



**2022 VISUAL SITE INSPECTION
AES INDIANA PETERSBURG RESTRICTED WASTE TYPE III LANDFILL
SOLID WASTE FACILITY PERMIT NO. FP63-02**

AES INDIANA PETERSBURG GENERATING STATION
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA 47567

ATLAS PROJECT NO. 170LF01358

DECEMBER 23, 2022

PREPARED FOR:

AES INDIANA
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA 47567

ATTENTION: MR. WILL TEAGUE



Atlas Technical Consultants

7988 Centerpoint Dr.
Suite 100
Indianapolis, IN 46256

Phone +1 317 849 4990
Fax +1 317 849 4278

www.oneatlas.com

December 23, 2022

Mr. Will Teague
Senior Scientist
AES Indiana
6925 North State Road 57
Petersburg, Indiana 47567-0436

Re: 2022 Visual Site Inspection
Petersburg Restricted Waste Landfill
Solid Waste Facility Permit No. FP 63-02
AES Indiana
Petersburg Generating Station
Petersburg, Indiana
ATLAS Project No. 170LF01358

Dear Mr. Teague:

Atlas Technical Consultants is pleased to present the findings of the November 17, 2022 Visual Site Inspection of the AES Indiana Petersburg Generating Station Type III Restricted Waste Landfill. This visual inspection and report were done in accordance with guidelines established by the Coal Combustion Residuals (CCR) Rule published by the Environmental Protection Agency (EPA) on April 17, 2015.

The scope of this inspection was limited to an examination of readily observable surficial features of the landfill and its appurtenant structures, and a review of information that you provided. 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 as a warranty or guaranty of the future performance/safety of the landfill.

The AES Indiana Petersburg Generating Station Type III Restricted Waste Landfill is located about four (4) miles north of the City of Petersburg in Pike County, Indiana west of State Road 57 (Figure 1). The landfill encompasses an area of approximately 122.1 acres inside the Solid Waste Boundary (Figure 2). The Petersburg Type III RWS Landfill operates under Indiana Department of Environmental Management (IDEM) Permit Number 63-2.

The landfill inspection was completed by Bill Paraskevas and Pedro Avellaneda of Atlas. The weather conditions during the inspection were between 33°F and 38°F and sunny. Contained herein

is a summary of the engineering observations of the landfill including condition of the cover soils, grading and erosion, vegetation, haul roads, perimeter ditches, down drain channels, riprap areas, culverts and other adjacent structures. The landfill system features are highlighted on the attached Site Plan shown in Figure 3 of this report.

The 2022 annual inspection was performed to address the standards and guidelines required by the CCR Rule instituted by the Environmental Protection Agency 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). Listed below are requirements specified within the CCR Rule and the observations made by Bill Paraskevas and Pedro Avellaneda during the annual inspection:

- i. Any changes in geometry of the structure since the previous annual inspection;
- ii. The approximate volume of CCR contained in the unit at the time of inspection;
- iii. Any appearances of an actual or potential structural weakness of the CCR unit;
- iv. Any other change (s) which may have affected the stability or operation of the CCR Unit since the last annual inspection.

Changes in Structural Geometry

There were no observed geometry changes during the 2022 Petersburg visual landfill inspection. Waste placement has paused at the landfill and all areas are under final or intermediate cover. Engineering observations were grouped into two inspection zones shown in Figure 3, 2022 Visual Site Inspection Grid Map.

The zone descriptions, observations, and recommendations are as follows:

Zone A Partial Closure Area – North and West Side-slopes

A 33.8 acre area on the northern and western slopes of the landfill have received partial closure certification from the Indiana Department of Environmental Management (IDEM). In general, this area has a good soil cover and is well-vegetated. Since the time of the 2021 inspection, additional improvements have been made to fill in ruts and over-seed sparsely vegetated areas.

1. Good vegetation exists along the majority of the west and north slopes of the partial closure area (e.g., locations M-16, L-18, M-18, L-20 of Figure 3).
2. Overgrown vegetation on a drainage channel, located on the northeast side of the landfill (location Q-14), was reported on the 2021 inspection (Photo ID 12 of the 2021 inspection report). The overgrown vegetation on the channel has been trimmed.
3. Minor sparse vegetation areas (location K-23 and M-13 of Figure 3) were observed on the west side of the landfill.
 - o Recommendation: Repair the soil cover and overseed these areas to establish a protective grass cover.

4. Sediment accumulation was observed inside a culvert located on the north side of the landfill (location O-12 of Figure 3).
 - Recommendation: Remove sediment accumulation to allow flow into the culvert.
5. Overgrown vegetation was observed around drainage pipe inlets along the top of the landfill (location M-22 of Figure 3).
 - Recommendation: Vegetation around the inlets to the pipes should be maintained to allow for free flow of runoff into the pipes.

Zone B Intermediate Cover Area – Top East and South Side slopes

In 2017, a soil cover was applied to the top and east and south side slopes of the landfill, and new vegetation was established. Terrace and riprap down chute channels were added or improved to accommodate the addition of the new soil and vegetative cover.

1. Good vegetation exists along the majority of the south end of the landfill, top of landfill and east slope (e.g., locations Q-23, P-21, P-18, Q-17 of Figure 3).
2. A minor sparse vegetation area (location P-17 of Figure 3) and an animal burrow area (location P-16 of Figure 3) were observed on the east side of the landfill.
 - Recommendation: Repair the soil cover and overseed these areas to establish a protective grass cover.

CCR Volume

There is a 43 acre expansion area east of the existing landfill which has been approved as a Type I landfill, this area has not been developed at this time. Currently, landfill operations have been confined to the original landfill footprint and waste placement has been paused.

Based on IPL surveying information, there is approximately 7,043,808 cubic yards of CCR material placed in the landfill unit.

Structural Integrity

All landfill slopes appear to be stable with no visual indications or signs of sloughing or subsidence detected during the 2022 visual inspection.

Stability and Operation

The landfill is generally in good condition and well vegetated in most places. Minor cover and waste erosion was noted and should be repaired at the earliest opportunity. Operation of the landfill unit is not expected to be adversely affected by any items detected during the 2022 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 the undersigned at 317.849.4990.

Sincerely,

Atlas Technical Consultants L.L.C.



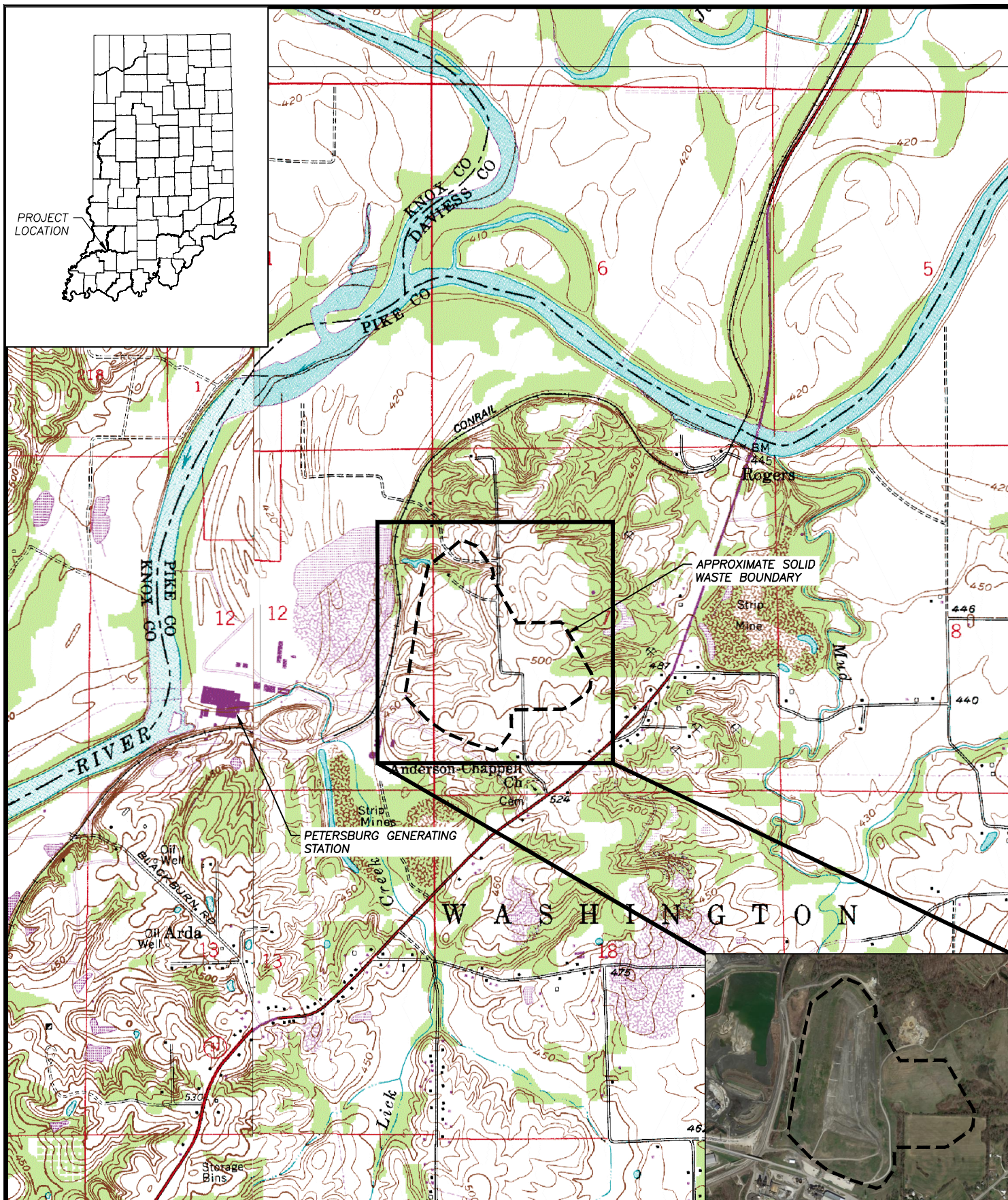
William Paraskevas, P.E.
Principal Engineer

Copies: Will Teague

Attachments:

Figure 1 Vicinity Map
Figure 2 CCR Disposal Facilities
Figure 3 Visual Site Inspection Grid
Inspection Photo Log

H:\2022\AES INDIANA\PETERSBURG\170LF01358\PHOTO LOCATIONS\170LF01358-VIC LIMITS.DWG, FIG1



VICINITY MAP

AES PETERSBURG ASH POND AMBANKMENTS
AES INDIANA
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA

Project Number:
170LF01358

Drawing File:
SEE LOWER LEFT

Date:
12/21/2022

Scale:
AS SHOWN

Drn. By:
BH

Ckd. By:
MB

App'd By:

Figure:

1

ATC

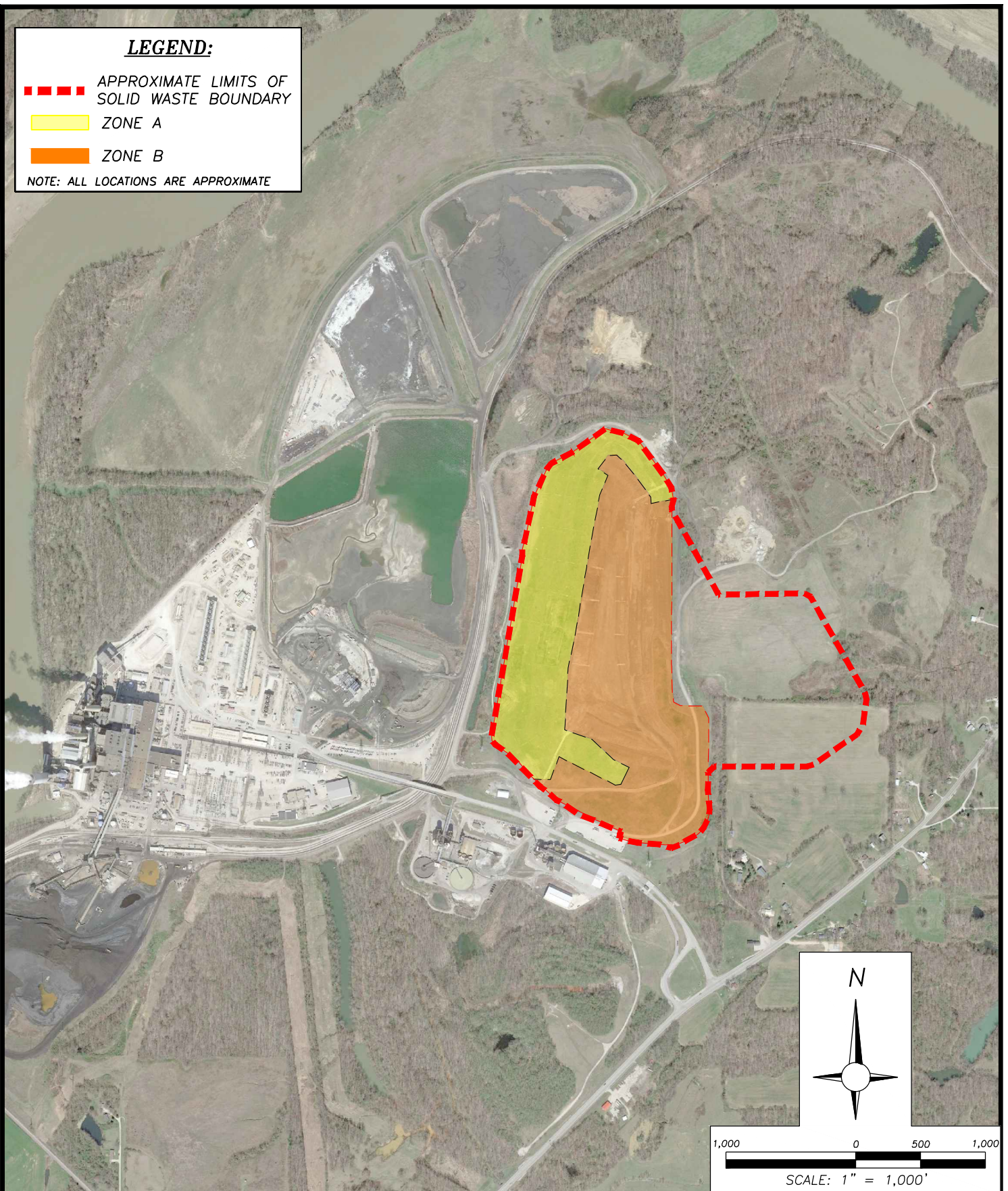
LEGEND:

■ ■ ■ ■ ■ APPROXIMATE LIMITS OF
SOLID WASTE BOUNDARY

 ZONE A

 ZONE B

NOTE: ALL LOCATIONS ARE APPROXIMATE



CCR DISPOSAL FACILITIES CCR LANDFILL ANNUAL INSPECTION REPORT

AES PETERSBURG RESTRICTED WASTE TYPE III LANDFILL
AES INDIANA
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA

Project Number:
170LF01358

Drawing File:
SEE LOWER LEFT

Date:
12/21/2022

Scale:
AS SHOWN

Drn. By:
BH

Ckd. By:
MB

App'd By:

Figure:
2



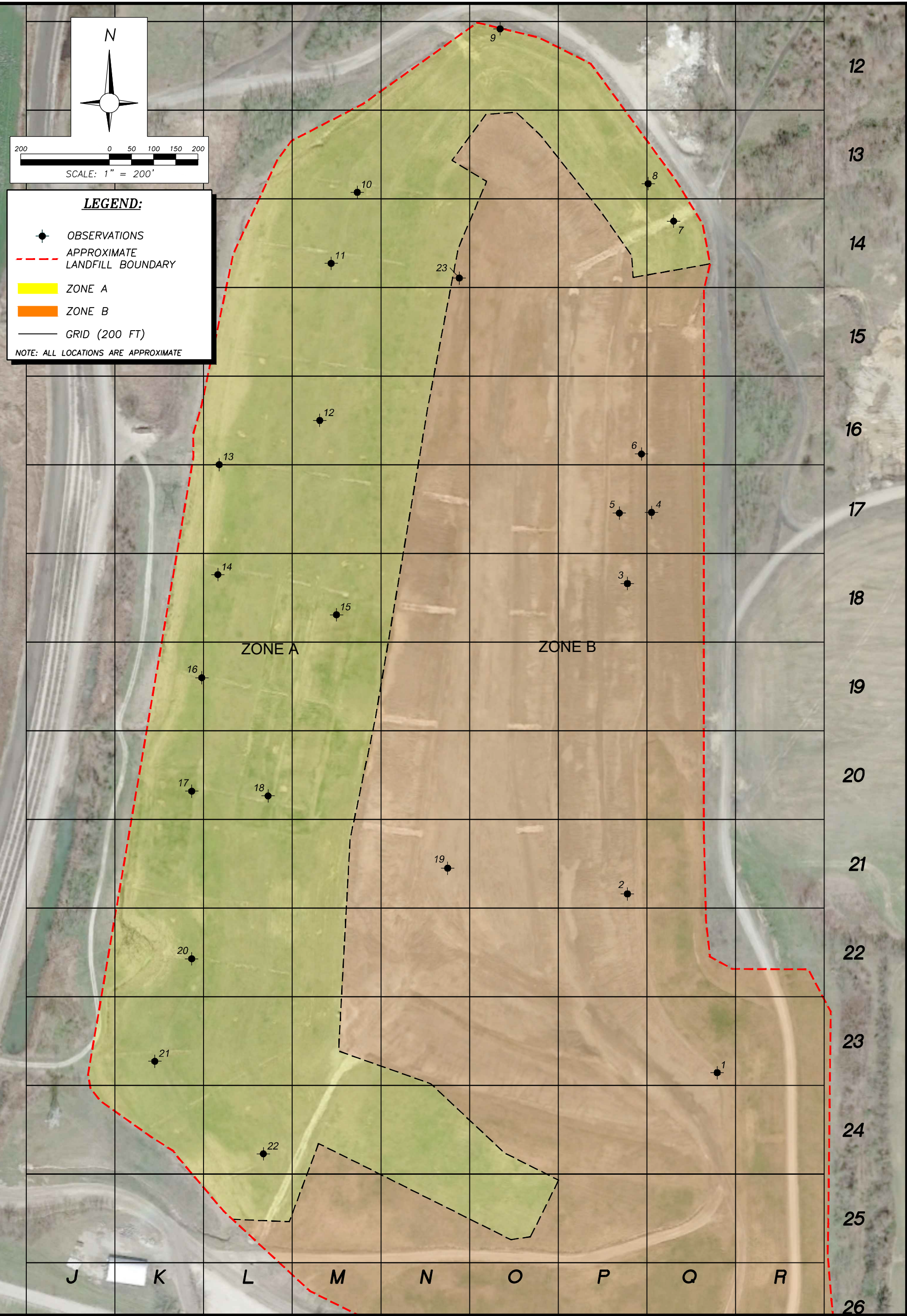






Figure: 3	AS SHOWN Scale: 12/22/2022	<div>2022 VISUAL SITE INSPECTION GRID MAP</div> <div>AES PETERSBURG RESTRICTED WASTE TYPE III LANDFILL</div> <div>AES INDIANA</div> <div>6925 NORTH STATE ROAD 57</div> <div>PETERSBURG, INDIANA</div>						Project Number: 170LF01358		Drm. By: BH	
										Ckd. By: MB	
										App'd By:	
										Ckd. Date:	
										<div>ATC</div>	


Grid ID Q-23	Photo ID 1	
Date November 17, 2022		
Description: Vegetation well established on the southeast side of the landfill. Photo looking northwest.		
Grid ID P-21	Photo ID 2	
Date November 17, 2022		
Description: Vegetation well established on the east side of the landfill. Lower east slope. Photo looking north.		


Grid ID P-18	Photo ID 3	
Date November 17, 2022		
Description: Vegetation well established on the east side of the landfill. Lower east slope. Photo looking north.		


Grid ID Q-17	Photo ID 4	
Date November 17, 2022		
Description: Vegetation well established along the east slope of the landfill and around a rock check dam. Lower east slope. Photo looking south.		


Grid ID P-17	Photo ID 5	
Date November 17, 2022		
Description: Sparse vegetation on the east section of the landfill. Photo looking north.		



Grid ID P-16	Photo ID 6	
Date November 17, 2022		
Description: Animal burrow on the east side of the landfill.		



Grid ID Q-14	Photo ID 7	
Date November 17, 2022		
Description: Drainage channel on the northeast side of the landfill. Overgrown vegetation reported on the 2021 report has been removed. Photo looking southwest.		


Grid ID Q-13	Photo ID 8	
Date November 17, 2022		
Description: Drainage channel on the northeast side of the landfill. Photo looking northwest.		


Grid ID O-12	Photo ID 9	
Date November 17, 2022		
Description: Sediment accumulation preventing flow into a culvert. Photo looking southwest.		


Grid ID M-13	Photo ID 10	
Date November 17, 2022		
Description: Sparse vegetation on the northwest side of the landfill. Photo looking northeast.		


Grid ID M-14	Photo ID 11	
Date November 17, 2022		
Description: Drainage channel on the northwest side of the channel. Photo looking southwest.		
Grid ID M-16	Photo ID 12	
Date November 17, 2022		
Description: Vegetation well established on the west side of the landfill. Photo looking south.		



Grid ID L-16	Photo ID 13	
Date November 17, 2022		
Description: Vegetation well established on west slope of the landfill. Photo looking east.		
Grid ID L-18	Photo ID 14	
Date November 17, 2022		
Description: Vegetation well established on west side slope of the landfill. Photo looking southwest.		



Grid ID M-18	Photo ID 15	
Date November 17, 2022		
Description: Vegetation well established along the west side slope of the landfill. Photo looking north east.		


Grid ID K-19	Photo ID 16	
Date November 17, 2022		
Description: Drainage channel on the west side of the landfill. Photo looking east.		

Grid ID K-20	Photo ID 17	
Date November 17, 2022		
Description: Vegetation well established on the west slope of the landfill. Photo looking north.		

Grid ID L-20	Photo ID 18	
Date November 17, 2022		
Description: Vegetation well established on the west slope of the landfill. Photo looking north.		

Grid ID N-21	Photo ID 19	
Date November 17, 2022		
Description: Vegetation well established on top of the landfill. Photo looking north.		
Grid ID K-22	Photo ID 20	
Date November 17, 2022		
Description: Drainage pipes on the west slope of the landfill. Photo looking northeast.		

Grid ID K-23	Photo ID 21	
Date November 17, 2022		
Description: Sparse vegetation on the west slope of the landfill. Photo looking northeast.		
Grid ID L-25	Photo ID 22	
Date November 17, 2022		
Description: Drainage channel on the southwest slope of the landfill. Photo looking northeast.		

Grid ID M-22	Photo ID 23	
Date November 17, 2022		
Description: Overgrown vegetation around drainage pipe inlets along the top of the landfill. Photo looking west.		