



VISUAL SITE INSPECTION REPORT – 2022

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

ATLAS PROJECT NO. 170LF01372

JANUARY 6, 2023

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



Atlas Technical Consultants L.L.C.

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January 6, 2023

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

Re: Visual Site Inspection Report – 2022

A.B. Brown Generating Station
Type III Restricted Waste Landfill
West Franklin, Indiana
Atlas Project No. 170LF01372

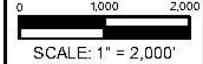
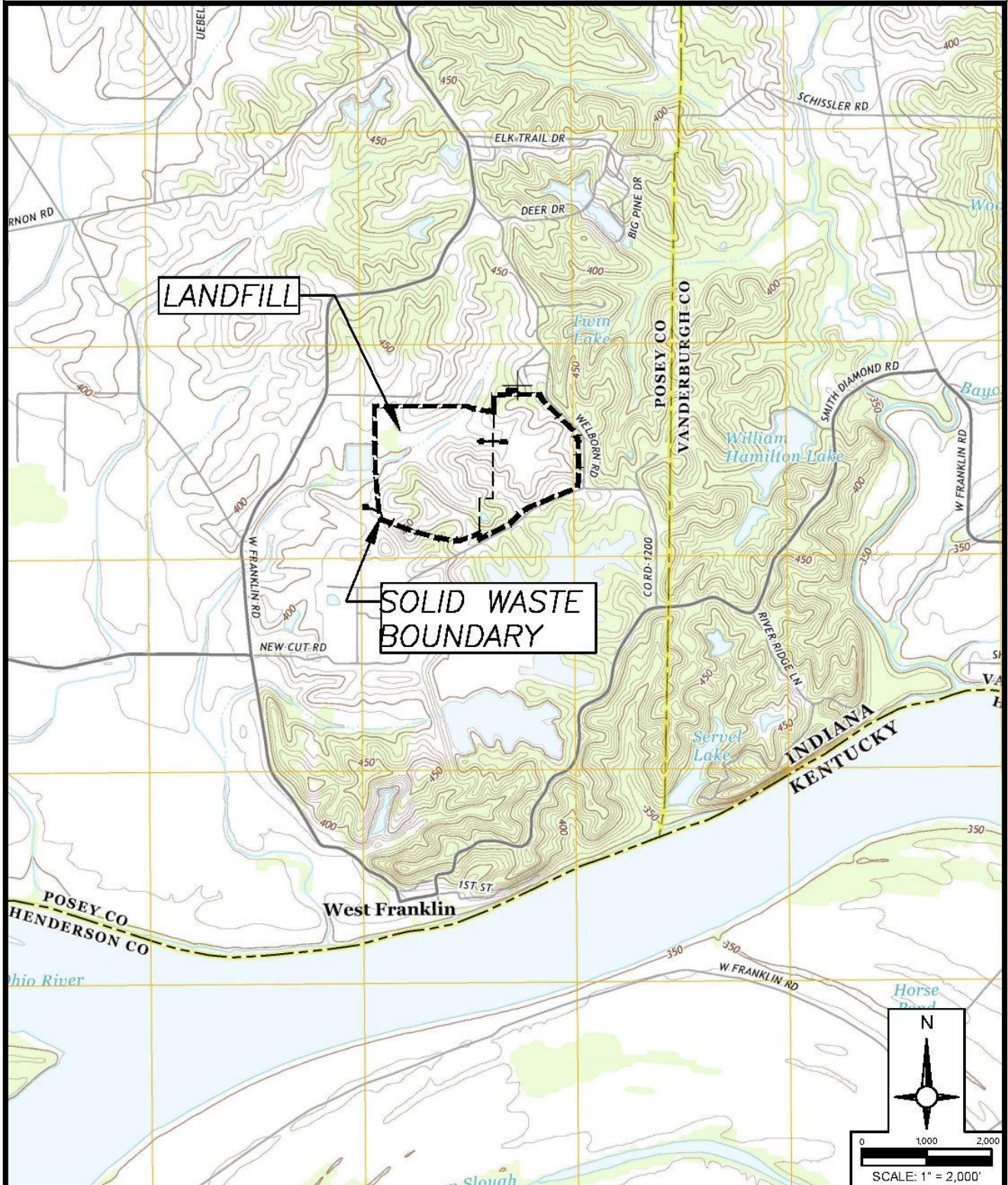
Dear Ms. Casbon-Scheller:

This report summarizes our December 21, 2022 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 Michael Thornbrue and Pedro Avellaneda of Atlas with site support by Eric Brown of CenterPoint Energy. The weather during the inspection was sunny with temperatures ranging from 35°F and 47°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: 170LF01372	Drn. By: BH
Date: 12/29/2022	Scale: AS SHOWN
	Ord. By: MT



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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 (Location 1, 3, 8, and 10).

Recommendation: None at this time.

- 2) Observed sparse vegetation of the Final Cover (Locations 6, 17, 18, and 20).

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) Although most drop inlets were in good conditions (Location 4), a few isolated areas near some drop inlets exhibited excess vegetation growth and erosion at the time of the inspection (Locations 7).

Recommendation: Remove excess vegetation and repair erosion by establishing a new vegetation cover.

- 4) Tall vegetation growth (relative to the adjacent grass) was observed along the edge of some drainage channels on the north side of the landfill and near an outlet drainage pipe, on the northeast side of the landfill (Locations 5, 9, 19 and 20). Site personnel clarified that the tall

vegetation prevents erosion adjacent to the riprap and that it is actively managed with regular inspection combined with scheduled growth, herbicide treatment, and cutting.

Recommendation: Continue planned vegetation maintenance.

- 5) The former seep has been filled and the area is well vegetated and maintained (Location 8).

Recommendation: None at this time.

- 6) An area on the northeast side of the landfill has been used as an informal access road to the landfill (Location 6).

Recommendation: Prevent further use as road and established a new vegetation cover.

- 7) Sediment accumulation was observed in a manhole of the north side of the landfill (Location 16).

Recommendation: Remove sediment accumulation inside the manhole.

- 8) A fallen solid waste boundary sign was observed on the north side of the landfill (Location 21).

Recommendation: Replace fallen sign.

- 9) A fallen bollard around piezometer PZ-M5 was observed on the east side of the landfill (Location 2).

Recommendation: Replace fallen bollard.

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 has temporary or final cover with established vegetation while parts are receiving temporary or final cover.

Recommendation: None at this time.

- 2) A drop inlet on the north side of the Vertical Expansion Disposal Area exhibited a damaged trash rack at the time of the inspection (Location 11).

Recommendation: Repair or replace the trash rack.

- 3) A drop inlet on the top of the Vertical Expansion Disposal Area lacks appropriate sediment controls (Location 12).

Recommendation: Improve sediment controls around drop inlet.

- 4) A drop inlet on the top of the Vertical Expansion Disposal Area exhibited erosion at the time of the inspection (Location 13).

Recommendation: Repair the erosion and reseed as necessary.

- 5) Erosion rills have formed on the middle north slope of the Vertical Expansion Disposal Area (Location 14).

Recommendation: Repair rills, install erosion control blankets and/or other erosion BMPs, and reseed areas to re-establish grass cover.

- 6) Sediment accumulation was observed at an outlet drainage pipe on the north side of the Vertical Expansion Disposal Area (Location 15).

Recommendation: Remove sediment accumulation at the outlet of the drainage pipe.

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.

Recommendation: None at this time.

- 2) Surface water runoff from the northern portion of the Active Landfill Area is routed to a depression at the far north end (Locations 22) and southwest corner (Location 25).

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 (Locations 23 and 24).

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

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 Atlas during the 2022 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 engineer on December 21, 2022. 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 December 21, 2022 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 2022 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 2021 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 5,393,900 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,

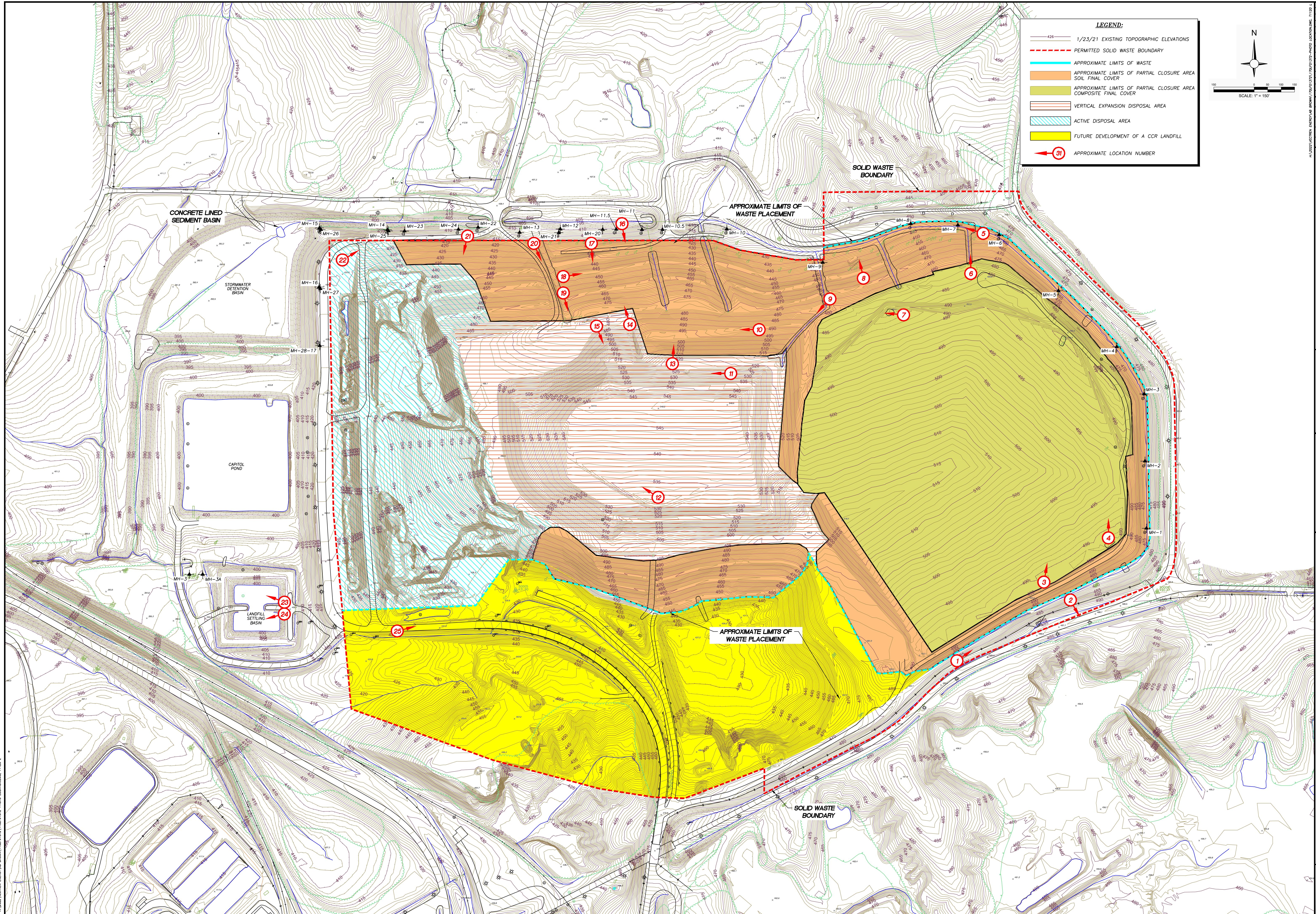
Atlas Technical Consultants L.L.C.

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



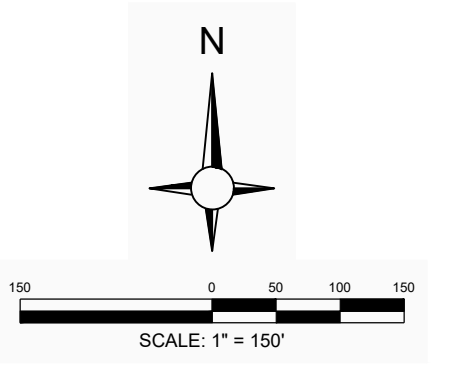
Copies: (3) Angie Casbon-Scheller – CenterPoint Energy
(1) Eric Brown – CenterPoint Energy
(1) Jason Copeland – CenterPoint Energy

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
- ① APPROXIMATE LOCATION NUMBER



<p>Project Number: 170LFD1372 Drawing For: See File Location Date: 12/2022 Scale: AS SHOWN App'd By: [Signature] Date: [Date] Drawn By: [Signature] Date: [Date]</p>	<p>Company Name: ATLAS 7988 CENTERPOINT DR. SUITE 100 INDIANAPOLIS, IN 46256 PHONE +1 317 849 4990 FAX +1 317 849 4278 WWW.ONEATLAS.COM</p>
<p>ATLAS</p>	
<p>SITE PLAN OF INSPECTION LOCATIONS TYPE III RWS LANDFILL 8511 WELBORN ROAD MOUNT VERNON, INDIANA 47620</p>	
<p>Sheet: 1</p>	