. List of photographs:

	Location	Direction of Photo	Description
i.	SEE THE ATTACHED PHOTO LOG		
ii.			
iii.			
iv.			
v.			

1 — DIRECTION OF PHOTO; PHOTO NUMBER

MONROE POWER PLANT
VERTICAL EXTENSION LANDFILL PHOTO LOG

Geosyntec consultants
DETROIT, MICHIGAN

PROJECT: CHE1067A | JANUARY 2026

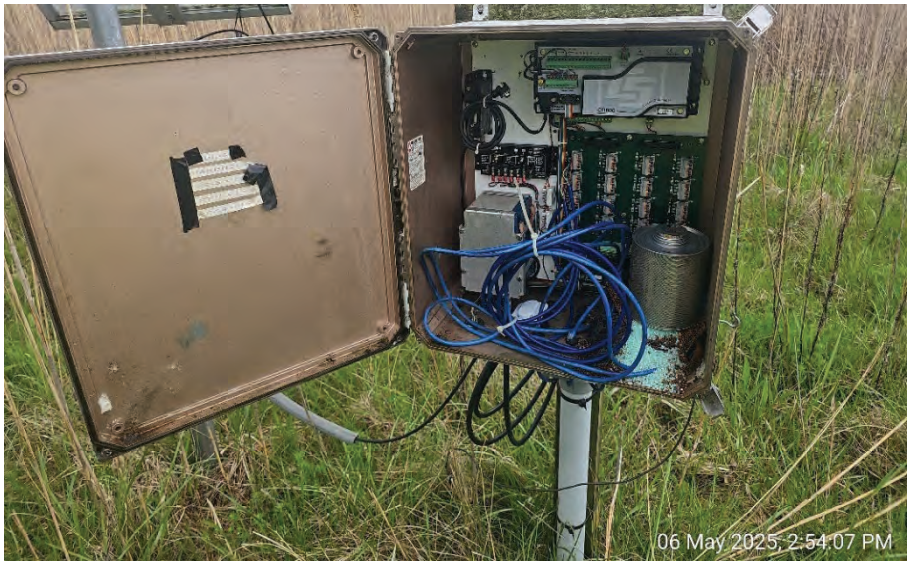
FIGURE B1

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 1	
Date: 5/6/2025	
Direction: East	
Comments: Some vegetation but no apparent signs of slope instability or erosion were observed on the perimeter berm along the north side of the Landfill. Dense vegetation was observed within the perimeter swale (R1) on the north side of the Landfill, but it did not appear to affect the flow of stormwater.	

Photograph 2	
Date: 5/6/2025	
Direction: --	
Comments: The instrument enclosures for the dataloggers (DL) showed signs of previous moisture intrusion and ants. Previous desiccant canisters had corroded within the enclosures and were removed. Current conditions of the enclosures, new desiccant canisters, and wiring were satisfactory. (DL-3 shown)	

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 3	
Date: 5/6/2025	
Direction: South	
Comments: The pore pressure relief layer constructed for Phase 2 of the Landfill was in good condition with minimal vegetation.	

Photograph 4	
Date: 5/6/2025	
Direction: East	
Comments: Some vegetation but no apparent signs of slope instability or erosion were observed on the perimeter berm along the northeast side of the Landfill. Dense vegetation was observed within the perimeter swale (R2) on the northeast side of the Landfill, but it did not appear to obstruct the flow of stormwater.	

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 5

Date: 5/6/2025

Direction: -

Comments: Some flow was observed from one of the pressure relief pipes on the northeast side of the Landfill during the inspection. The flow was directed into perimeter swale R2 and the outlet had no obstructions, sediments, or vegetation.

Photograph 6

Date: 5/6/2025

Direction: -

Comments: The dense vegetation within the perimeter swales obscured the outlets of the pressure relief pipes on all sides of the Landfill. However, the vegetation did not appear to impede the conveyance of any water into the perimeter swales. (typical)

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 7

Date: 5/6/2025

Direction: Northeast

Comments: Dense vegetation was observed within the perimeter swales (R2) on the northeast and east sides of the Landfill. Water was observed within the swales, but minimal flow was observed during the inspection.

Photograph 8

Date: 5/6/2025

Direction: South

Comments: Some vegetation but no apparent signs of slope instability or erosion were observed on the perimeter berm along the east side of the Landfill. Dense vegetation was observed within the perimeter swale (R2) on the east side of the Landfill, but it did not appear to obstruct the flow of stormwater.

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 9	
Date: 5/6/2025	
Direction: West	
Comments: Some vegetation but no apparent signs of slope instability or erosion were observed on the perimeter berm along the southeast side of the Landfill. Dense vegetation was observed within the perimeter swale (R4) on the southeast side of the Landfill, but it did not appear to obstruct the flow of stormwater.	

Photograph 10	
Date: 5/6/2025	
Direction: -	
Comments: The culvert inlet at the southeast corner of the Landfill was in good condition. Dense vegetation was observed within the perimeter swales adjacent to the culvert; however, the vegetation did not appear to impact the ability of the culvert to convey water. Flow was observed during the inspection.	

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 11 **Date:** 5/6/2025 **Direction:** - **Comments:** The pressure relief pipes that were observed during the inspection had no obstructions and generally no sediments or vegetation (pipe on the southeast side of the Landfill shown) (typical).	
Photograph 12 **Date:** 5/6/2025 **Direction:** - **Comments:** Some flow was observed from one of the pressure relief pipes on the southeast side of the Landfill during the inspection. This flow was directed into perimeter swale R4 and the outlet had no obstructions, sediments, or vegetation.	

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 13	
Date: 5/6/2025	
Direction: -	
Comments: Minimal flow was observed from one of the pressure relief pipes on the southeast side of the Landfill during the inspection. Some vegetation was observed at the outlet of the pipe, but it did not appear to obstruct the flow into perimeter swale R4.	

Photograph 14	
Date: 5/6/2025	
Direction: North	
Comments: Many of the settlement plates installed in Phase 2 of the Landfill appeared to be in good condition. The pore pressure relief layer constructed for Phase 2 of the Landfill was in good condition.	

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 15 **Date:** 5/6/2025 **Direction:** South **Comments:** The DL locations had some vegetation around them, but it did not appear to obstruct the solar panels. The exterior of the enclosures, solar panels, battery boxes, and antennae appeared to be in satisfactory condition (DL-2 shown).	
Photograph 16 **Date:** 5/6/2025 **Direction:** - **Comments:** Some flow was observed from one of the pressure relief pipes on the south side of the Landfill during the inspection. This flow was directed into perimeter swale R4 and the outlet had no obstructions, sediments, or vegetation.	

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 17

Date: 5/6/2025

Direction: -

Comments: Some of the pressure relief pipes on the south side of the Landfill were partially submerged by the water within the perimeter swale R4.

Photograph 18

Date: 5/6/2025

Direction: Southwest

Comments: Dense vegetation was observed within the perimeter swale on the southeast and south sides of the Landfill (R4 and R3). Water was observed within the swales, but minimal flow was observed during the inspection.

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 19

Date: 5/6/2025

Direction: Southeast

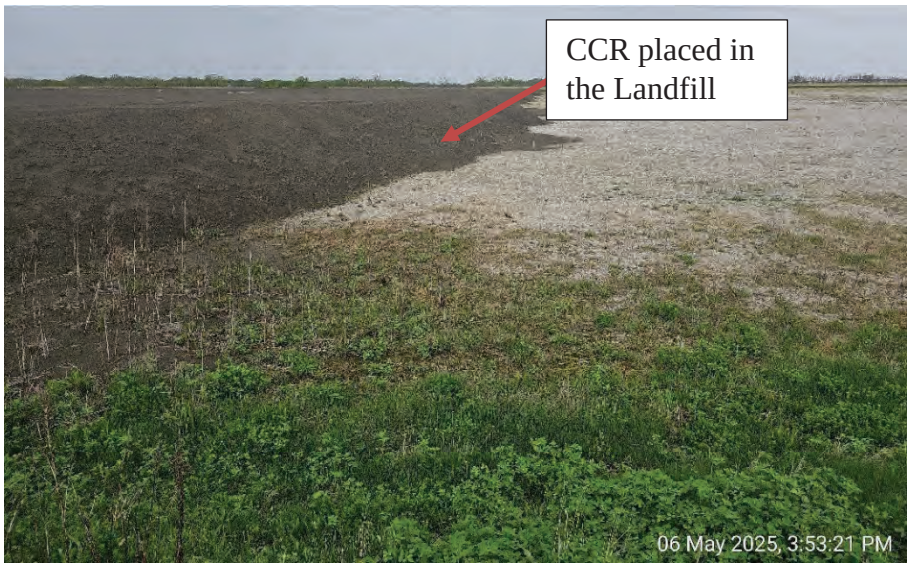
Comments: Some vegetation but no apparent signs of slope instability or erosion were observed on the perimeter berm along the south side of the Landfill. Dense vegetation was observed within the perimeter swale (R3) on the south side of the Landfill, but it did not appear to obstruct the flow of stormwater.

Photograph 20

Date: 5/6/2025

Direction: North

Comments: The CCR placed in the Landfill appears to have been placed and stacked in accordance with generally accepted engineering practices. No CCR placement has occurred since the last inspection.



DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 21

Date: 5/6/2025

Direction: -

Comments: Some vegetation was observed at the outlets of some of the pore pressure relief pipes located on the south side of the Landfill. However, the vegetation did not appear to obstruct any flow from the pipes into perimeter swale R3.

Photograph 22

Date: 5/6/2025

Direction: West

Comments: CCR has eroded onto the crest of the perimeter berm at one location on the southwest side of the Landfill. It does not appear the CCR has eroded into perimeter swale R3. The extent of the eroded CCR did not appear to have changed since the previous inspection.

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 23	
Date: 5/6/2025	
Direction: Northeast	
Comments: Some vegetation but no apparent signs of slope instability or erosion were observed on the perimeter berm along the west side of the Landfill. Dense vegetation was observed within the perimeter swale (R1) on the west side of the Landfill, but it did not appear to obstruct the flow of stormwater.	

Photograph 24	
Date: 5/6/2025	
Direction: South	
Comments: The two culverts at the southwest corner of the Landfill were in good condition. Dense vegetation was observed at the discharge point of these culverts into the Fly Ash Basin, but the vegetation did not appear to obstruct flow.	

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 25 **Date:** 5/6/2025 **Direction:** East **Comments:** Some vegetation but no apparent signs of slope instability or erosion were observed on the perimeter berm along the southwest side of the Landfill. Dense vegetation was observed within the perimeter swale (R3) on the southwest side of the Landfill, but it did not appear to obstruct the flow of stormwater.	
Photograph 26 **Date:** 5/6/2025 **Direction:** - **Comments:** Some sediments were observed within one pore pressure relief pipe outlet on the west side of Landfill, but it did not appear to obstruct flow into perimeter swale R1. Minimal flow was observed from this pipe.	

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 27 **Date:** 5/6/2025 **Direction:** East **Comments:** Some vegetation but no apparent signs of slope instability or erosion were observed on the perimeter berm along the northwest side of the Landfill. Dense vegetation was observed within the perimeter swale (R1) on the northwest side of the Landfill, but it did not appear to obstruct the flow of stormwater.	
Photograph 28 **Date:** 5/6/2025 **Direction:** North **Comments:** Dense vegetation was observed within the perimeter swale (R1) on the northwest side of the Landfill. Water was observed within the swale, but minimal flow was observed during the inspection.	

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 29

Date: 5/6/2025

Direction: -

Comments: Minimal flow and some algae were observed at two pressure relief pipes on the northwest side of the Landfill during the inspection. These pipes are located below Phase 1 of the Landfill. Some vegetation was observed at the outlets of the pipes, but it did not appear to obstruct the flow into perimeter swale R1.

Photograph 30

Date: 5/6/2025

Direction: North

Comments: The paved access road near the northwest corner of the Landfill was in good condition.

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 31 **Date:** 5/6/2025 **Direction:** North **Comments:** The reinforced concrete culvert beneath the paved access road and riprap around the culvert were generally in good condition. Some vegetation was observed in the riprap. Dense vegetation was observed within perimeter swale R1 by the culvert. Water was observed within the swale, but minimal flow through the culvert was observed during the inspection.	
Photograph 32 **Date:** 5/6/2025 **Direction:** Southwest **Comments:** The aggregate access road on the north side of the Landfill was in satisfactory condition. There was one low spot with water from precipitation before and during the inspection, but no ruts or erosion were observed.	

DTE ELECTRIC COMPANY
Photographic Record

Client: DTE Electric Company | **Project Number:** CHE1067A

Site Name: Monroe Power Plant
Vertical Extension Landfill | **Site Location:** Monroe, MI

Photograph 33 **Date:** 5/6/2025 **Direction:** Southwest **Comments:** Regrading of the CCR observed on the crest of the perimeter berm shown in Photograph #22. The CCR was removed from the crest and the southwest corner of Phase 1 of the Landfill was regraded.	
Photograph **Date:** 5/6/2025 **Direction:** **Comments:**	