ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

VISUAL SITE INSPECTION REPORT – 2020

HOOSIER ENERGY
RURAL ELECTRIC COOPERATIVE, INC.
MEROM GENERATING STATION
AREA 3 RESTRICTED WASTE LANDFILL
MEROM, INDIANA

ATC PROJECT NO. 170LF00788

JANUARY 15, 2021

PREPARED FOR:

HOOSIER ENERGY RURAL ELECTRIC COOPERATIVE, INC.
MEROM GENERATING STATION
5500 WEST OLD HIGHWAY 54
SULLIVAN, IN 47882
ATTENTION: MR. LON PETTS

January 15, 2021

Mr. Lon Petts
Hoosier Energy Rural Electric Cooperative, Inc.
Merom Generating Station
5500 West Old Highway 54
Sullivan, IN 47882

ATC Group Services LLC

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Re: Visual Site Inspection Report – 2020
Merom Generating Station
Area 3 Type I Restricted Waste Landfill
Sullivan, Indiana
ATC Project No. 170LF00629

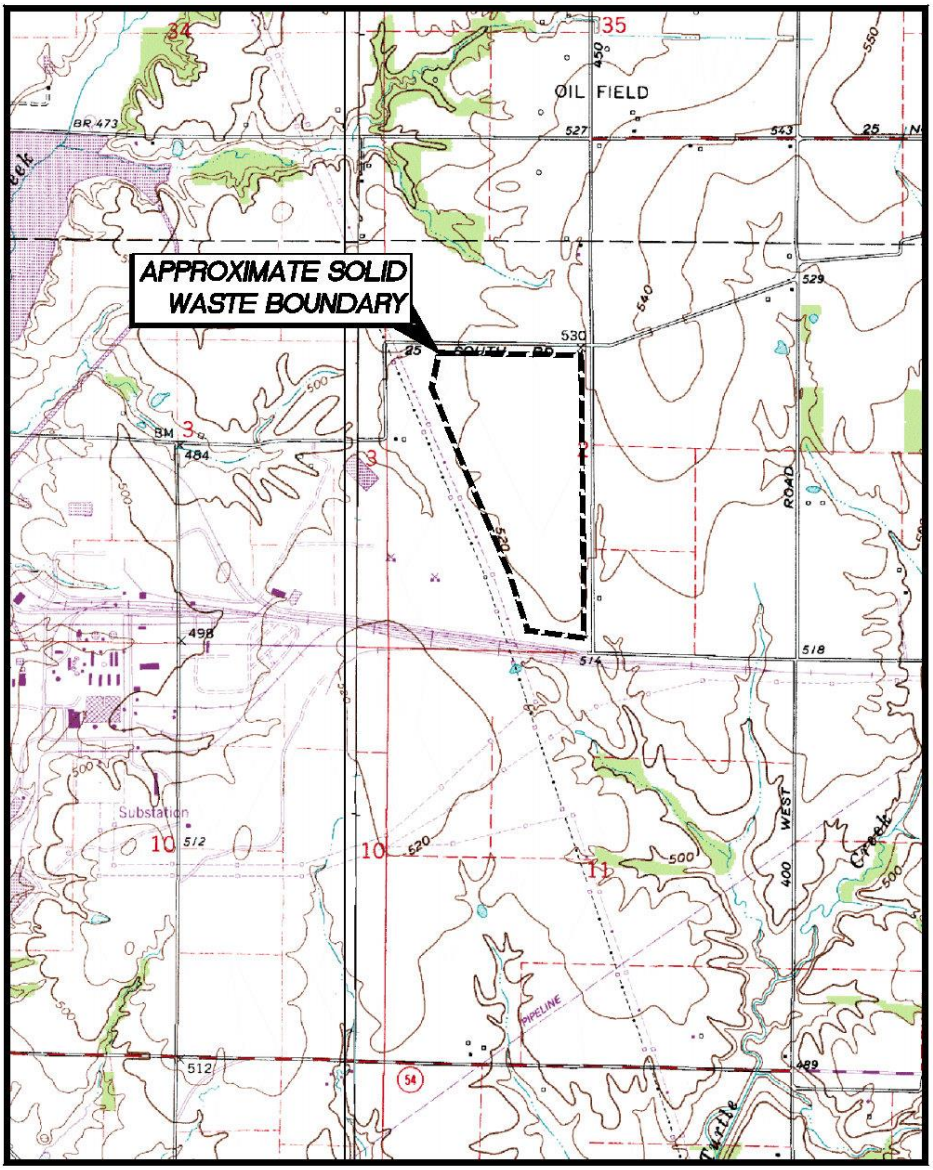
Dear Mr. Petts:

This report summarizes our 2020 Visual Site Inspection of the Area 3 Type I Restricted Waste Landfill at the Merom Generating Station. This visual inspection was conducted in accordance with guidelines established by the Coal Combustion Residuals (CCR) Rule published by the Environmental Protection Agency on April 17, 2015.

This inspection was limited to a visual examination of readily observable surficial features of the landfill and its appurtenant structures, and a review of available site information. Please note that the inspection did not include any test drilling, testing of materials, precise physical measurements of landfill features, detailed calculations to verify slope stability or other engineering analyses. Although the inspection was conducted by competent personnel in accordance with generally accepted methods for inspecting landfills, it should not be considered a warranty or guaranty of the future performance and/or safety of the landfill.

The Merom Area 3 Type I Restricted Waste (RWS I) Landfill is located in Sullivan County, Indiana in Section 2 of Gill Township and within Township-7-North/Range-10-West about 1.4 miles east of Turtle Creek Reservoir and about 4.2 miles east of the Wabash River as shown on Figure 1.

The landfill inspection was completed on December 10, 2020 by Michael Thornbrue and William Paraskevas of ATC Group Services LLC (ATC). The weather conditions during the inspection was approximately 53ºF and sunny. Documentation of inspection items can be found below and on the corresponding Site Plans in Appendix A.



USGS 7.5-MINUTE TOPOGRAPHIC MAP; MEROM AND SULLIVAN, RI QUADRANGLE 2000; SCALE 1:24,000

VICINITY MAP

MEROM GENERATING STATION - AREA 3
RESTRICTED WASTE SITE TYPE 1 LANDFILL
SULLIVAN COUNTY, INDIANA

Project Number: 170LF00629		Drn. By: BH
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ATC		Figure: 1

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Coal Combustion Residuals Rule Landfill Requirements/Observations

This visual inspection addresses a portion of the requirements of the CCR Rule instituted by the Environmental Protection Agency on April 17, 2015. As a result, CCR Landfills must meet the requirements of 40 C.F.R. §257 including annual inspections of the landfill in accordance with 40 C.F.R. §257.84(b). The requirements specified within the CCR Rule and the observations made by Michael Thornbrue and William Paraskevas during the annual inspection are listed below:

40 C.F.R. §257.84

(b) Annual inspections by a qualified professional engineer.

(1) Existing and new CCR landfills and any lateral expansion of a CCR landfill must be inspected on a periodic basis by a qualified professional engineer 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 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 inspections by a qualified person, and results of previous annual inspections); and

The 2020 annual inspection of the Merom Area 3 RWS I Landfill was conducted by the undersigned professional engineer(s) on December 10, 2020. Prior to the inspection, design plans were reviewed by the undersigned.

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

The inspection conducted on December 10, 2020 did not reveal any immediate signs of failure for the landfill. However, there are areas that require ongoing maintenance.

(2) Inspection report. The qualified professional engineer must prepare a report following each inspection that addresses the following:

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

At this time, Cell 1 and Cell 2, are fully constructed and actively receiving CCR waste.

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

The approximate volume of CCR in the landfill is about 3,287,551 cubic yards.

(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

There were no signs of structural weakness noted within the permitted solid waste boundary at the time of this visual inspection.

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

None noted at the time of this inspection.

Coal Combustion Residuals Landfill Observations/Recommendations

This section provides additional details regarding the landfill inspection completed on December 10, 2020. The observation locations and the landfill system features are shown on Sheet 2 in Appendix A.

The landfill system was divided into the following components to help organize the inspection and the reporting:

- Cell 1 and Cell 2; and
- Area 3 Sedimentation Pond.

The following paragraphs include a summary of the observations made during the inspection followed by our recommendations in bold print. Note that no final cover has been placed on Cell 1 or Cell 2, no partial closure has taken place, and a soil cover has been placed on Cell 1 and the east side of Cell 2.

Cell 1 and Cell 2 – Observations/Recommendations

The following list describes the items noted during the visual inspection of this area.

1) The north and east exterior slopes and the top of Cell 1 are generally well graded with established and maintained vegetation as observed at Locations 1 – 3 and 21 – 23.

   Recommendation: None at this time.

2) At Location 4 near the southeast corner of Cell 1 the inspection noted sparse vegetation on the exterior slope of Cell 1.

   Recommendation: Monitor vegetation growth and reseed as necessary.

3) At Locations 5, 7, 8 and 10 on the east side of Cell 2 the inspection noted sparse vegetation on the temporary cover placed on the exterior slope of Cell 2 that is contributing to rill erosion and equipment ruts in the perimeter ditch.

   Recommendation: Fill the erosion rills, repair the equipment ruts, and reseed as needed to prevent further erosion. Consider armoring a cross section of the channel to allow better equipment access inside the perimeter ditch.

4) At Locations 6, 11, and 14 around the perimeter of Cell 2 the inspection noted that contact stormwater runoff is contained within Cell 2.

   Recommendation: None at this time.

5) As noted at Location 9 on the east side of Cell 2 the inspection noted sparse vegetation on the perimeter road near the monitoring wells.

   Recommendation: Reseed as necessary to establish vegetation however, it may be difficult in high traffic areas. If vegetation growth does not establish, consider adding a gravel layer to the perimeter road in high traffic areas to prevent erosion.

6) At Location 12 on the south side of Cell 2 the inspection noted several large erosion rills on the inside and outside of the Cell 2 south perimeter berm.

   Recommendation: Fill the erosion and reseed as needed to prevent further erosion.

7) At Location 13 at the southwest corner of Cell 2 the inspection noted a riprap check dam installed upstream of an outlet to the concrete lined perimeter ditch.

   Recommendation: None at this time.

8) At Locations 15 along the west side of Cell 2, the inspection noted that sediment deposits in the concrete lined ditch are maintained at acceptable levels.

   Recommendation: Continue to maintain the established vegetation and continue regular maintenance of the concrete lined ditch.

9) At Locations 16 near the northwest corner of Cell 2, the inspection noted a large amount of sediment buildup behind a riprap check dam upstream of an outlet to the concrete lined ditch.

   Recommendation: Remove the accumulated sediments to maintain capacity of the channel.

10) At Locations 17 near the northwest corner of Cell 1, the inspection noted that the sediment levels in the concrete lined pond are maintained at acceptable levels.

    Recommendation: Continue routine sediment removal.

11) At Locations 18 near the northwest corner of Cell 1, the inspection noted sparse vegetation west of the concrete lined pond that could be susceptible to erosion.

    Recommendation: Monitor the vegetation growth and reseed as necessary to establish adequate cover.

12) At Locations 19 near the northwest corner of Cell 1, the inspection noted erosion from a small drainage swale at the toe of the slope that begins at the end of the installed erosion control matting and continues to the riprap lined channel below.

    Recommendation: Armor the section of slope between the erosion control matting and the riprap.

13) At Locations 20 on the north side of Cell 1 the inspection noted sparse vegetation and minor erosion at the toe of the recently added diversion berms across the haul road to the top of Cell 1. It should be noted that the erosion is much less than that noted in 2019.

    Recommendation: Fill the erosion and reseed as needed to prevent further erosion. Consider adding temporary erosion control matting to the toe of the diversion berms to allow vegetation growth to establish.

Area 3 Sedimentation Basin - Observations/Recommendations

The following list describes the items noted during the visual inspection of this area.

1) At Location 24 on the east slope of the West Sediment Basin west of Cell 1 the inspection noted a large erosion rill at the crest of the pond.

   Recommendation: Fill the erosion and reseed as needed to prevent further erosion. Consider adding armoring if the erosion persists.

2) At Location 25 on the east slope of the West Sediment Basin west of Cell 1 the inspection noted that the pond is generally in good condition and maintaining adequate freeboard.

   Recommendation: None at this time.

We appreciate the opportunity to assist you with this project. If you have any questions concerning information contained in this report, please do not hesitate to call either of the undersigned at 317.849.4990.

Sincerely,

ATC Group Services LLC

Michael D. Thornbrue 1/15/2021

Michael D. Thornbrue, P.E.
Senior Project Engineer

MICHAEL D. THORNBRUE
REGISTERED
No. PE11800260
STATE OF
INDIANA
PROFESSIONAL ENGINEER

William Paraskevas

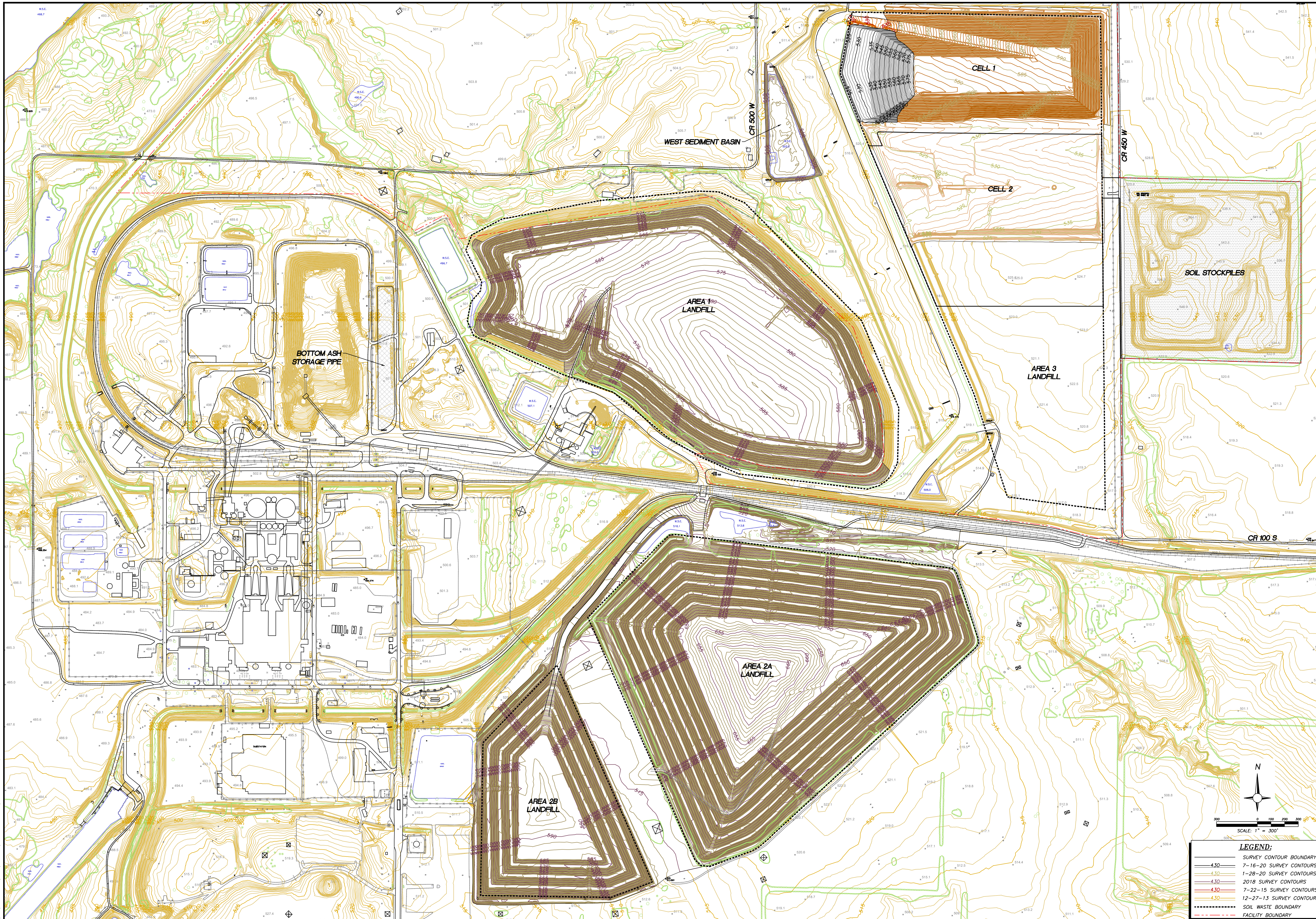
William Paraskevas, P.E.
Principal Engineer

Copies: (2) Lon Petts – Hoosier Energy
(1) Kyle Eslinger – Hoosier Energy

Appendices

Appendix A: Site Plan

Appendix A: Site Plans



Revision:

Project Number: 170LF00629
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Date: 12/2020
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App'd By:	Ckd. By:	Drn. By:
DS	MT	BH

Company Name:
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Drawing Title:
FACILITY SITE PLAN
OVERALL SITE MAP
HOOSIER ENERGY MEROM GENERATING STATION

Sheet: 1

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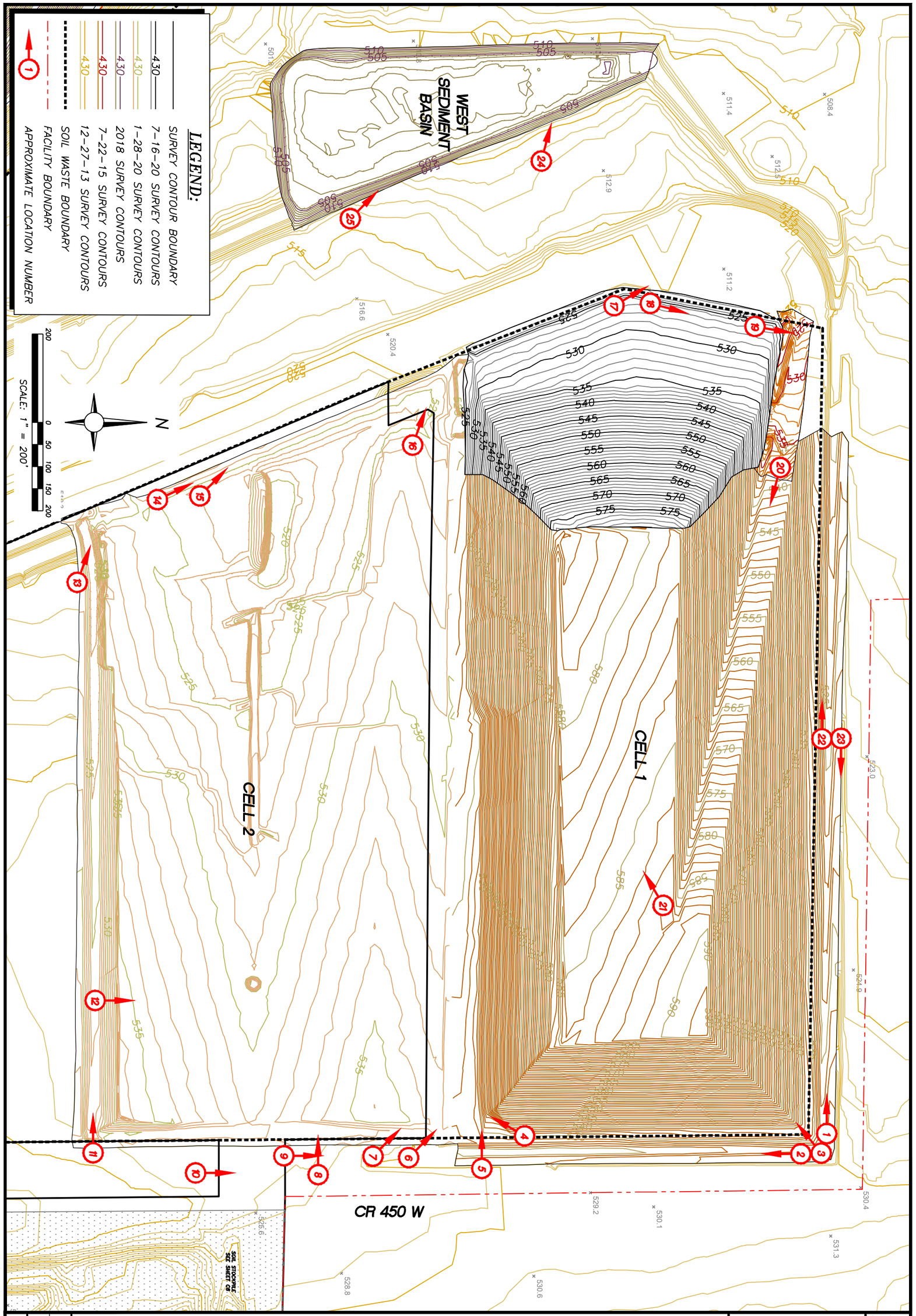

OBSERVATION LOCATION PLAN

AREA 3 RESTRICTED WASTE LANDFILL
2020 INSPECTION
HOOSIER ENERGY
MEROM GENERATING STATION

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