ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

AMENDMENT 1 TO CLOSURE PLAN

AES INDIANA PETERSBURG GENERATING STATION
ASH PONDS A, A' AND C

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

OCTOBER 11, 2016
AMENDMENT DATE: JUNE 20, 2022

PREPARED FOR:

AES INDIANA

ATTENTION: MR. JEFF HARTER, ENVIRONMENTAL LEADER

June 20, 2022

ATC Group Services LLC

7988 Centerpoint Dr.
Suite 100
Indianapolis, IN 46256

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

www.atcgroupservices.com

Mr. Jeff Harter
Environmental Leader
Indianapolis Power & Light Company d/b/a AES Indiana (AESI)
Petersburg Generating Station
6925 North State Route 57
Petersburg, IN 47567

Re: Revised CCR Closure Plan
Petersburg Generating Station
Ash Ponds A, A' and C
Petersburg, Indiana

Dear Mr. Harter:

ATC is pleased to present the following Coal Combustion Residuals (CCR) Amended Closure Plan for Ash Ponds A, A' and C at the AESI Petersburg Generating Station. The closure plan is being amended pursuant to 40 CFR 257.102(b)(3)(iii) to include a description of the alternate final cover to be placed over parts of Pond A that was not anticipated at the time that the original closure plan was prepared. The amendment contained herein summarizes the compliance of the closure plan with requirements of 40 C.F.R. Part 257, Subpart D.

A summary of the final cover systems, engineering design measures, narrative of closure activities, an approximate timeline for closure, and engineering certification are included with this amended closure plan.

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,

ATC Group Services LLC

William Paraskevas, P.E.
Principal Engineer

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1 INTRODUCTION

Under 40 C.F.R. § 257.102(b), the owner or operator of a CCR unit must prepare a written closure plan that describes the steps necessary to close the CCR unit consistent with recognized and generally accepted good engineering practices at any point during the active life of the CCR unit. The Closure Plan outlined below is provided to meet this requirement.

1.1 PURPOSE

The Closure Plan for the Petersburg Station Ash Ponds A, A' and C is intended to satisfy requirements set forth by the CCR Rule. In accordance with 40 C.F.R. § 257.102(d)(1), the ash ponds will be closed in a manner that will:

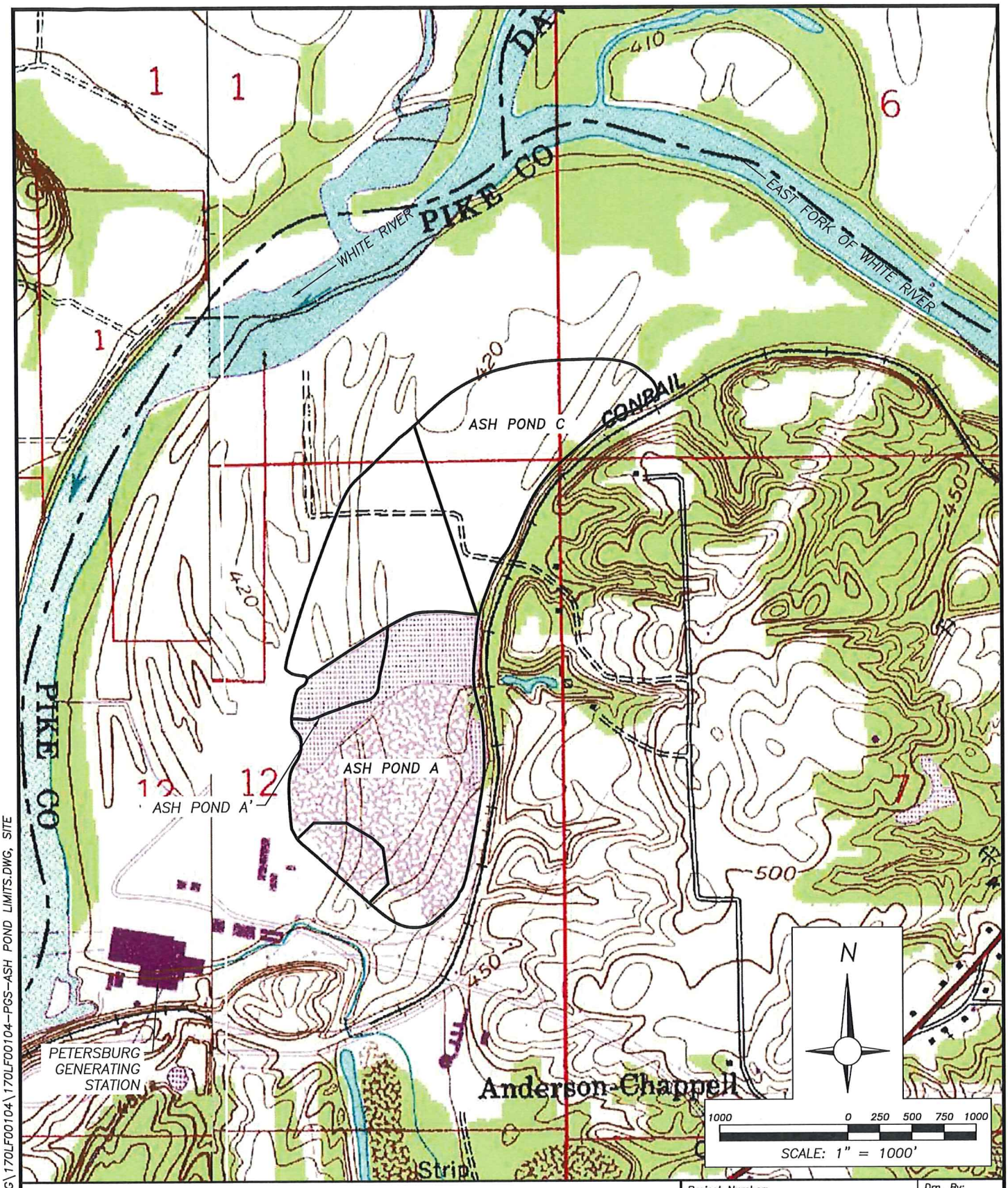
(i) Control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquid into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere;
(ii) Preclude the probability of future impoundment of water, sediment, or slurry;
(iii) Include measures that provide for major slope stability to prevent the sloughing or movement of the final cover system during the closure and post-closure care period;
(iv) Minimize the need for further maintenance of the CCR unit; and
(v) Be completed in the shortest amount of time consistent with recognized and generally accepted good engineering practices.

1.2 FACILITY & SITE DESCRIPTIONS

The AES Indiana Petersburg Generating Station Ash Pond System is located approximately four (4) miles north of the City of Petersburg in Pike County, Indiana (Figure 1). The information contained in this Closure Plan will be used to assist AESI in the closure of the Ash Ponds A, A' and C, which occupy an area of approximately 109 acres, on property owned by AESI.

1.3 CCR UNIT NAMES

The CCR unit names are Ash Ponds A, A' and C, which are all located within the ash pond system at the AESI Petersburg Generating Station in Pike County, Indiana. The approximate location of each of the ponds is noted on Figure 1.



H:\2016\IPL\PETERSBURG\170LF00104\170LF00104-PGS-ASH POND LIMITS.DWG, SITE

VICINITY MAP

IPL PETERSBURG GENERATING STATION
ASH POND CLOSURE AREA
PETERSBURG, INDIANA

Project Number: 170LF00104		Drn. By: WS
Drawing File: SEE LOWER LEFT		Ckd. By: CD
Date: 9/16	Scale: AS SHOWN	App'd By:
ATC		Figure: 1

2 PLANNED CLOSURE ACTIVITIES

Ash Ponds A, A' and C will be closed in accordance with 40 C.F.R. § 257.102(d) by leaving the CCR in place. Proposed closure activities are summarized below:

- Removal and treatment of free liquids
- CCR dewatering and treatment (as needed)
- Stabilization of remaining CCR to provide support of the final cover system (as needed)
- Grading to promote drainage and prevent movement of the final cover system
- Installation of the final cover system
- Installation of surface water control system
- Certification of Closure

3 DESCRIPTION OF FINAL COVER SYSTEM

The final cover systems for Ponds A', C and most of A will meet the following requirements specified in 40 C.F.R. § 257.102(d)(3)(i):

(A) The permeability of the final cover system must be less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less.
(B) The infiltration of liquids through the closed CCR unit must be minimized by the use of an infiltration layer that contains a minimum of 18 inches of earthen material.
(C) The erosion of the final cover system must be minimized by the use of an erosion layer that contains a minimum of six inches of earthen material that is capable of sustaining native plant growth.
(D) The disruption of the integrity of the final cover system must be minimized through a design that accommodates settling and subsidence.

The final cover systems will consist of established vegetated composite covers. The final cover systems will include run-on and run-off controls to minimize both the potential for erosion of the vegetative layer and the ponding of water on the final cover. Storm water control measures (i.e., diversion berms, channels, downslope pipes, and/or downchutes) will convey surface run-off from the cover.

The final cover system for portions of Pond A along the boundary with the site wastewater treatment plant will meet the following requirements for an alternative final cover system as specified in 40 C.F.R. § 257.102(d)(3)(ii):

(A) The design of the final cover system must include an infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraphs (d)(3)(i)(A) and (B).
(B) The design of the final cover system must include an erosion layer that provides equivalent protection from wind or water erosion as the erosion layer specified in paragraph (d)(3)(i)(C).

(C) The disruption of the integrity of the final cover system must be minimized through a design that accommodates settling and subsidence.

The infiltration layer in the alternative final cover system will consist of a linear low-density polyethylene geomembrane as in the final cover systems for the other ponds. The erosion layer will consist of a 4-inch layer of asphalt over eight inches of gravel with a geotextile protective layer between the gravel and the geomembrane. The areas to be covered with the alternative final cover system are small and narrow compared to the rest of the pond area. They are limited to the southern edges of the pond where the CCR materials are not deep. As such, these areas are not expected to be affected by differential settlement.

4 ESTIMATED MAXIMUM INVENTORY OF CCR

The volumes of CCR present in Ash Ponds A, A' and C, which are listed below, were estimated based on information provided by the Petersburg Generating Station.

Ash Pond	Estimated Volume of CCR Materials, cubic yards
A	1,560,000
A'	150,000
C	2,040,000

5 ESTIMATED SURFACE AREA OF FINAL COVER

The estimated largest total area ever requiring final cover at any time during the CCR unit's active lives is estimated to be approximately 109 acres.

6 SCHEDULE FOR CLOSURE ACTIVITIES

Ash Pond C was closed in general accordance with 40 C.F.R. § 257.102(e) in 2021. Ash Ponds A and A' are currently undergoing closure. Construction activities for these ponds is anticipated to be completed in 2022. A detailed demonstration regarding the need for any extensions to the closure timeframe in accordance with 40 C.F.R. § 257.102(f)(2)(iii) will be provided as needed.

7 AMENDMENTS TO CLOSURE PLAN

In accordance with 40 C.F.R. § 257.102(b)(3), the owner or operator may amend the initial or any subsequent written closure plan developed pursuant to 40 C.F.R. § 257.102(b)(1) at any time.

The owner or operator will amend the written closure plan whenever:

(A) There is a change in the operation of the CCR unit that would substantially affect the written closure plan in effect; or

(B) Before or after closure activities have commenced, unanticipated events necessitate a revision of the written closure plan.

8 CERTIFICATIONS

I, William Paraskevas, being a registered Professional Engineer in the State of Indiana, do hereby certify to the best of my knowledge, information and belief, that the information contained in this written Closure Plan was developed in general accordance with the requirements of 40 C.F.R. § 257.102(b) and has been prepared in accordance with recognized and generally accepted good engineering practices.

AUTHORIZED REPRESENTATIVE:

DATE:

June 20, 2022

ADDRESS:

ATC Group Services LLC
7988 Centerpoint Drive, Suite 100
Indianapolis, Indiana 46256