



VISUAL SITE INSPECTION REPORT – 2019

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

ATC PROJECT NO. 170LF00788

December 16, 2019

PREPARED FOR:

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



December 16, 2019

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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Indianapolis, IN 46256

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Re: Visual Site Inspection Report – 2019
Merom Generating Station
Area 3 Type I Restricted Waste Landfill
Sullivan, Indiana
ATC Project No. 170LF00788

Dear Mr. Petts:

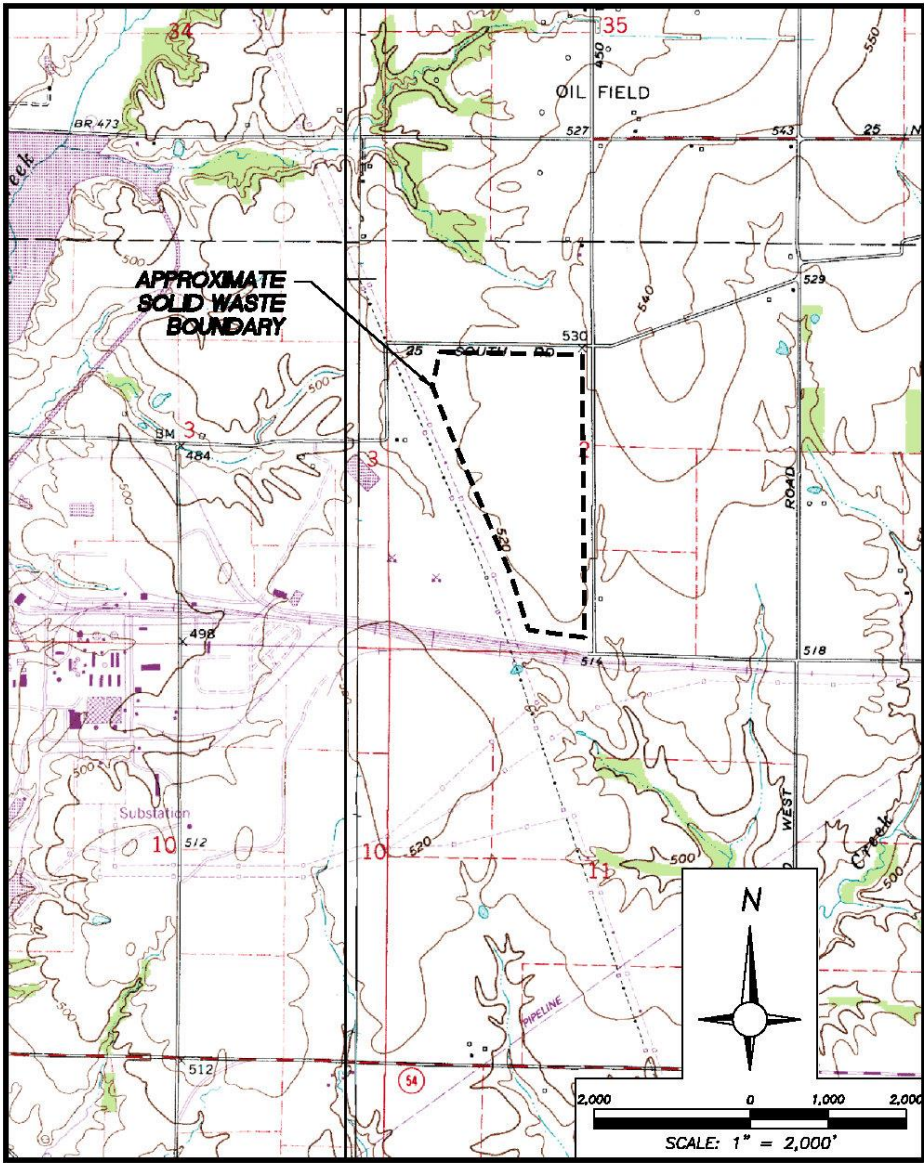
This report summarizes our 2019 Visual Site Inspection of the Area 3 Type I Restricted Waste Landfill at the Merom Generating Station. This visual inspection was conducted in accordance with guidelines established by the Coal Combustion Residuals (CCR) Rule published by the Environmental Protection Agency 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 November 18, 2019 by David Stelzer and Michael Thornbrue of ATC Group Services LLC (ATC). The weather conditions during the inspection was approximately 40°F and cloudy. Documentation of inspection items can be found below and on the corresponding Site Plans in Appendix A.

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VICINITY MAP

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

Project Number: 170LF00629		Drn. By: DH
Drawing File: SEE LOWER LEFT		Ckd. By: MT
Date: 12/18	Scale: AS SHOWN	App'd By: DS
ATC		Figure: 1

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 David Stelzer and Michael Thornbrue 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 2019 annual inspection of the Merom Area 3 RWS I Landfill was conducted by the undersigned professional engineer(s) on November 18, 2019. 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 November 18, 2019 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 3,000,000 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 November 18, 2018. 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 outside slopes around Cell 1.

Cell 1 and Cell 2 – Observations/Recommendations

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

- 1) The exterior slopes of Cell 1 are generally well graded with established and maintained vegetation as observed at Locations 1 – 3 and 9 – 12.

Recommendation: None at this time.

- 2) At Location 4 near the southeast corner of Cell 1 the inspection noted that vehicle ruts, erosion, and sediment deposits in the perimeter channel that were noted from the 2018 inspection have been repaired and vegetation has been well established.

Recommendation: None at this time.

- 3) At Location 5 near the southeast corner of Cell 1 the inspection noted that the interior south slope of Cell 1 appears to be well graded and has received an interim vegetated cover.

Recommendation: None at this time.

- 4) At Location 6 near the southeast corner of Cell 2 the inspection noted that contact stormwater runoff is contained within Cell 2

Recommendation: None at this time.

- 5) At Location 7 near the southeast corner of Cell 2 the inspection noted that the future Cell 3 area has well established vegetation.

Recommendation: None at this time.

- 6) As noted at Location 8 on the east side of Cell 1 the inspection identified erosion at the toe of the slope above the perimeter ditch.

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

- 7) At Locations 13 and 14 on the north side of Cell 1 the inspection noted erosion along the road to the top of Cell 1.

Recommendation: Fill the erosion and reseed as needed to prevent further erosion. Consider adding more berms to direct stormwater into the drainage ditch.

- 8) At Location 15 at the northwest corner of Cell 1 the inspection noted erosion from the road into the drainage channel.

Recommendation: Fill the erosion and add armoring to prevent further erosion.

- 9) At Location 16 at the northwest corner of Cell 1 the inspection noted that erosion in the road into the drainage channel.

Recommendation: Fill the erosion and add armoring to prevent further erosion.

- 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 Location 18 near the northwest corner of Cell 2 the inspection noted a patch of bare soil above a drainage culvert that could be susceptible to erosion.

Recommendation: Reseed the area as needed to establish vegetation.

- 12) At Locations 19 along the west side of Cell 2, the inspection noted that the outside slope of the perimeter berm above the concrete ditch and the outside slope of the Cell 2 south perimeter berm has established vegetation. Additionally, the 2018 inspection noted sediment deposits in the concrete ditch that have been removed.

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

Area 3 Sedimentation Basin - Observations/Recommendations

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

- 1) At Location 20 in the stormwater channel northwest of Cell 1 the 2018 inspection noted sparse vegetation at the riprap interface. The 2019 inspection noted well established vegetation.

Recommendation: None at this time.

- 2) At Locations 21 and 22 in the stormwater channel northwest of Cell 1 the inspection noted erosion at the edge of the riprap.

Recommendation: Repair the erosion damage and utilize appropriately sized riprap for the expected stormwater flows.

- 3) At Location 23 in the stormwater channel west of Cell 1, the inspection noted heavy equipment damage adjacent to the riprap lined channel.

Recommendation: Reseed the area as necessary to reestablish vegetation.

- 4) At Location 24 and 25 on the east slope of the West Sediment Basin west of Cell 1 the inspection noted erosion at the crest of the pond.

Recommendation: Regrade the area as necessary to restore the drainage into the pond and reseed to reestablish vegetation.

- 5) At Location 26 on the east slope of the West Sediment Basin west of Cell 1 the inspection noted sediment deposition in the southeast corner of the pond at the inlet of the concrete channel.

Recommendation: Remove sediment deposits from the channel and the pond on a regular basis.

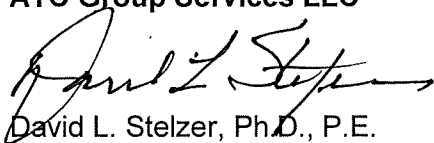
- 6) At Location 27 on the east slope of the West Sediment Basin west of Cell 1 the inspection noted that the pond is generally in good condition and maintaining adequate freeboard.

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



David L. Stelzer, Ph.D., P.E.
Senior Project Engineer



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



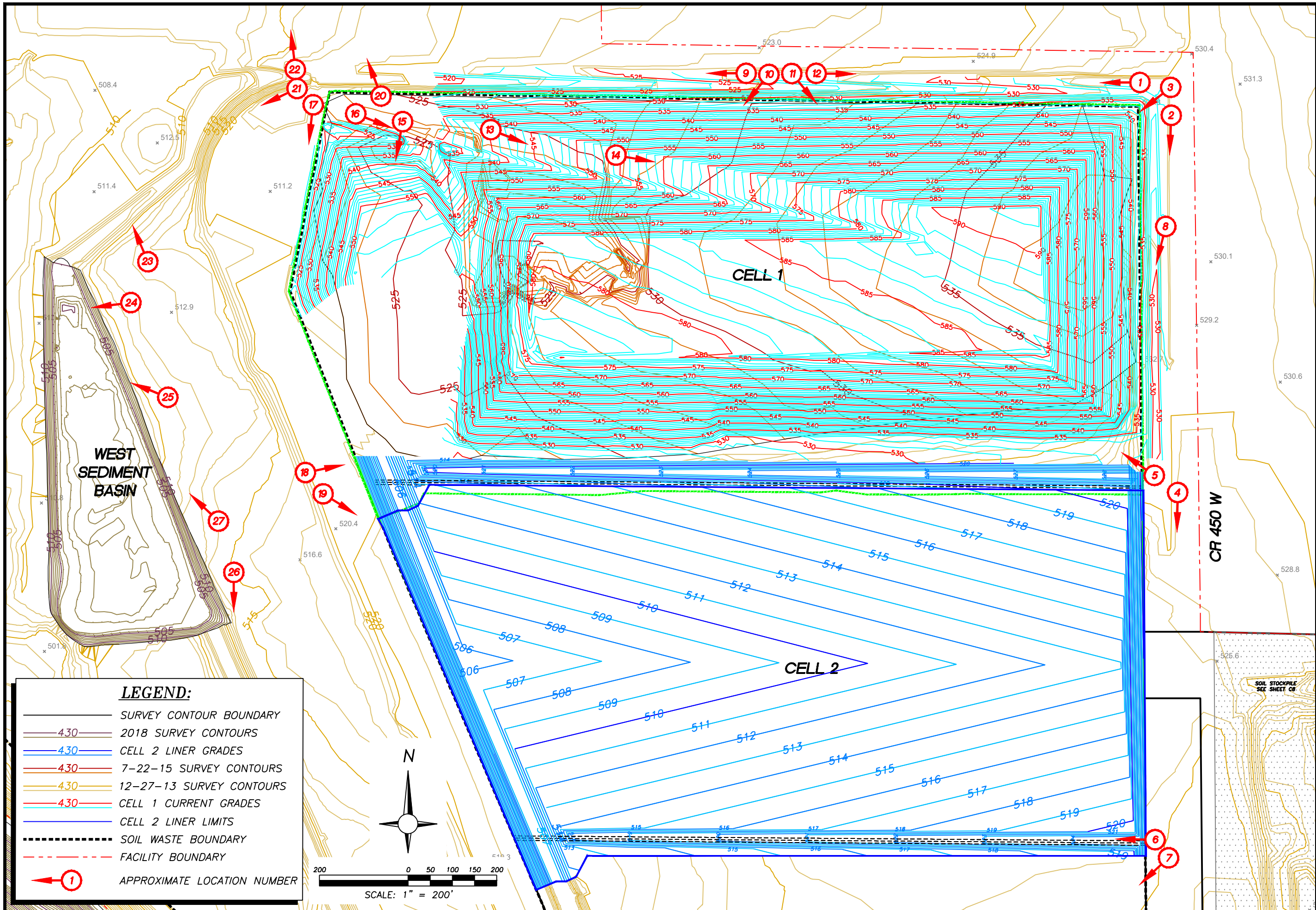
Copies: (2) Lon Petts – Hoosier Energy
(1) Kyle Eslinger – Hoosier Energy

Appendices

Appendix A: Site Plan

Appendix A: Site Plans

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Drn. By:	JG	Ckd. By:	MT	App'd By:	DS	Ckd. Date:	12/2019
Project Number:	17OLF00629	Drawing File:	SEE LOWER LEFT				
OBSERVATION LOCATION PLAN AREA 3 RESTRICTED WASTE LANDFILL 2019 INSPECTION HOOSIER ENERGY MEROM GENERATING STATION							
Date: 12/19 Scale: AS SHOWN Figure: 2							