

The attached is the final annual inspection report for the Flint Creek Primary Bottom Ash Pond (PBAP) as a CCR unit.

The Flint Creek Primary Bottom Ash Pond was certified closed (Closure by Removal) as a CCR unit on January 15, 2025.

2025 Annual Dam and Dike Inspection Report

**Wastewater Pond Dam
(Primary Bottom Ash Pond – CCR Unit)**

**Flint Creek Plant
Southwestern Electric Power Company
Gentry, Arkansas**

December 2025

Prepared by: American Electric Power Service Corporation
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2025 Annual Dam and Dike Inspection Report

Flint Creek Plant


Wastewater Pond Dam

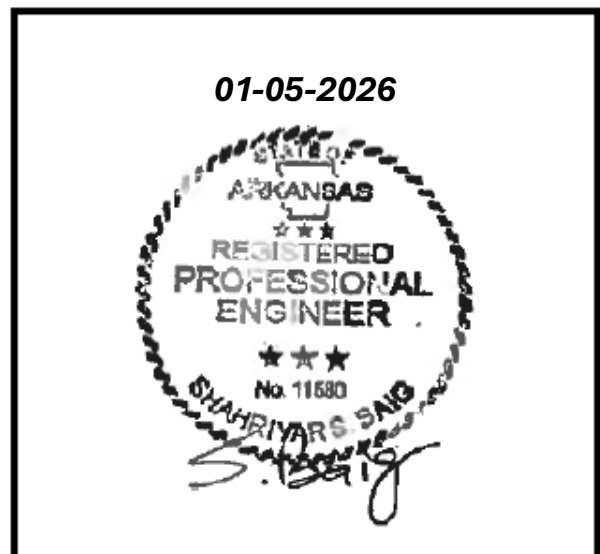
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I certify to the best of my knowledge, information, and belief that the information contained in this report meets the requirements of 40 CFR § 257.83(b).

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1.0 INTRODUCTION

On December 24, 2024, the Flint Creek Plant Primary Bottom Ash Pond (PBAP) was transitioned to closure status in accordance with 40 CFR 257.102. Closure notification was posted on January 15, 2025 in the operating record in accordance with 40 CFR 257.102(h). Effective with the closure completion notification, the former PBAP is no longer a CCR unit. This report is the final CCR report for the Primary Bottom Ash Pond (PBAP)

American Electric Power Service Corporation (AEPSC) Civil Engineering administers the Dam Inspection and Maintenance Program (DIMP) at AEP facilities. As part of the DIMP, staff from the geotechnical engineering section conducts dam and dike inspections on a periodic basis. This report was prepared by AEP- Geotechnical Engineering Services (GES) section, in part, to fulfill requirements of 40 CFR 257.83 and to provide the Flint Creek Plant an evaluation of the facility.

The Wastewater Pond (formerly known Primary Bottom Ash Pond) is located south of the Flint Creek Power Plant. Figure 1, Site Location Map illustrates the location of both ponds. Shah Baig, P.E. of the AEP-Geotechnical Engineering performed the 2025 inspection of the pond facilities at the Flint Creek Plant. Greg Carter of the AEP-Plant Engineering coordinated the pond inspection and Scott Carney of the Flint Creek Plant facilitated the inspection of the facility. The inspection was performed on October 29, 2025. Weather conditions were foggy, windy, visibility was fair, and the temperature ranged mid to high 40 degrees Fahrenheit. On the day of inspection 0.34 inch of rain was recorded and in the last 7 days prior to the inspection, 2.22 inches of rain was recorded.

2.0 DESCRIPTION OF IMPOUNDMENTS

Figure 1 provides a general plan view of the facility including the Wastewater Pond and Clearwater dams. The Flint Creek power plant is located to the north of the Wastewater Pond (WWP) and the Clearwater Pond (CWP). The coalyard is located east of the power plant and the Flint Creek lake is located west of both dams. The Wastewater Pond dam is an 820-foot long cross-valley dam on an unnamed tributary to Little Flint Creek. The Wastewater Pond was previously used primarily for the settling and storage of bottom ash, and was considered a coal combustion residuals (CCR) surface impoundment. The Primary Bottom Ash Pond has completed closure by removal and is now operating as a Wastewater Pond. The WWP continues to receive runoff from the coalyard, surrounding watershed area consisting of agricultural land, plant site, and residential

areas of the City of Gentry, and plant other waste streams. Flow from the reservoir discharges into the Clearwater pond.

GENERAL INFORMATION

Dam or Reservoir:	Wastewater Pond (Former Primary Bottom Ash Pond)
Owner:	Southwestern Electric Power Company (SWEPCO)
Type of Dam:	Earth-Fill Structure
Date of Construction:	1978
Downstream Hazard:	Low

LOCATION

County:	Benton County
General Location:	Approximately 4.5 miles north of Siloam Springs, AR
Stream and Basin:	Unnamed tributary to Little Flint Creek; Flint Creek Basin

SIZE – PRIMARY DAM

Dam Crest Elevation:	1,155 feet
Dam Height:	45 feet
Water Surface Area:	24 acres (current elevation 1,143.9 feet)
Reservoir Volume:	485 acre-feet (elevation 1,145 feet)

3.0 REVIEW OF AVAILABLE INFORMATION (257.83(b)(1)(i))

A review of available information regarding the status and condition of the wastewater dam has been conducted. This includes files available in the operating record, such as design and construction information, previous periodic structural stability assessments, previous 7-day inspection reports, 30-day data collection reports, and previous annual inspections has been conducted. Based on the review of the data, no signs of actual or potential structural weakness or adverse conditions were noted.

4.0 INSPECTION (257.83(b)(1)(ii))

4.1 CHANGES IN GEOMETRY SINCE LAST INSPECTION (257.83(b)(2)(i))

No modifications have been made to the geometry of the primary bottom ash dam since the last annual inspection on November 7, 2024.

4.2 INSTRUMENTATION (257.83(b)(2)(ii))

There are four piezometers located along the crest of the dam as shown on Figure 2. These are the only instrumentation related to this facility. A review of readings since the last inspection and historical readings (2017-2025) indicate the levels are consistent and respond to the fluctuation of the cooling lake level. The piezometers are more influenced by the

level of the cooling lake than the elevation of the Wastewater Pond. A spike was noticed in Piezometers A1-A3 in April 2023 and A4 in August 2023. Piezometers A1-A3 were damaged by construction equipment and were replaced in June 2023. Typically, the trend in the historical data between the piezometers reading, lake level, and pond levels are consistent. Once the pond resume to its normal operating condition, the piezometer reading shall be checked and compared to its historical readings. Table 1 lists the maximum piezometer reading since the last annual inspection. Figure 3 provides historical data plot of the piezometer readings over the past several years.

<u>TABLE 1 - INSTRUMENTATION DATA</u> (primary bottom ash dam)			
Instrument	Type	Maximum Reading (Elevation) Since Last Annual Inspection	Date of Reading
A1	Piezometer	1,133.42	5/29/2025
A2	Piezometer	1,132.51	5/29/2025
A3	Piezometer	1,133.85	5/29/2025
A4	Piezometer	1141.71	8/29/2025

4.3 IMPOUNDMENT CHARACTERISTICS (257.83(b)(2)(iii, iv, v))

Table 2 is a summary of the minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection; the storage capacity of the impounding structure at the time of the inspection; and the approximate volume of the impounded water and CCR at the time of the inspection. The data below is based on the original topography and 2004 hydrographic survey. The water level in the Wastewater Pond does not vary much during normal operations. Based on normal operations, the volume of water remain fairly constant. As the CCR unit has been closed my removal all CCR material has been removed.

<u>Table 2 - IMPOUNDMENT CHARACTERISTICS</u>	
	Primary Bottom Ash Dam
Approximate Minimum depth (elevation) of impounded water since last annual inspection	32.8 ft. (1,145.8 feet msl)
Approximate Maximum	33.4 ft. (1,146.4 feet msl)

depth (elevation) of impounded water since last annual inspection	
Approximate Present depth of impounded water at the time of the inspection	33 ft. (1,146.0 feet msl)
Approximate Minimum depth (elevation) of CCR since last annual inspection	0 ft.
Approximate Maximum depth (elevation) of CCR since last annual inspection	0 ft
Approximate Present depth (elevation) of CCR at the time of the inspection	0 ft
Approximate Storage Capacity of impounding structure at the time of the inspection	771 ac-feet (at crest elevation)
Approximate volume of impounded water at the time of the inspection	186.1 ac-ft.
Approximate volume of CCR at the time of the inspection	0

4.4 DEFINITIONS OF VISUAL OBSERVATIONS AND DEFICIENCIES

This summary of the visual observations uses terms to describe the general appearance or condition of an observed item, activity or structure. The meaning of these terms are as follows:

- Good: A condition or activity that is generally better or slightly better than what is minimally expected or anticipated from a design or maintenance point of view.
- Fair/
- Satisfactory: A condition or activity that generally meets what is minimally expected or anticipated from a design or maintenance point of view.
- Poor: A condition or activity that is generally below what is minimally expected or anticipated from a design or maintenance point of view.
- Minor: A reference to an observed item (e.g., erosion, seepage, vegetation, etc.) where the current condition is below what is normal or desired, but which is not currently causing concern from a structure safety or stability point of view.

- Significant: A reference to an observed item (e.g. erosion, seepage, vegetation, etc.) where the current maintenance program has neglected to improve the condition. Usually, conditions that have been identified in the previous inspections, but have not been corrected.
- Excessive: A reference to an observed item (e.g. erosion, seepage, vegetation, etc.) where the current condition is above or worse than what is normal or desired, and which may have affected the ability of the observer to properly evaluate the structure or particular area being observed or which may be a concern from a structure safety or stability point of view.

This document also uses the definition of a “deficiency” as referenced in the CCR rule section §257.83(b)(5) Inspection Requirements for CCR Surface Impoundments. This definition has been assembled using the CCR rule preamble as well as guidance from MSHA, “Qualifications for Impoundment Inspection” CI-31, 2004. These guidance documents further elaborate on the definition of deficiency. Items not defined by deficiency are considered maintenance or items to be monitored.

A “deficiency” is some evidence that a problem has developed that could impact the structural integrity of the structure. There are four general categories of deficiencies. These four categories are described below:

1. Uncontrolled Seepage

Uncontrolled seepage is seepage that is not behaving as the design engineer has intended. An example of uncontrolled seepage is seepage that comes through or around the embankment and is not picked up and safely carried off by a drain. Seepage that is collected by a drain can still be uncontrolled if it is not safely collected and transported. Seepage that is not clear and is turbid would also be considered as uncontrolled. Seepage that is unable to be measured and/or observe it is considered uncontrolled seepage.

Note: Wet or soft areas are not considered as uncontrolled seepage, but can lead to this type of deficiency. These areas should be monitored more frequently.

2. Displacement of the Embankment

Displacement of the embankment is large scale movement of part of the dam. Common signs of displacement are cracks, scraps, bulges, depressions, sinkholes and slides.

3. Blockage of Water Control Appurtenances

Blockage of Water Control Appurtenances is the restriction of the flow section at spillways, decant or pipe spillways, or drains.

4. Erosion

Erosion is the gradual movement of surface material by water, wind or ice. Erosion is considered a deficiency when it is more than a minor routine maintenance item.

4.5 VISUAL INSPECTION (257.83(b)(2)(i))

A visual inspection of the Wastewater Pond Dam was conducted to identify any signs of distress or malfunction of the impoundment and appurtenant structures. Specific items inspected included all structural elements of the dam such as inboard and outboard slopes, crest, and toe; as well as appurtenances.

Overall, the facility is in good condition. The impoundment is functioning as intended with no signs of potential structural weakness or conditions that are disrupting the safe operation of the impoundment. Currently, the bottom ash from the impoundment has been removed as part of the pond closure work. Inspection photograph location map (Figures 4A and 4B) and inspection photos are included.

- (i) Overall view of the Wastewater Pond is illustrated in Photograph No. 1. The pond is closed by removal and the CCR materials are placed in the onsite landfill. The pond is converted as a Wastewater Pond and functioning as a repurposed pond.
- (ii) Photograph Nos. 2-4 illustrates the condition of the upstream and downstream slopes. New riprap was placed on the upstream slope during the pond closure project. Both slopes of the dam appeared in stable and satisfactory condition without any signs of any distress.
- (iii) Photograph No. 5 illustrates crest of the dam. Crest is also used by vehicular traffic to access the piezometers and operational and maintenance activities. The crest is in good condition with no evidence of misalignment, settlement, or cracking.
- (iv) Photograph No. 6 illustrates downstream slope section, southeast corner near the overflow structure downstream slope of the dam. The slope is protective with riprap, minor erosion and lack of riprap was noticed.
- (v) The principal spillway for the pond is a concrete drop-inlet structure with stop logs used to control the pool elevation. The overflow discharge structure was in generally good and functional condition. The access platform and discharge through the principal spillway was unobstructed (Photograph No. 7).
- (vi) The emergency spillway (Photograph No. 8) is an incised channel in natural ground with a concrete weir control section, 1 ft. in height, across the channel width. The spillway was in generally good condition. The spillway appeared to be generally stable. Vegetation control in the natural ground area downstream of the concrete

weir was good. Concrete cover that had hairline cracks was removed from the buttress (north of the spillway).

4.6 CHANGES THAT EFFECT STABILITY OR OPERATION (257.83(b)(2)(vii))

Based on interviews with plant personnel and field observations there were no changes to the Wastewater Pond Dam since the last annual inspection that would affect the stability of the impounding structure.

5.0 SUMMARY OF FINDINGS

5.1 GENERAL OBSERVATIONS

Based on the visual inspection and review of the instrumentation information available, it is concluded that the primary bottom ash pond dam is generally in good condition at the time of inspection. There were no signs of distress that would indicate possible instability, excessive settlement, misalignment, sloughing, or cracking of the dams. The plant personnel are performing regular maintenance as required.

5.2 MAINTENANCE ITEMS

The following maintenance items were identified during the visual inspection.

- Continue the vegetation control plan of mowing and spraying.

5.3 ITEMS TO MONITOR

None.

5.4 DEFICIENCIES (257.83(b)(2)(vi))

The Wastewater Pond Dam exhibited no signs of structural weakness or disruptive conditions during the inspection that would require additional investigation or remedial action.

There were no deficiencies noted during this inspection or during any of the periodic 7-day inspections. A deficiency is defined as either 1) uncontrolled seepage, 2) displacement of the embankment, 3) blockage of control features, or 4) erosion, more than minor maintenance. If any of these conditions occur before the next annual inspection contact AEP Geotechnical Engineering immediately.

If you have any questions with regard to this report, please contact Shah Baig (Phone: 614-716-2241, email: sbaig@aep.com) or Dan Pizzino (Phone: 614-716-1472, email: dwpizzino@aep.com)

LIST OF FIGURES

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- Figure 2 – Piezometer Location Map
- Figure 3 – Historical Piezometer Data Plot
- Figure 4 – Photograph Location Map

Figure 1 – Site Location Map

Wastewater Pond and Clearwater Pond, Flint Creek Plant, Gentry, AR



Figure 2 – Piezometer Location Map
Primary Bottom Ash Pond, Flint Creek Plant, Gentry, AR

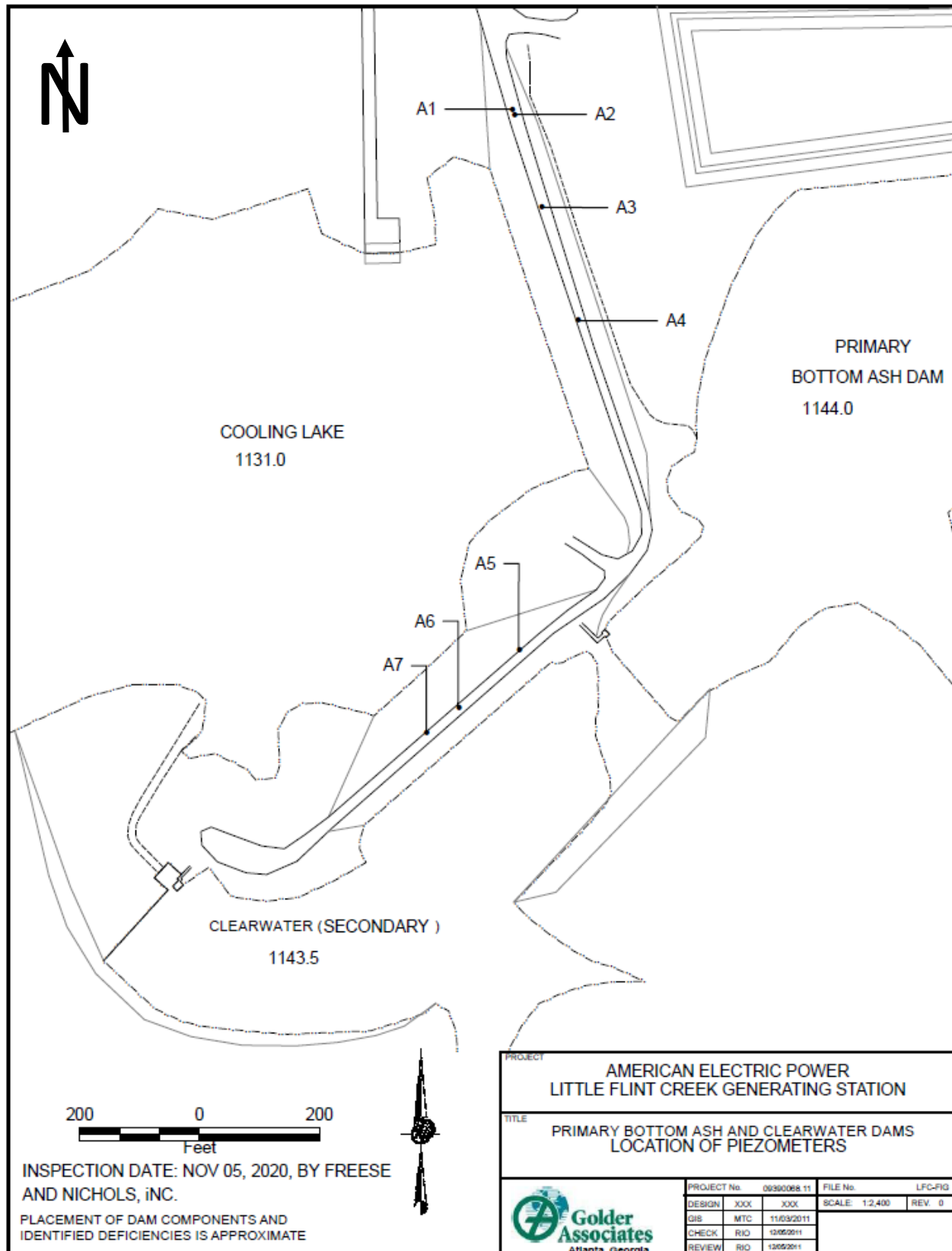


Figure 3 - Wastewater Pond Historical Piezometer Data

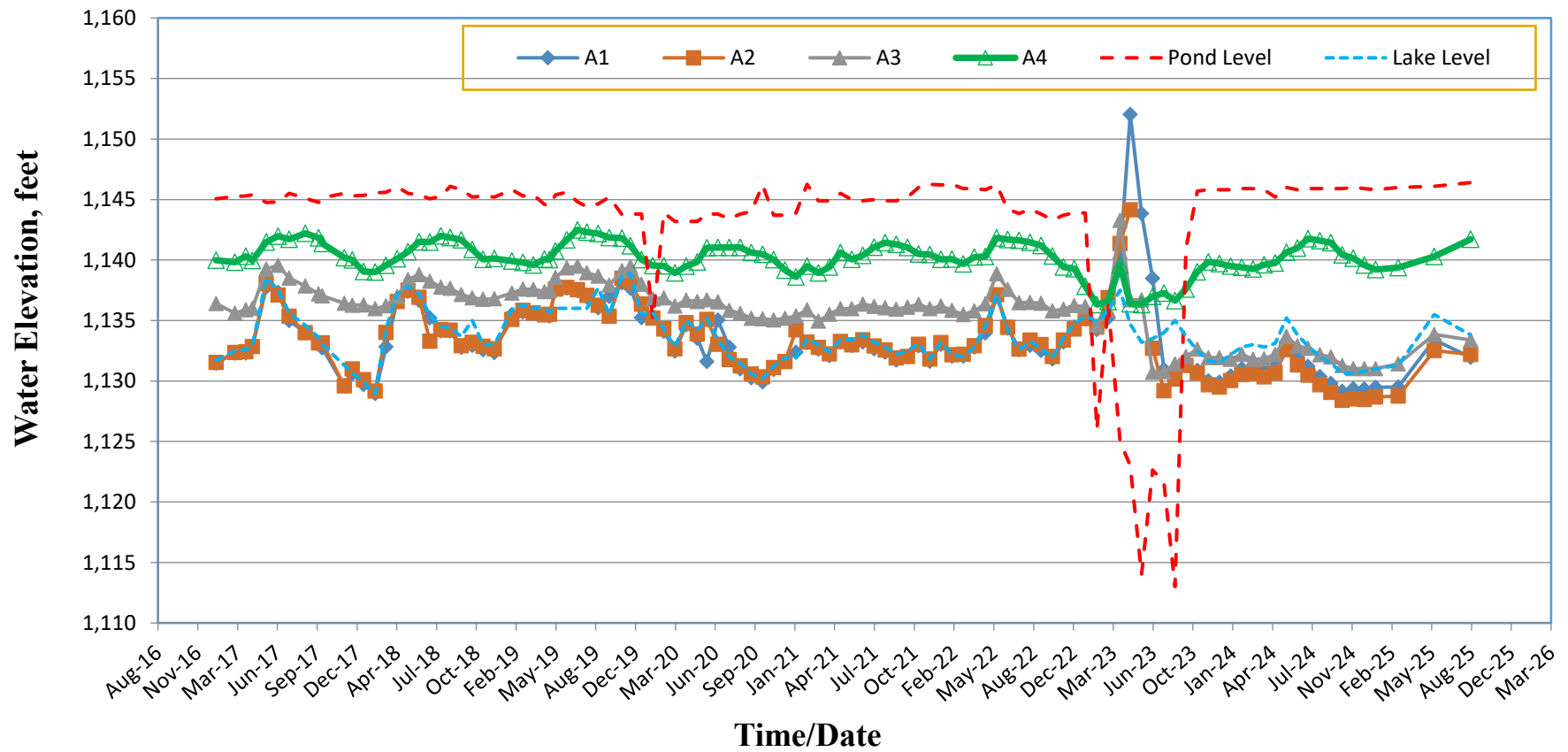


Figure 4 – Photograph Location Map
Wastewater Pond, Flint Creek Plant, Gentry, AR



ATTACHMENT – INSPECTION PHOTOGRAPHS

Photograph No. 1 Overall view of the pond interior.	 A wide-angle photograph of a large, calm body of water under a heavy, overcast sky. In the background, industrial structures, including a tall silo and various buildings, are visible along the far shore. The foreground shows a gravelly, vegetated bank.
Photograph No. 2 Downstream slope (looking south).	 A photograph showing a grassy downstream slope leading down to a body of water. The grass is green and somewhat wild. In the background, a line of trees and a gravelly area are visible under a cloudy sky.
Photograph No. 3 Downstream slope (looking north).	 A photograph of a grassy downstream slope, similar to the previous one, but viewed from the opposite direction. In the background, industrial facilities, including a large building and a tall chimney, are visible across a body of water under a cloudy sky.
Photograph No. 4	

Upstream slope
(looking south).



Photograph No. 5
Crest of the dam
(looking north).



Photograph No. 6
Southwest corner near
the overflow discharge
structure.



Photograph No. 7

Overflow discharge structure.



Photograph No. 8
Emergency spillway
concrete sill (looking
south).

