



**ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING**

VISUAL SITE INSPECTION REPORT – 2021

SOUTHERN INDIANA GAS AND ELECTRIC
A.B. BROWN GENERATING STATION
TYPE III RESTRICTED WASTE LANDFILL
WEST FRANKLIN, IN

ATC PROJECT NO. 170LF01149

JANUARY 7, 2022

PREPARED FOR:

SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
dba CENTERPOINT ENERGY INDIANA SOUTH
A.B. BROWN GENERATING STATION
8511 WELBORN ROAD
MOUNT VERNON, IN 47620
ATTENTION: MS. ANGIE CASBON-SHELLER



January 7, 2022

Angie Casbon-Scheller
CenterPoint Energy
8511 Welborn Road
Mount Vernon, IN 47620

Re: Visual Site Inspection Report – 2021

A.B. Brown Generating Station
Type III Restricted Waste Landfill
West Franklin, Indiana
ATC Project No. 170LF01149

ATC Group Services / Atlas

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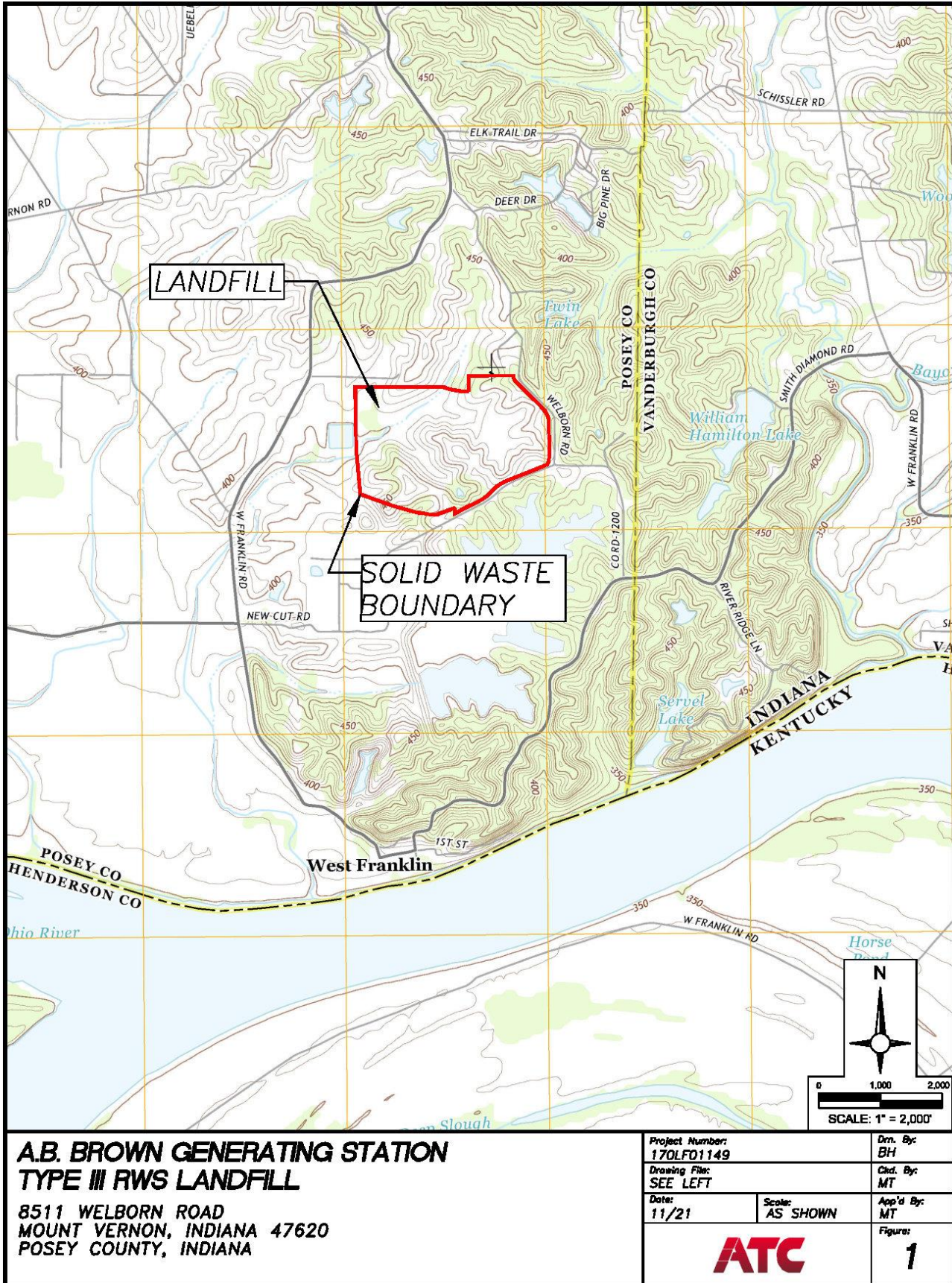
Dear Ms. Casbon-Scheller:

This report summarizes our August 26, 2021 Visual Site Inspection of the Type III Restricted Waste Landfill at the A.B. Brown Generating Station. The visual inspection and this report were completed in accordance with guidelines established by the Coal Combustion Residuals (CCR) Rule published by the Environmental Protection Agency (EPA) on April 17, 2015.

This inspection included a visual examination of readily observable surface features of the landfill and its appurtenant structures, and a review of information provided by CenterPoint Energy. Please note that the inspection did not include any drilling, testing of materials, precise physical measurements of landfill features, detailed calculations, 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 as a warranty or guarantee of the future performance and/or safety of the landfill.

The landfill is located within the A.B. Brown Station property in Section 24, Township 7 South, and Range 12 West, about a half mile north of the Ohio River in Posey County, Indiana as highlighted on the West Franklin, IN USGS Quadrangle map, Figure 1 on the following page.

The landfill inspection was completed by Juan Carrizo and Michael Thornbrue of ATC Group Services LLC (ATC). The weather during the inspection was sunny with temperatures around 94°F. Ground conditions were generally dry. The landfill system features are highlighted on the attached Site Plan in Appendix A.



**A.B. BROWN GENERATING STATION
 TYPE III RWS LANDFILL**
 8511 WELBORN ROAD
 MOUNT VERNON, INDIANA 47620
 POSEY COUNTY, INDIANA

Project Number: 170LF01149		Drn. By: BH
Drawing File: SEE LEFT		Chd. By: MT
Date: 11/21	Scale: AS SHOWN	App'd By: MT
ATC		Figure: 1

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

- Partial Closure Areas (east end, north slope, and south slope of the landfill);
- Active Disposal Area (west end of the landfill);
- Vertical Expansion Disposal Area (top central portion of the landfill); and
- Landfill Settling Basin.

The approximate limits of each of these areas is noted on Sheet 1 in Appendix A.

The following paragraphs include a summary of the observations made during the inspection followed by our recommendations in bold print. Approximate locations of some of the observed features are noted on Sheet 1 in Appendix A.

PARTIAL CLOSURE AREAS – OBSERVATIONS / RECOMMENDATIONS

The approximate limits of the Partial Closure Area – Composite Final Cover are shown on Sheet 1 in Appendix A and cover an area of approximately 28 acres. The composite cover consists of a 40-mil LLDPE geomembrane overlain with a 16 oz/yd² nonwoven geotextile, 2.5 feet of protective soil, and 0.5 feet of topsoil. The final cover was constructed in stages from 2012 through 2014. Documentation of the completion of closure activities in this area was submitted to the Indiana Department of Environmental Management (IDEM) in three (3) separate reports in 2012, 2013, and 2014.

The approximate limits of the Partial Closure Area – Soil Final Cover are also shown on Sheet 1 in Appendix A. This section covers an area of approximately 24.5 acres and consists of a minimum of 2.0 feet of cohesive soils, covered with 0.5 feet of topsoil. Documentation of the completion of the closure activities along these slopes was submitted to IDEM in 2015.

Items noted during the visual inspection of this area are described in the following list.

- 1) In general, this area is well vegetated and well maintained (Locations 6 and 15).

Recommendation: None at this time.

- 2) Observed sparse vegetation of the Final Cover (Locations 1, 5, 9, 11, 12, 13, 14, and 16).

Recommendation: Areas of sparse vegetation should be reseeded with similar grasses to the ones at the site, and temporarily isolated to prevent trampling and help re-establish grass cover.

- 3) The drop inlets and outlet pipes located in the southeast corner of the landfill were generally free of debris at the time of the inspection (Locations 2 and 4).

Recommendation: None at this time.

- 4) Riprap installed at the outlet of a drainage pipe in the perimeter drainage channel on the northeast side of the Partial Closure Area appears to be in good condition (Location 3).

Recommendation: None at this time.

- 5) The former seep has been filled and the area is well vegetated and maintained (Location 7).

Recommendation: None at this time.

- 6) Downdrain riprap channel on the north side of the Partial Closure Area appears to be in good condition (Location 8).

Recommendation: None at this time.

- 7) Downdrain riprap channel on the north side of the Partial Closure Area appears to be in good condition and riprap has been reinforced with the addition of chain link fencing fabric (Location 10).

Recommendation: None at this time.

VERTICAL EXPANSION DISPOSAL AREA OBSERVATIONS / RECOMMENDATIONS

The vertical expansion disposal area noted on Sheet 1 in Appendix A generally consists of approximately 18 acres across the top of the central portion of the landfill. This area has not yet been filled to the approved final grades. Items noted during the visual inspection of this area are described in the following list.

- 1) In general, this area is well vegetated and well maintained (Location 20).

Recommendation: None at this time.

- 2) Observed sparse vegetation around side slopes areas located on the north and east sides of the Vertical Expansion Disposal Area (Locations 17, 18, 19, 21, and 22).

Recommendation: Areas of sparse vegetation should be reseed with similar grasses to the ones at the site, and temporarily isolated to prevent trampling and help re-establish grass cover.

- 3) Erosion at the outlet of a culvert and erosion rills have formed adjacent to a road on the south slope of the Vertical Expansion Disposal Area (Locations 23, and 24).

Recommendation: Install riprap or another form of armouring at the culvert outlet. Repair rills, install erosion control blankets and/or other erosion BMPs, and reseed areas to re-establish grass cover.

- 4) Observed filter cake in the bottom of Manhole No. 11.5 where a pipe from the Vertical Expansion Disposal Area discharges into the manhole. (Location 25).

Recommendation: The erosion and sediment controls in the Vertical Expansion Disposal Area should be upgraded and additional sediment control protection should be installed at the pipe inlet.

ACTIVE DISPOSAL AREA OBSERVATIONS / RECOMMENDATIONS

The active disposal area generally consists of portions of Cells 16, 17 and 18, which occupy an area of approximately 21 acres. Items noted during the visual inspection of this area are described in the following list.

- 1) Active filling is ongoing at the west end of the landfill (Locations 26 and 28).

Recommendation: None at this time.

- 2) There is a limited amount of freeboard between the surface of the waste and the adjoining access road at the south end of the Active Landfill Area (Location 29). In addition, surface water runoff from the northern portion of the Active Landfill Area is routed to a depression with at the far north end (Locations 27). It should be noted that the available freeboard at Location 27 has been improved compared to previous inspections.

Recommendation: Monitor these areas during and after significant storm events to maintain adequate freeboard.

LANDFILL SETTLING BASIN OBSERVATIONS / RECOMMENDATIONS

The existing Landfill Settling Basin was constructed in 2015 to receive water that has been in contact with waste in the landfill. The pond has a composite liner across the base and a riprap protective layer. The inlet pipe is located in the southeast corner of the pond while the drop inlet for the outlet to the Capital Pond is located in the northwest corner of the pond. A stormwater detention basin is located immediately north of the Capitol Pond. Items noted during the visual inspection of this area are described in the following list.

- 1) The slopes of the Settling Basin are lined with riprap and appeared in satisfactory condition. Also, the pond is maintaining adequate freeboard (Location 31).

Recommendation: Continue to monitor the condition of the pond and perform maintenance as necessary.

- 2) Observed sparse vegetation adjacent to the access road to the Landfill Settling Basin (Locations 30).

Recommendation: Areas of sparse vegetation should be reseed with similar grasses to the ones at the site, and temporarily isolated to prevent trampling and help re-establish grass cover.

COAL COMBUSTION RESIDUALS RULE LANDFILL REQUIREMENTS/OBSERVATIONS

In addition to the general observations and recommendations outlined above, this visual inspection was also performed to address the standards and guidelines required by the CCR Rule established by the EPA on April 17, 2015. As a result, CCR Landfills are now required to meet the requirements of 40 C.F.R. §257 to conduct 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 Juan Carrizo and Michael Thornbrue during the 2021 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 annual inspection of the AB Brown Landfill was conducted by the undersigned professional engineers on August 26, 2021. Operating records along with 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 August 26, 2021 did not reveal any signs of imminent failure for the landfill. However, there are isolated areas of erosion that require repair and/or modification as part of the ongoing maintenance of the landfill area.

(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;

In general, the following changes in the geometry of the structure were noted during the 2021 visual inspection:

- **In the past year the site continued filling operations in Cells 16, 17 and 18.**
- **New waste was also placed on the center, western and southern portions of the Active Disposal Area.**
- **Maintenance issues noted during the 2020 visual inspection had been addressed.**

The measures taken as outlined above have improved the overall condition of this facility.

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

The approximate volume of CCR within the limits of the 1988 landfill expansion is 5,148,500 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. Additional temporary erosion and sediment controls should be deployed in the Vertical Expansion Disposal Area.

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

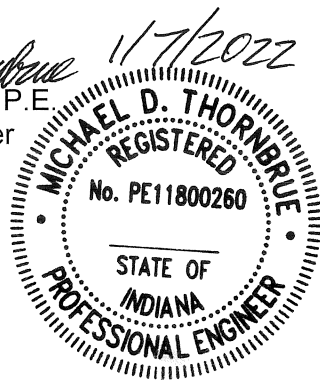
None noted at the time of this inspection.

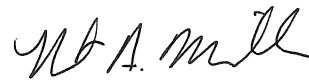
We appreciate the opportunity to assist you with this project. If you have any questions concerning information contained in this report, please do not hesitate to call either of the undersigned at 317.849.4990.

Sincerely,

ATC Group Services / Atlas


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



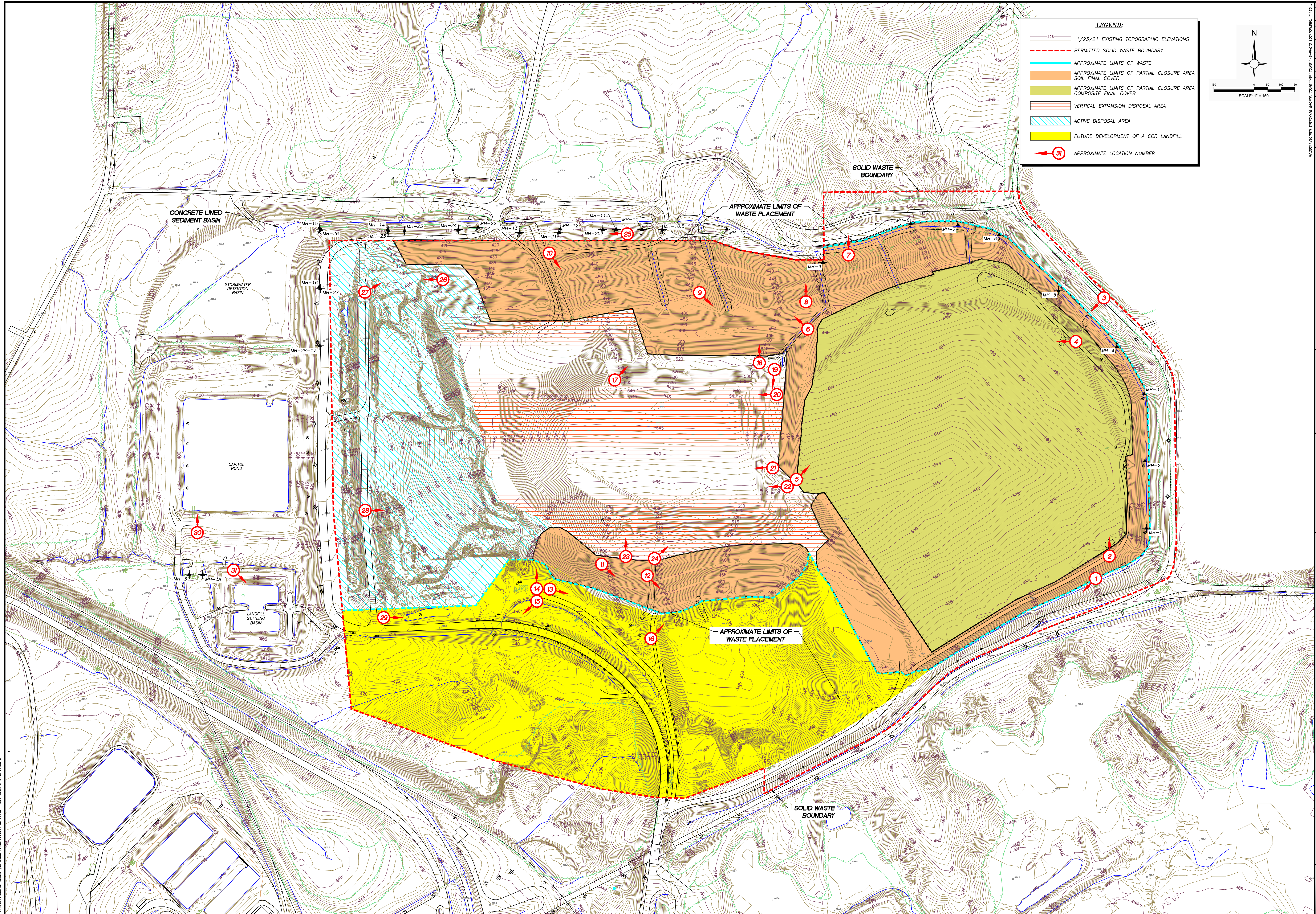

Brent A. Miller, CHMM
Principal Scientist

Copies: (3) Angie Casbon-Scheller – CenterPoint Energy
(1) Eric Brown – CenterPoint Energy
(1) Jason Copeland – CenterPoint Energy

Appendices

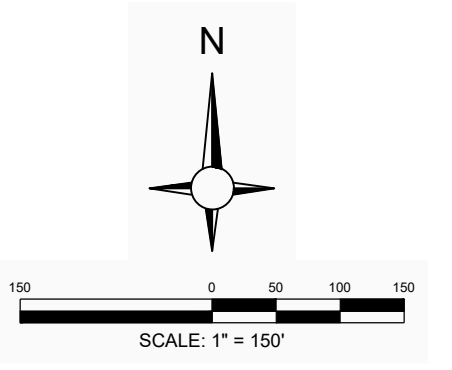
Appendix A: Site Plan

Appendix A: Site Plan



LEGEND:

- 1/23/21 EXISTING TOPOGRAPHIC ELEVATIONS
- - - PERMITTED SOLID WASTE BOUNDARY
- - - APPROXIMATE LIMITS OF WASTE
- APPROXIMATE LIMITS OF PARTIAL CLOSURE AREA SOIL FINAL COVER
- APPROXIMATE LIMITS OF PARTIAL CLOSURE AREA COMPOSITE FINAL COVER
- VERTICAL EXPANSION DISPOSAL AREA
- ACTIVE DISPOSAL AREA
- FUTURE DEVELOPMENT OF A CCR LANDFILL
- 31 APPROXIMATE LOCATION NUMBER



Revision:	
Project Number:	170LFD1149
Drawing For:	See File Location
Date:	11/2021
Scale:	AS SHOWN
Appr. By:	MT
Des. By:	BH
Company Name:	ATC GROUP SERVICES, LLC
7988 CENTERPOINT DR. INDIANAPOLIS, IN 46256 PHONE +1 317 849 4990 FAX +1 317 849 4278 WWW.ATCGROUPSERVICES.COM	
Drawing Title: SITE PLAN OF INSPECTION LOCATIONS TYPE III RWS LANDFILL 8511 WELBORN ROAD MOUNT VERNON, INDIANA 47620	
Sheet:	1