



**2023 VISUAL INSPECTION OF ASH POND EMBANKMENTS  
AES PETERSBURG ASH POND SYSTEM**

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

ATLAS PROJECT NO. 170LF01359

JANUARY 3, 2024

PREPARED FOR:

AES INDIANA  
6925 NORTH STATE ROAD 57  
PETERSBURG, INDIANA 47567

ATTENTION: MR. JEFF HARTER



Atlas Technical Consultants

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Indianapolis, IN 46256

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Fax +1 317 849 4278

[www.oneatlas.com](http://www.oneatlas.com)

January 3, 2024

Mr. Jeff Harter  
Team Leader  
AES Indiana  
6925 North State Road 57  
Petersburg, Indiana 47567-0436

**Re: 2023 Visual Inspection of Ash Pond Embankments  
Petersburg Ash Basin Pond System  
AES Indiana**  
Petersburg Generating Station  
Petersburg, Indiana  
ATLAS Project No. 170LF01359

Dear Mr. Harter:

Atlas Technical Consultants is pleased to present the findings of the December 28, 2023, Visual Site Inspection of the AES Petersburg Generating Station Ash Pond Embankments of the Ash Ponds A, A', B, C and D. 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 ash pond embankments 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 ash pond system 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 ash pond systems, it should not be considered as a warranty or guaranty of the future performance/safety of the ash pond embankments.

The AES Petersburg Generating Station Ash Basin Pond System is located about four (4) miles north of the City of Petersburg in Pike County, Indiana west of State Road 57 (Figure 1). The ash pond system encompasses an area of approximately 157.9 acres (Figure 2).

The ash pond embankments inspection was completed by Juan Carrizo of Atlas Technical Consultants accompanied by Braden Henson of AES. The weather condition during the inspection were between 33°F and 38°F and cloudy. Contained herein is a summary of the engineering observations of the ash pond embankments including condition of the pond embankment side slopes, grading and erosion, vegetation, haul roads, perimeter ditches, down drain channels, riprap

areas, culverts, and other adjacent structures. A vicinity map and the ash pond limits are shown in Figures 1 and 2 of this report for reference.

The 2023 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 ash ponds 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. §257.83(b). Listed below are requirements specified within the CCR Rule and the observations made by Juan D. Carrizo during the annual inspection:

- i. A review of available information regarding the status and condition of the CCR Unit;
- ii. A visual inspection of the CCR Unit to identify signs of distress or malfunction;
- iii. A visual inspection of any hydraulic structures underlying the base of the CCR unit.

## Inspection Summary

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A site inspection grid map for the ash pond system at the AES Petersburg station is presented in Figure 3. The area occupied by Ash Pond D has been repurposed with the construction of a wastewater treatment plant, Ash Ponds B and C are closed, and Ash Pond A is in the closure process as in-place closure. Ash Pond A' is largely dewatered and will soon be regraded and closed as part of the Ash Pond A closure.

Engineering observations performed on December 28, 2023 are shown in Figure 3, 2023 Visual Site Inspection Grid Map. Atlas visually inspected the embankments for Ash Ponds A, A', B, C, and D and found no areas of instability. However, there were few areas with concerns relating to minor erosion on sections of Ash Pond B (Figure 3).

A description of the inspection findings is presented in sections below.

## Changes in Geometry of Ash Pond

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Observed geometry changes during the 2023 Petersburg ash basin embankment inspection consisted mainly of grading measures within the limits of Ash Pond A and A' which are in the process of being closed in place. There were no changes to the observed geometry of Ponds B, C & D.

### **Ash Pond A and A'**

Ash Pond A & A' are approximately 70.1 acres in size are closed in place and a geocomposite final cover system installed over the ash pond system. No erosion was observed with vegetation and slope areas in excellent condition.

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## Ash Pond B

Ash Pond B is approximately 33.1 acres and was closed with a geomembrane final cover except for the south side slope which was closed with an approved soil final cover. As part of the closure work on Pond A, located to the south of Pond B, the soil final cover along the south slope of Pond B is being replaced with a geomembrane cover. Ash Pond B does not receive ash anymore. In general, this pond has a good soil cover and is well-vegetated along the side slopes and top of the former ash pond basin.

1. Accumulated sediments/debris and/or tall vegetation observed at three separated drop inlets located on the south side of Ash Pond B (locations 12, and 31 of Figure 4) and the north side of Ash Pond B (location 38 of Figure 4).
  - o Recommendation: Remove sediments and cut down tall vegetation at drop inlets.
2. Minor erosion rills were observed at three separate locations on the top section of Ash Pond B (locations 32, 37 and 39 of Figure 4).
  - o Recommendation: Repair the soil cover and overseed these areas to establish a protective grass cover.

## Ash Pond C

Ash Pond C is approximately 45.7 acres. It has been recently closed with a geomembrane final cover and does not receive ash anymore. The former ash pond has a good soil cover and vegetation established along the side slopes and upper cover. No erosion was observed with vegetation and slope areas in excellent condition.

## Ash Pond D

The area for Ash Pond D has been repurposed and does not receive ash sluicing anymore. In general, this area has been paved with asphalt and is now entirely occupied by a wastewater treatment plant and a parking facility.

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## Structural Integrity

All ash pond embankment slopes appear to be stable with no visual indications or signs of sloughing or subsidence were detected during this inspection.

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## Stability and Operation

The ash pond embankments are generally in good condition and the slopes are well vegetated in most places. Areas of localized surficial erosion were found around a few areas of Ash Pond A. Those erosional features did not appear to penetrate through the soil cover, but they should be refilled and revegetated to prevent further damage to the cover or embankments. No other significant

deficiencies were noted and operation of the ash pond system at this time is not expected to be adversely affected by any items detected during the 2023 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.**



Juan Carrizo, P.E.  
Senior Project Engineer



Sendhil Kumar, P.E.  
Principal Engineer

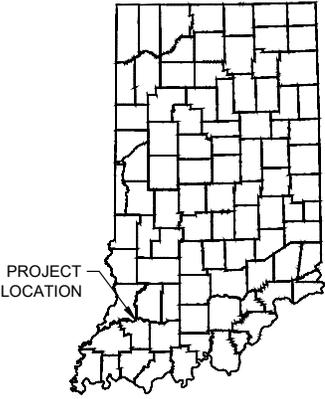
Copies:        Jeff Harter  
                  Braden Henson

Attachments:

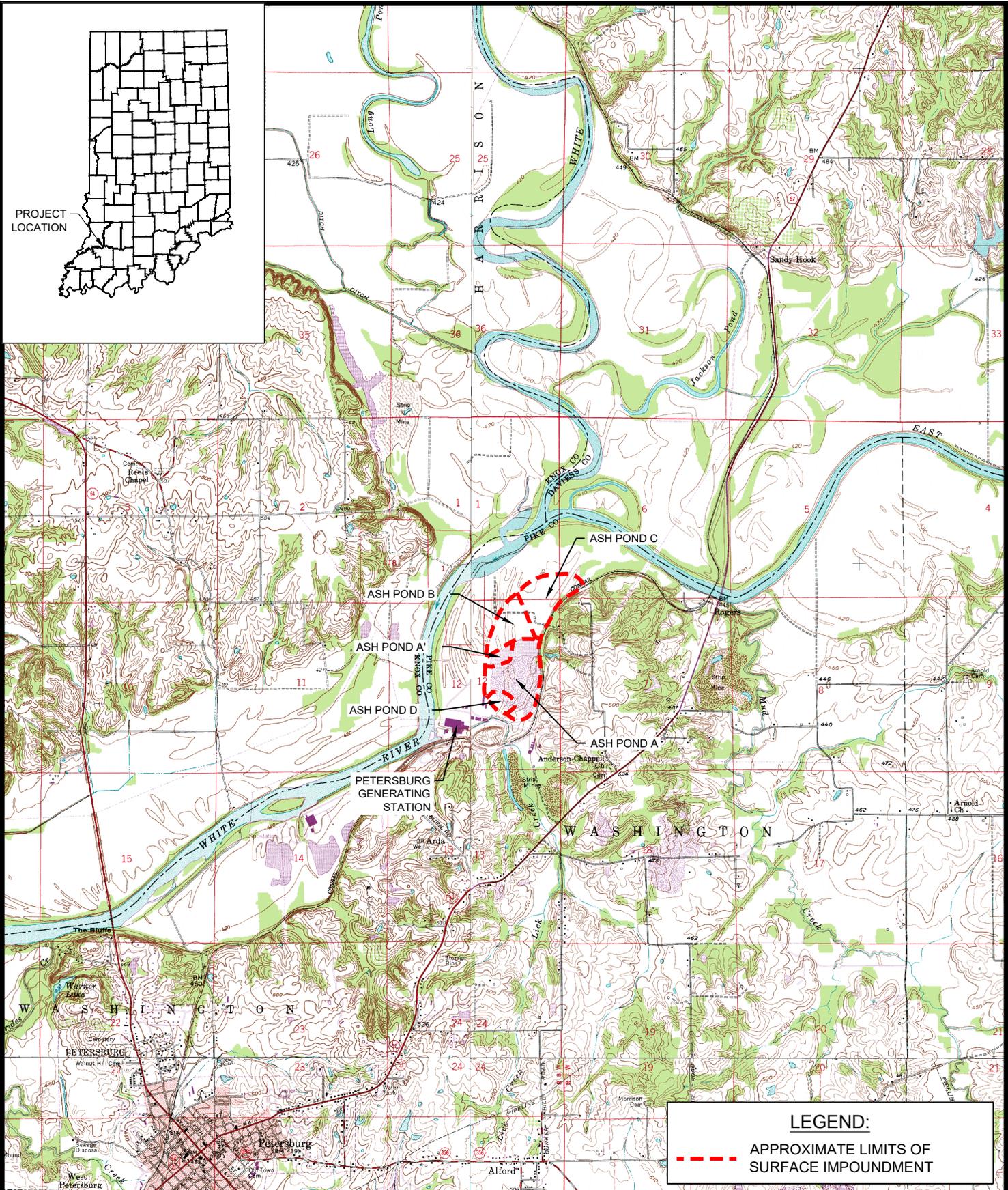
Figure 1	Vicinity Map
Figure 2	CCR Disposal Facilities
Figure 3	Visual Site Inspection Grid Map
Figure 4	Site Plan for Photo Locations

Attachment A: Dam Inspection Report

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PROJECT LOCATION



**LEGEND:**

 APPROXIMATE LIMITS OF SURFACE IMPOUNDMENT

**VICINITY MAP**  
 AES PETERSBURG ASH POND SYSTEM  
 AES INDIANA  
 6925 NORTH STATE ROAD 57  
 PETERSBURG, INDIANA

Project Number: TBD	Scale: AS SHOWN	Drn. By: PH
Date: 12/28/2023		Ckd. By: JC

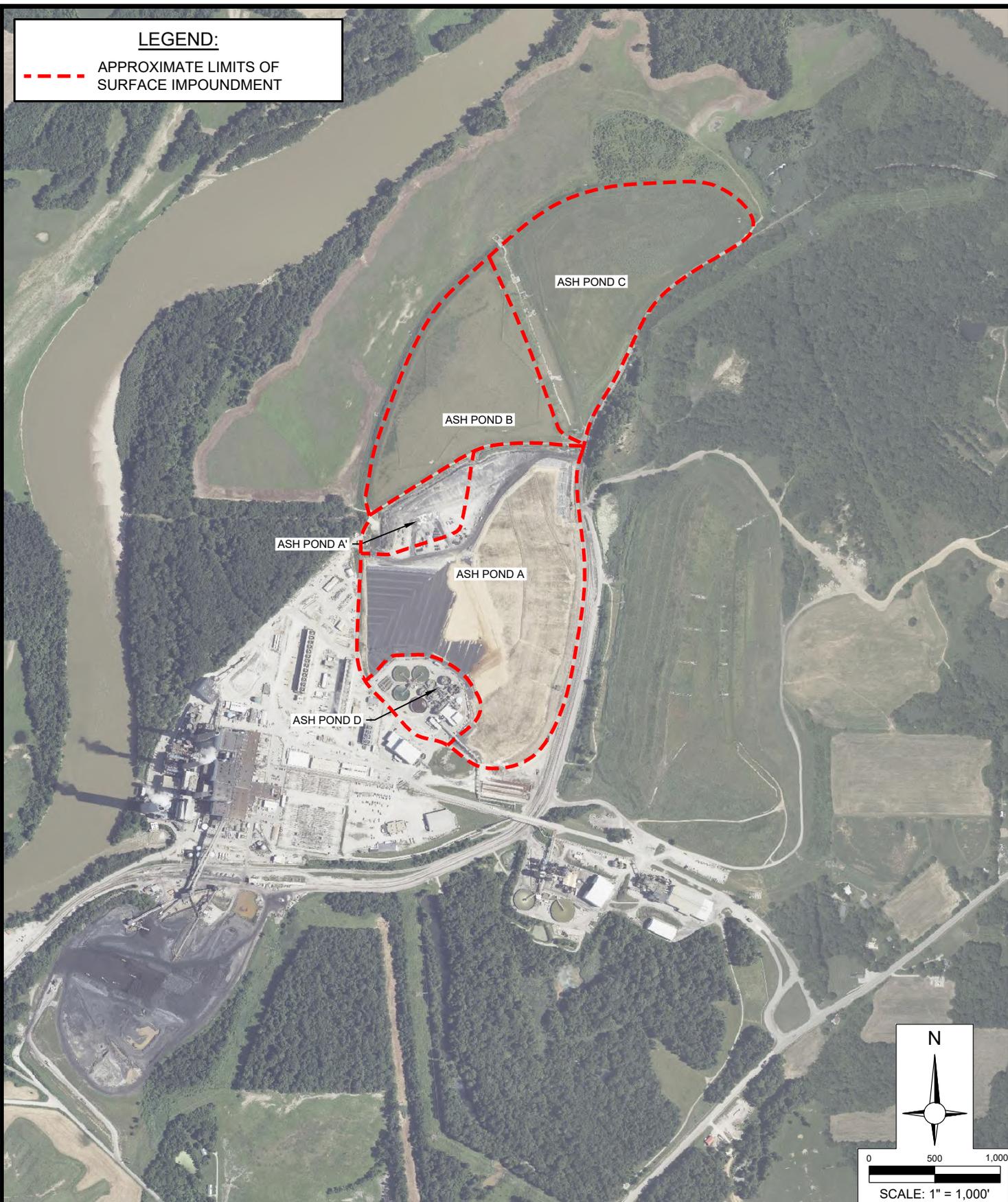


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**LEGEND:**

 APPROXIMATE LIMITS OF SURFACE IMPOUNDMENT



**CCR ASH POND SYSTEM  
CCR ASH POND EMBANKMENT ANNUAL INSPECTION REPORT**

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

Project Number:

TBD

Drn. By:

PH

Date:

12/28/2023

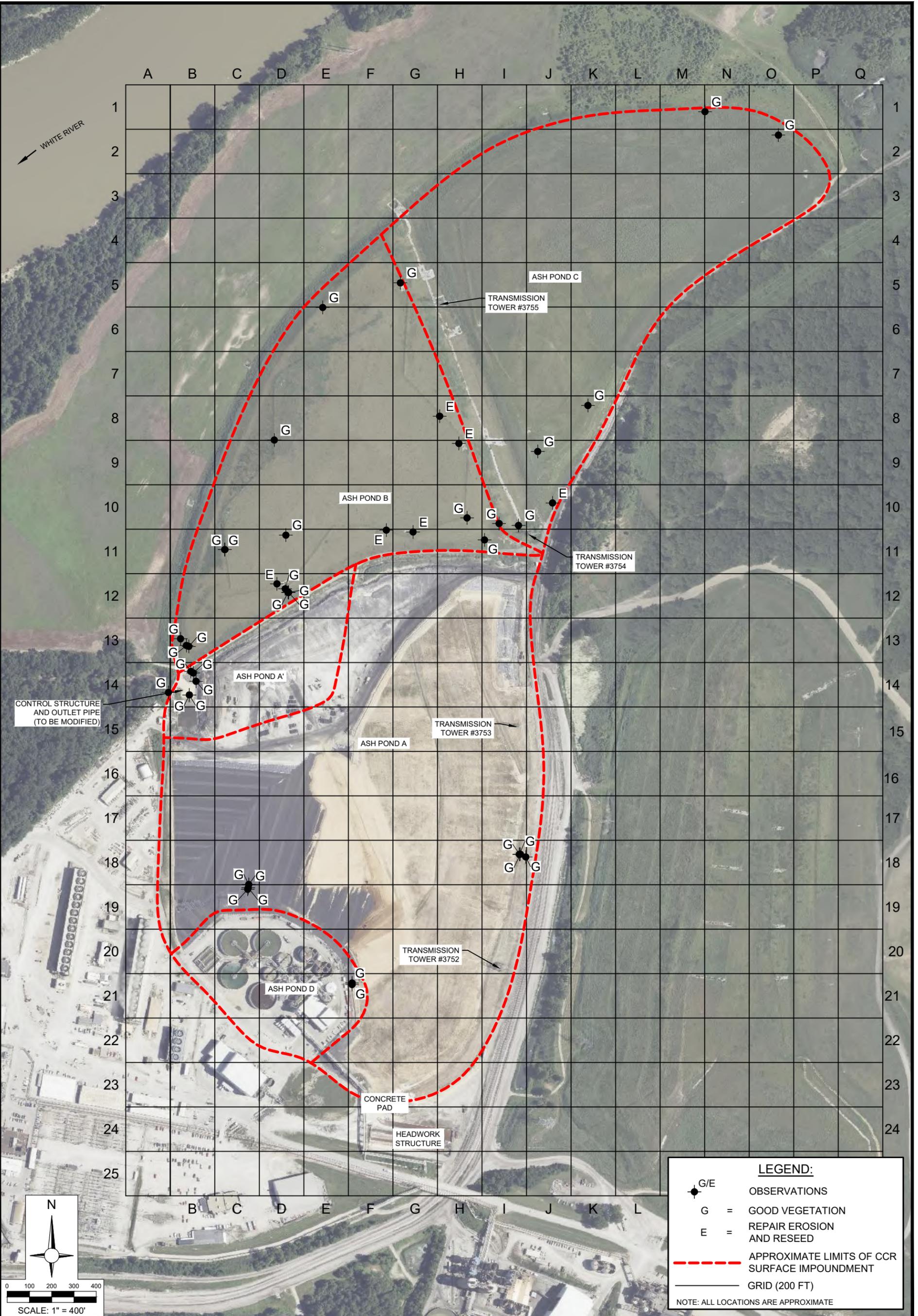
Scale:

AS SHOWN

Ckd. By:

JC





**LEGEND:**

- G/E OBSERVATIONS
- G = GOOD VEGETATION
- E = REPAIR EROSION AND RESEED
- APPROXIMATE LIMITS OF CCR SURFACE IMPOUNDMENT
- GRID (200 FT)

NOTE: ALL LOCATIONS ARE APPROXIMATE

3

AS SHOWN

PH

JC

01/03/2024

Scale: AS SHOWN

Dn. By: PH

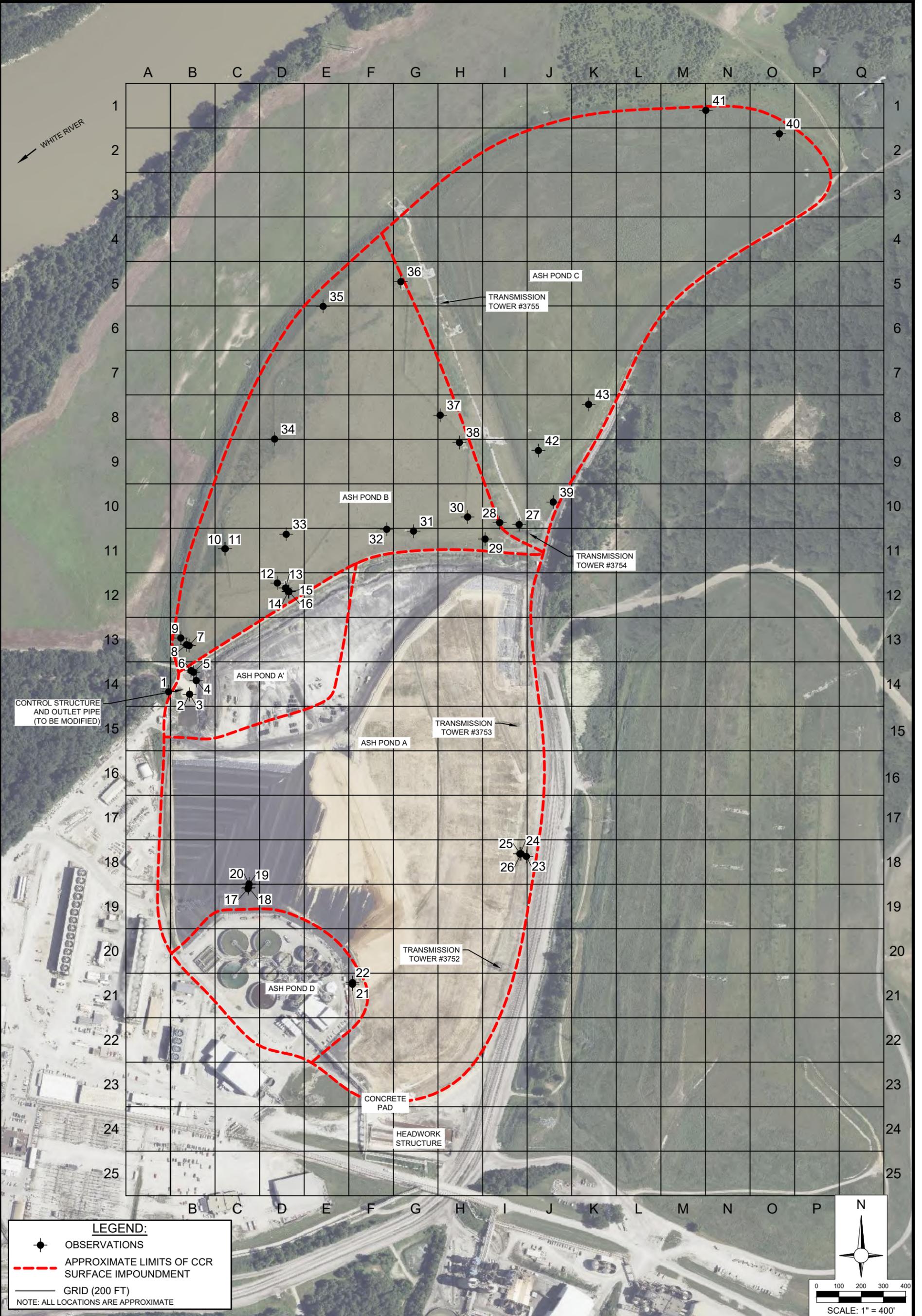
Okd. By: JC

Date: 01/03/2024

Project Number: TBD

**2023 VISUAL SITE INSPECTION GRID MAP**  
 AES PETERSBURG ASH POND SYSTEM  
 AES INDIANA  
 6925 STATE ROAD 57  
 PETERSBURG, INDIANA





**LEGEND:**  
 ● OBSERVATIONS  
 - - - APPROXIMATE LIMITS OF CCR SURFACE IMPOUNDMENT  
 — GRID (200 FT)  
 NOTE: ALL LOCATIONS ARE APPROXIMATE

N  
 0 100 200 300 400  
 SCALE: 1" = 400'

Figure: AS SHOWN  
 Scale: PH  
 Dn. By: JC  
 Date: 01/03/2024  
 Project Number: TBD

**SITE PLAN FOR PHOTO LOCATIONS**  
**DECEMBER 28, 2023**  
 AES PETERSBURG ASH POND SYSTEM  
 AES INDIANA  
 6925 STATE ROAD 57  
 PETERSBURG, INDIANA



## **Attachment A: Dam Inspection Report**

# SUGGESTED DAM INSPECTION REPORT (Refer to pages 5 and 6 for instructions.)

Name of Professional Conducting Inspection <b>Juan D. Carrizo</b>	Professional License No. (Indiana) <b>PE11500037</b>
Business Address 7988 Centerpoint Dr, Suite 100, Indianapolis, IN 46256	Phone: (day) <u>317 - 849 - 4990</u> (evening) _____

Company Name **Atlas Technical Consultants**

INSPECTION PREPARATION: Reviewed all pertinent technical documentation related to this dam and site in the State's and the Owner's files:  
Yes  No  Comment \_\_\_\_\_

MULTIDISCIPLINARY: I am experienced in the technical disciplines or I am working with other professionals experienced in the technical disciplines to properly inspect this dam and appurtenant works. Technical disciplines, in addition to the general civil engineering, may include geotechnical, geological, hydrologic, structural, and mechanical. Yes  No  Comment \_\_\_\_\_

Dam Name <b>AES Petersburg Ash Pond A</b>		Quad. <b>Petersburg</b>	Date of Inspection <b>12 / 28 / 2023</b>
State Dam ID <b>N/A</b>	Permit (if unapproved see pg. 6) <b>N/A</b>	County <b>Pike</b>	Last Inspection <b>11 / 17 / 2022</b>
Owners Name <b>AES Indiana</b>		Owner's Phone <b>( 812 ) 601-7115</b>	

Address/Zip Code  
**6925 North State Road 57, Petersburg, IN 47567**

Contact's Name <b>Jeff Harter</b>	Contact's Phone (day) <u>812 - 601 - 7222</u> (evening) <u>812 - 631 - 2654</u>	Spillway Width Top <b>N/A</b> Bot. <b>N/A</b>	Ft. FBD. <b>N/A</b>
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Hazard <b>Low</b>	Drainage Area <b>0.16 MI<sup>2</sup></b>	Surface Area <b>81 AC</b>	Height <b>20 FT</b>	Crest Length <b>6900 FT</b>	Crest Width <b>20 FT</b>	Inlet Below Crest <b>N/A FT</b>	Slope: Up <b>2.5</b> Down <b>2.5</b>
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<b>FIELD CONDITIONS OBSERVED</b> Water Level - Below Dam Crest <u>&gt;20</u> Ft. Ground Moisture Condition: Dry <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Snowcover <input type="checkbox"/> Other _____	<b>DRAWDOWN STRUCTURE</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> None Comment <u>Taken out of service</u>
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**MONITORING**  Yes  None [  Gage Rod  Piezometers  Seepage Weirs  Survey Monuments  Other ]

Comments \_\_\_\_\_

<b>A UPSTREAM SLOPE</b>	<b>PROBLEMS NOTED:</b> <input checked="" type="checkbox"/> (A-1) None <input type="checkbox"/> (A-2) Riprap - Missing, Sparse, Displaced, Weathered <input type="checkbox"/> (A-3) Wave Erosion-with Scarps <input type="checkbox"/> (A-4) Cracks-with Displacement <input type="checkbox"/> (A-5) Sinkhole <input type="checkbox"/> (A-6) Appears Too Steep <input type="checkbox"/> (A-7) Depressions or Bulges <input type="checkbox"/> (A-8) Slides <input type="checkbox"/> (A-9) Animal Burrows <input type="checkbox"/> (A-10) Trees, Brush, Briars <input type="checkbox"/> (A-11) Other _____
GOOD <input checked="" type="checkbox"/>	Comments: _____
ACCEPTABLE <input type="checkbox"/>	
DEFICIENT <input type="checkbox"/>	
POOR <input type="checkbox"/>	

<b>B CREST</b>	<b>PROBLEMS NOTED:</b> <input checked="" type="checkbox"/> (B-1) None <input type="checkbox"/> (B-2) Ruts or Puddles <input type="checkbox"/> (B-3) Erosion <input type="checkbox"/> (B-4) Cracks with Displacement <input type="checkbox"/> (B-5) Sinkholes <input type="checkbox"/> (B-6) Not Wide Enough <input type="checkbox"/> (B-7) Low Area <input type="checkbox"/> (B-8) Misalignment <input type="checkbox"/> (B-9) Inadequate Surface Drainage <input type="checkbox"/> (B-10) Trees, Brush, Briars <input type="checkbox"/> (B-11) Other _____
GOOD <input checked="" type="checkbox"/>	Comments: _____
ACCEPTABLE <input type="checkbox"/>	
DEFICIENT <input type="checkbox"/>	
POOR <input type="checkbox"/>	

*Spillway Width* refers to the open channel (typically the emergency or auxiliary spillway) at the control section.  
*Ft. FBD.* refers to the vertical distance from the emergency (auxiliary) spillway control section to the lowest point of the crest of the dam.  
*Inlet Below Crest* refers to the vertical distance from the inlet of the principal spillway to the crest of the dam.

<b>C DOWNSTREAM SLOPE</b>	
GOOD	<input checked="" type="checkbox"/>
ACCEPTABLE	<input type="checkbox"/>
DEFICIENT	<input type="checkbox"/>
POOR	<input type="checkbox"/>

**PROBLEMS NOTED:**  (C-1) None  (C-2) Livestock Damage  (C-3) Erosion or Gullies  (C-4) Cracks with Displacement  (C-5) Sinkholes  (C-6) Appears too Steep  (C-7) Depression or Bulges  (C-8) Slide  (C-9) Soft Areas  (C-10) Trees, Brush, Briars  (C-11) Animal Burrows  (C-12) Other \_\_\_\_\_

Comments:

<b>D SEEPAGE</b>	
GOOD (NONE)	<input checked="" type="checkbox"/>
ACCEPTABLE	<input type="checkbox"/>
DEFICIENT	<input type="checkbox"/>
POOR	<input type="checkbox"/>

**PROBLEMS NOTED:**  (D-1) None  (D-2) Saturated Embankment Area  (D-3) Seepage Exits on Embankment  (D-4) Seepage Exits at Point Source  (D-5) Seepage Area at Toe  (D-6) Flow Adjacent to Outlet  (D-7) Seepage Clear/Muddy

[DRAIN OUTFALLS SEEN \_\_\_No\_\_\_Yes  (D-8) Flow Clear/Muddy  (D-9) Dry/Obstructed]

(D-10) Other \_\_\_\_\_ Describe location of drains and indicate amount and quality of discharge.

Comments:

<b>E PRINCIPAL SPILLWAY</b>	
GOOD	<input checked="" type="checkbox"/>
ACCEPTABLE	<input type="checkbox"/>
DEFICIENT	<input type="checkbox"/>
POOR	<input type="checkbox"/>

**DESCRIPTION:**

**PROBLEMS NOTED:**  (E-1) None  (E-2) Deterioration  (E-3) Separation  (E-4) Cracking  (E-5) Inlet, Outlet Deficiency  (E-6) Stilling Basin Inadequacies  (E-7) Trash Rack  (E-8) Other \_\_\_\_\_

Comments:  
Being removed from service as ash pond is closed.

<b>F AUXILIARY SPILLWAY</b>	
GOOD	<input type="checkbox"/>
ACCEPTABLE	<input type="checkbox"/>
DEFICIENT	<input type="checkbox"/>
POOR	<input type="checkbox"/>

**DESCRIPTION:** N/A

**PROBLEMS NOTED:**  (F-1) None  (F-2) No Auxiliary Spillway Found  (F-3) Erosion-with Backcutting  (F-4) Crack with Displacement  (F-5) Appears to be Structurally Inadequate  (F-6) Appears too Small  (F-7) Inadequate Freeboard  (F-8) Flow Obstructed  (F-9) Concrete Deteriorated/Undermined  (F-10) Other \_\_\_\_\_

Comments:

<b>G MAINTENANCE AND REPAIRS</b>	
GOOD	<input checked="" type="checkbox"/>
ACCEPTABLE	<input type="checkbox"/>
DEFICIENT	<input type="checkbox"/>
POOR	<input type="checkbox"/>

**PROBLEMS NOTED:**  (G-1) None  (G-2) Access Road Needs Maintenance  (G-3) Cattle Damage  (G-4) Spillway Obstruction  (G-5) Brush, Weeds, Tall Grass, on Upstream Slope, Crest, Downstream Slope, Toe  (G-6) Trees on Upstream Slope, Crest, Downstream Slope  (G-7) Rodent Activity on Upstream Slope, Crest, Downstream Slope, Toe  (G-8) Deteriorated Concrete-Facing, Outlet, Spillway  (G-9) Gate and/or Drawdown Need Repair  (G-10) Other \_\_\_\_\_

Comments:

**H OVERALL CONDITIONS**

Based on this inspection and recent file review, the overall surficial condition is determined to be:  (H-1) Satisfactory  (H-2) Fair  (H-3) Conditionally Poor  (H-4) Poor  (H-5) Unsatisfactory

**IMPORTANT: IF THIS RATING IS DIFFERENT THAN PREVIOUS IDNR RATING, PLEASE ATTACH EXPLANATION AND REASONS FOR CHANGE ON PAGE 4.**

RECOMMENDATIONS AND ITEMS REQUIRING ACTION BY OWNER TO IMPROVE THE SAFETY OF THE DAM

MAINTENANCE-MINOR REPAIR-MONITORING

- (1) Provide Additional Erosion Protection:
(2) Mow:
(3) Clear Trees and/or Brush From:
(4) Initiate Rodent Control Program and Properly Backfill Existing Holes:
(5) Repair:
(6) Provide Surface Drainage For:
(7) Monitor:
(8) Other:
(9) Other:

ENGINEERING-EMPLOY AN ENGINEER EXPERIENCED IN DESIGN AND CONSTRUCTION OF DAMS TO:

(Plans & Specifications must be approved by State prior to construction.)

- (10) Prepare Plans and Specifications for the Rehabilitation of the Dam:
(11) Prepare As-Built Drawings of:
(12) Perform a Geotechnical Investigation to Evaluate the Stability of the Dam:
(13) Perform a Hydrologic Study to Determine Required Spillway Size:
(14) Prepare Plans and Specifications for an Adequate Spillway:
(15) Set up a Monitoring Program:
(16) Refer to Unapproved Status of Dam:
(17) Develop an Emergency Action Plan:
(18) Other:
(19) Other:

Recommended schedule for upgrades/comments (Please prioritize and note importance of each item.)

Photographs Attachments

ENGINEER'S INSTRUCTION Instructed owner on the safety concerns with the structure and how to monitor and inspect the dam and appurtenant works in the interim period between the regulatory two-year inspections. Yes No

Comment Further inspections as a dam facility will not be needed when ash pond is closed.

Professional Engineer's Signature Date

Reviewed By Date

Owner/Owner's Representative

**EXPLANATION FOR CHANGE IN RATINGS** ( Describe all repairs, upgrades or improvements made if dam conditions and rating have improved since the last inspection. Describe deteriorating conditions if ratings have worsened.)

REASONS FOR RATING CHANGE:

Ash Pond A has been removed from service and is permanently capped with geomembrane final cover.

PREVIOUS RECOMMENDATIONS FOR MAINTENANCE, REPAIRS, AND UPGRADES:

HAVE THEY BEEN PERFORMED  YES  NO (If no, please explain:)

Supporting Documentation

Photographs  Attachments  Calculations  Drawings  Other

Comments:

## INSTRUCTIONS FOR COMPLETING DAM VISUAL INSPECTION REPORT

1. Complete all items that are applicable; if not applicable, write in "N/A". For concrete dams, complete all applicable items and use "comments" section to cover items not included in the check boxes. Also indicate that the dam is concrete in the comments section.
2. Use page 6 to determine ratings of each dam component (items A through G) and for Overall Conditions (Item H).
3. Please write legibly and concisely.
4. Inspector must be knowledgeable with the type of dam, materials, and components being inspected. If not, qualified assistance shall be engaged.
5. The inspector shall review the dam owner's and IDNR project files prior to the inspection. Previous inspection reports shall be closely reviewed for previous problems and deficiencies.
6. If the ratings of the components (items A through G) or the Overall Conditions (item H) of the dam have changed since the last inspection, please complete page 4. If a rating has improved, dam repairs, improvements, analyses, or maintenance must have been performed and documented on page 4.
7. For a dam to have a satisfactory "Overall Conditions" rating, it must have no existing or potential dam safety deficiencies recognized. Safe performance is expected under all anticipated loading conditions, including infrequent hydrologic events (PMP for high hazard dams) and seismic events. The dam owner's project files must contain hydrologic and hydraulic analyses of the dam and its spillways to verify performance. The files must also contain slope stability analyses to verify embankment stability under full reservoir conditions and rapid-draw down conditions. The dam and all of its components must meet current IDNR and design standards. "Normal" deficiencies such as minor erosion, minor seepage, or normal concrete aging may not make a dam unsatisfactory or unacceptable. For a satisfactory "Overall Conditions" rating to be assigned, items A through G generally should all have a "good" rating; however, in some cases an "acceptable" rating may be satisfactory if the "Problems Noted" are minor, or "normal" conditions, such as minor erosion rills, small puddles on crest, or if grass needs mowed, but is in good condition.
8. An inspection report form must be submitted to IDNR along with a formal technical inspection report as described in Chapter 4.0 of Part 3 of the Indiana Dam Safety Inspection Manual.
9. Please sign and date this page in the space below to verify that you have read and understand these instructions.

Inspector's Signature: 

Date: 1/3/2024

## GUIDELINES FOR DETERMINING CONDITIONS

### CONDITIONS OBSERVED - APPLIES TO UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, PRINCIPAL SPILLWAY, AUXILIARY SPILLWAY

GOOD	ACCEPTABLE	DEFICIENT	POOR
In general, this part of the structure has a good appearance, and conditions observed in this area do not appear to threaten the safety of the dam.	Although general cross-section is maintained, surfaces may be irregular, eroded, rutted, spalled, or otherwise not in new condition. Conditions in this area do not currently appear to threaten the safety of the dam.	Continued deterioration and/or unusual loading may threaten the safety of the dam.	Conditions observed in this area appear to threaten the safety of the dam. Conditions observed in this area are unacceptable.

### CONDITIONS OBSERVED - APPLIES TO SEEPAGE

GOOD (NONE)	ACCEPTABLE	DEFICIENT	POOR
No evidence of uncontrolled seepage. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions do not appear to threaten the safety of the dam.	Some seepage exists at areas other than the drain outfalls, or other designed drains. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions observed do not currently appear to threaten the safety of the dam.	Excessive seepage exists at areas other than drain outfalls and other designed drains. Seepage needs to be evaluated. Increased flow and/or continued deterioration in seepage conditions may threaten the safety of the dam.	Excessive seepage conditions observed appear to threaten the safety of the dam and is unacceptable. Examples: 1) Designed drain or seepage flows have increased without increase in reservoir level. 2) Drain or seepage flows contain sediment. i.e., muddy water or particles in jar samples. 3) Widespread seepage, concentrated seepage or ponding appears to threaten the safety of the dam.

### CONDITIONS OBSERVED - APPLIES TO MAINTENANCE AND REPAIR

GOOD	ACCEPTABLE	DEFICIENT	POOR
Dam appears to receive effective on-going maintenance and repair, and only a few minor items may need to be addressed.	Dam appears to receive maintenance, but some maintenance items need to be addressed. No major repairs are required.	Level of maintenance of the dam needs significant improvement. Major repairs may be required. Continued neglect of maintenance may threaten the safety of the dam.	Dam does not receive adequate maintenance. One or more items needing maintenance or repair has begun to threaten the safety of the dam. Level of maintenance is unacceptable.

### OVERALL CONDITIONS

<p><b>SATISFACTORY</b> - No existing or potential dam safety deficiencies recognized. Safe performance is expected under all anticipated loading conditions, including such events as infrequent hydrologic and/or seismic events. Project Files contain necessary hydrologic, and other engineering calculations to verify dam safety and performance.</p> <p><b>FAIR</b> - No existing dam safety deficiencies are recognized for normal loading conditions. Infrequent hydrologic and/or</p>	<p>seismic events would probably result in a dam safety deficiency.</p> <p><b>CONDITIONALLY POOR</b> - A potential safety deficiency is recognized for unusual loading conditions which may realistically occur during the expected life of the structure. <b>CONDITIONALLY POOR</b> may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency; further investigations and studies are necessary.</p>	<p><b>POOR</b> - A potential dam safety deficiency is clearly recognized for normal loading conditions. Immediate actions to resolve the deficiency are recommended; reservoir restrictions may be necessary until problem resolution.</p> <p><b>UNSATISFACTORY</b> - A dam safety deficiency exists for normal conditions. Immediate remedial action is required for problem resolution.</p>
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### HAZARD CLASSIFICATIONS OF DAMS (STRUCTURE)

<p><b>LOW HAZARD</b>- A structure the failure of which may damage farm buildings, agricultural land, or local roads</p>	<p><b>SIGNIFICANT HAZARD</b>- A structure the failure of which may damage isolated homes and highways, or cause the temporary interruption of public utility services.</p>	<p><b>HIGH HAZARD</b>-A structure the failure of which may cause the loss of life and serious damage to homes, industrial and commercial buildings, public utilities, major highways, or railroads.</p>
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## UNAPPROVED STATUS OF DAM

A dam that has been given an unapproved status (see entry for permit) means that plans, construction specifications, hydraulic analyses, and/or a geotechnical investigation on your dam, proving the safety of the structure, have not been received and approved by the Indiana Department of Natural Resources (IDNR). IDNR records indicate that no progress has been made to secure this approval. The fact that the dam is inspected under the Regulation of Dams Act (IC 14-27-7.5) in no way alters the illegal status of the structures.

If your dam is indicated to be unapproved, it is requested that your engineer contact the Indiana Department of Natural Resources,