ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

VISUAL SITE INSPECTION REPORT – 2018

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

ATC PROJECT NO. 170LF00629

JANUARY 24, 2019

PREPARED FOR:

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

January 24, 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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Re: Visual Site Inspection Report – 2018
Merom Generating Station
Area 3 Type I Restricted Waste Landfill
Merom, Indiana
ATC Project No. 170LF00629

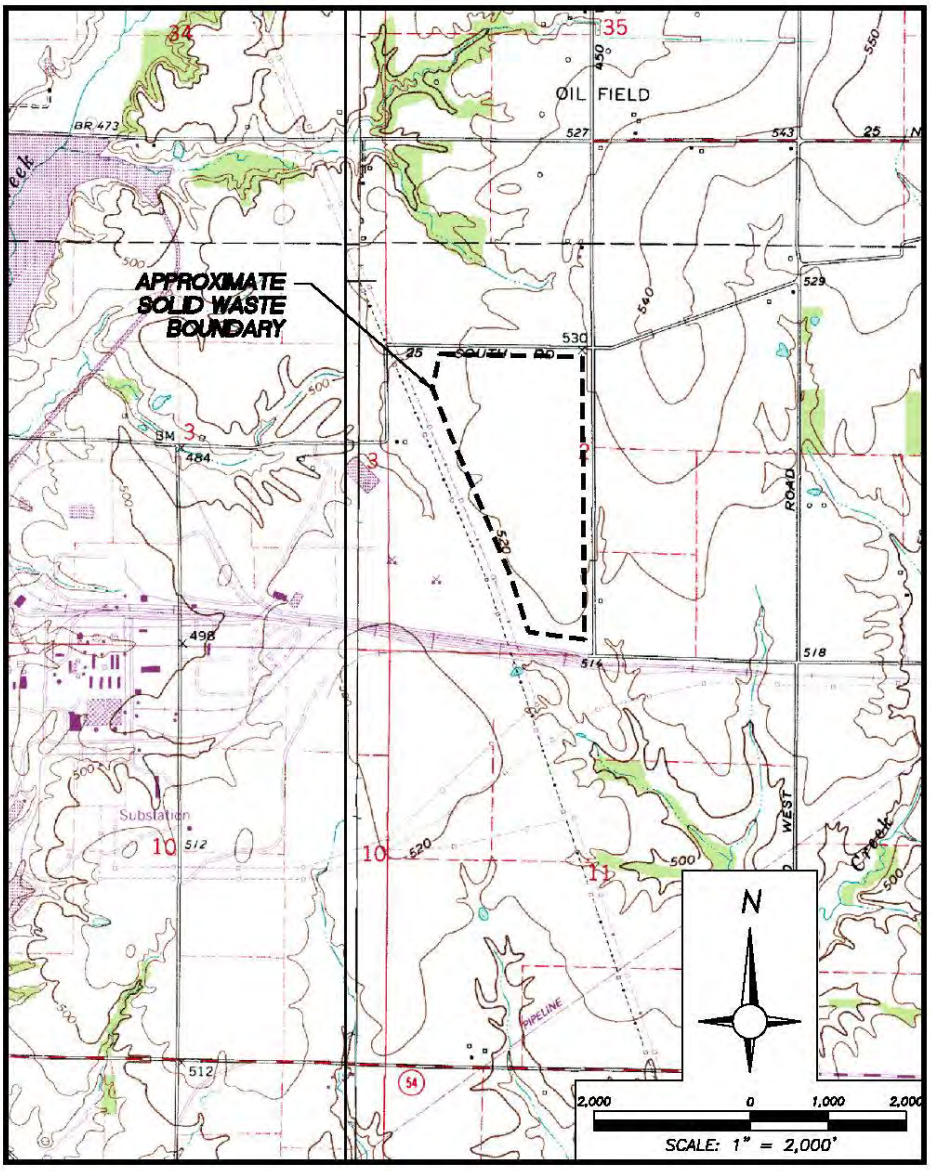
Dear Mr. Petts:

This report summarizes our 2018 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 an 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 26, 2018 by David Stelzer and Mike Thornbrue of ATC Group Services LLC (ATC). The weather conditions during the inspection was approximately 45ºF 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 2018 annual inspection of the Merom Area 3 RWS I Landfill was conducted by the undersigned professional engineer(s) on December 26, 2018. 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 26, 2018 did not reveal any immediate signs of failure for the landfill. However, there are areas that require ongoing maintenance such as erosion, sediment removal, and reseeding. This was discussed with landfill personnel and they indicated they would address as weather permitted.

(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. During 2018, Hoosier Energy completed construction of Cell 2 and began placing CCR materials.

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

The approximate volume of CCR in the landfill is about 2,560,000 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 December 26, 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 11 – 14.

   Recommendation: None at this time.

2) At Location 4 near the southeast corner of Cell 1, the inspection noted vehicle ruts, erosion, and sediment deposits in the perimeter channel.

   Recommendation: Remove sediment deposits and fill erosion rills as necessary to maintain flow and capacity in the channel, and reseed as needed to prevent future erosion.

3) At Location 5 near the southeast corner of Cell 1, the inspection noted sparse vegetation on top of the outer berm.

   Recommendation: Reseed as needed to prevent future erosion.

4) At Location 6 near the southeast corner of Cell 1, the inspection noted that the inside slope of Cell 1 appears to be well graded and has received an interim vegetated cover.

   Recommendation: None at this time.

5) Currently, CCR materials are being placed in Cell 2 utilizing articulated off-road trucks, a GPS-guided bulldozer, and a smooth-drum roller as observed at Locations 7 and 20.

   Recommendation: Continue placing CCR materials in controlled, compacted lifts.

6) As noted at Location 8, the inspection identified several minor erosion rills on the east side of Cell 2 in the perimeter ditch as well as sparse vegetation.

   Recommendation: Monitor erosion rills and regrade as necessary and reseed as needed to increase vegetation cover to prevent further erosion.

7) At Locations 9 and 10 near the southeast corner of Cell 2, the inspection noted that the outside slope of the south perimeter berm and the Cell 3 (future) area have little to no vegetation and may be susceptible to erosion.

   Recommendation: Reseed inactive areas to prevent erosion.

8) At Location 15 on the north side of Cell 1, the inspection noted an area of recently placed fill without established vegetation.

   Recommendation: Reseed inactive areas to prevent erosion.

9) At Locations 16 and 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.

10) At Location 18 near the southwest corner of Cell 1, the inspection noted that the CCR fill placement in the southwest corner of Cell 1 is being maintained within the Solid Waste Boundary.

    Recommendation: Continue to maintain placement of CCR within the Solid Waste Boundary.

11) At Locations 19 – 22 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 not been vegetated. Additionally, the inspection noted sediment deposits in the concrete ditch.

    Recommendation: Reseed inactive areas to prevent erosion and remove sediment deposits from the channel on a regular basis. Also, consider installing a pedestrian access bridge across 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 23, north of the northwest corner of Cell 1, the inspection noted an area of sparse vegetation at the edge of the riprap on the upstream side of the road crossing.

   Recommendation: Reseed as necessary to prevent future erosion.

2) At Locations 24 and 26 in the stormwater channel west of Cell 1, the inspection noted well established vegetation with good riprap armoring in the channel.

   Recommendation: None at this time.

3) At Location 25 in the stormwater channel west of Cell 1, the inspection noted a rut in the soil at the base of the channel adjacent to the edge of the riprap.

   Recommendation: Regrade the rutted area as needed to prevent pooling water and reseed the area as needed.

4) At Location 27 in the stormwater channel west of Cell 1, the inspection noted debris (a bucket and a sign) in the channel.

   Recommendation: Remove the debris and reinstall the sign in its rightful place.

5) At Location 28 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.

6) At Location 29 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.

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

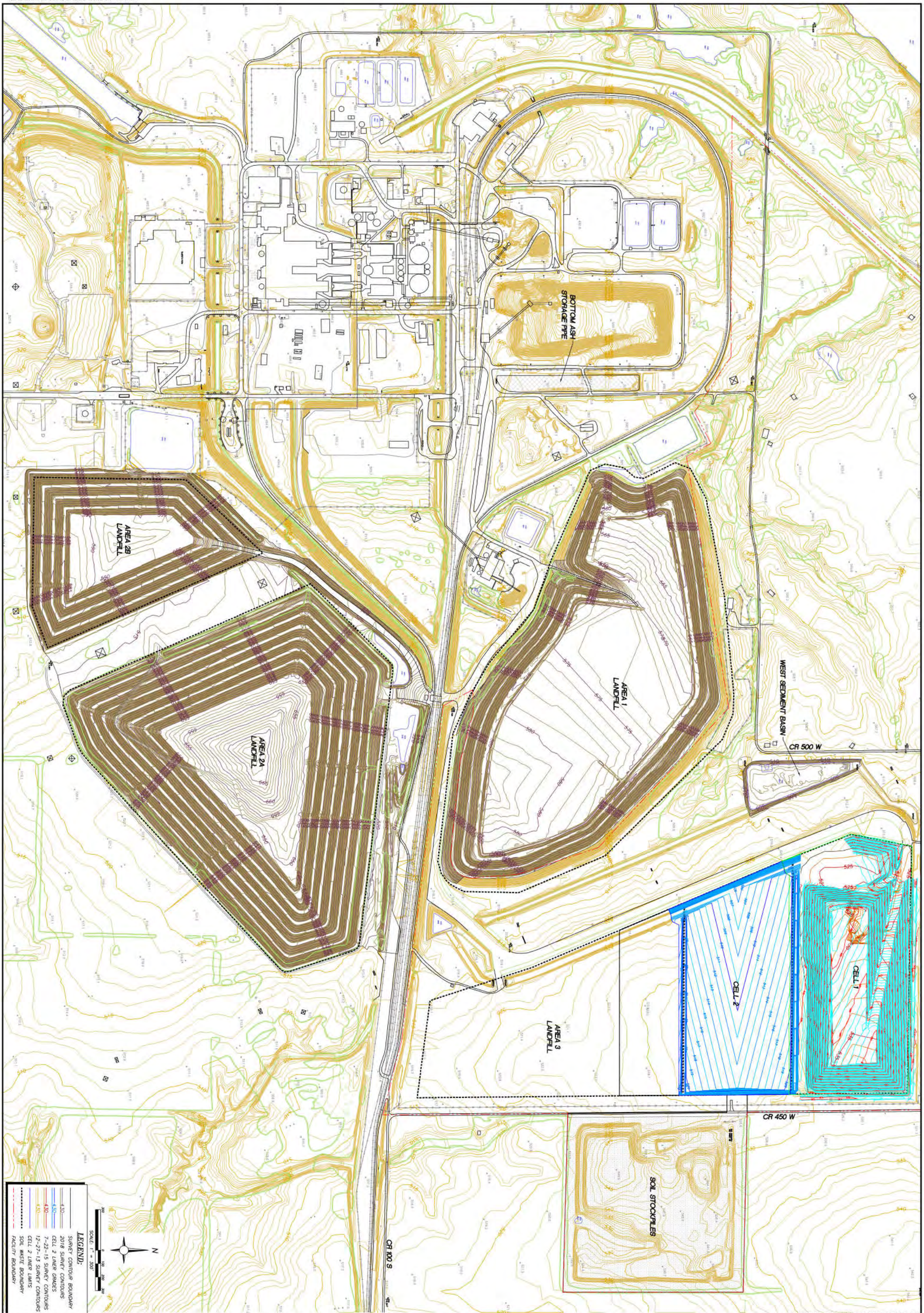
David L. Stelzer, Ph.D., P.E.
Senior Project Engineer

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

1/24/2019

Copies: (3) Lon Petts – Hoosier Energy
(1) Kyle Eslinger – Hoosier Energy

Appendix A: Site Plans



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Sheet: 1

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

ATC GROUP SERVICES LLC
7986 CENTERPOINT DR.
SUITE 100
INDIANAPOLIS, IN 46256
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FAX +1 317 849 4278
WWW.ATCGROUPSERVICES.COM

Company Name:
HOOSIER ENERGY
MEROM GENERATING STATION
SULLIVAN COUNTY, INDIANA

Date:	12/18
Scale:	AS SHOWN
Drawn By:	DH
Checked By:	DH
Project Number:	170JT00629
Filename:	SITE LOWER LEFT

Revision

CELL 1

CELL 2

WEST SEDIMENT BASIN

CR 500 W

CR 450 W

AREA 1
LANDFILL

AREA 3
LANDFILL

SOIL STOCKPILES

SCALE: 1" = 200'

LEGEND:

- SURVEY CONTOUR BOUNDARY
- 430 2018 SURVEY CONTOURS
- 430 CELL 2 LINER GRADES
- 430 7-22-15 SURVEY CONTOURS
- 430 12-27-13 SURVEY CONTOURS
- CELL 2 LINER LIMITS
- SOIL WASTE BOUNDARY
- FACILITY BOUNDARY
- (1) APPROXIMATE LOCATION NUMBER

Revision:

Project Number: 170LF00629
Drawing File: SEE LOWER LEFT
Date: 12/18
Scale: AS SHOWN

App'd By:	Chk. By:	Drn. By:
DS	MT	DH

Company Name:
HOOSIER ENERGY
MEROM GENERATING STATION
SULLIVAN COUNTY, INDIANA

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Drawing Title:
FACILITY SITE PLAN
AREA 3 RESTRICTED WASTE LANDFILL - 2018 INSPECTION
HOOSIER ENERGY MEROM GENERATING STATION

Sheet:
2