Hazard Potential Classification Pursuant to 40 C.F.R. Part 257.73

C-Pond CCR Surface Impoundment
Greenidge Power Generating Station

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History of Revisions

Revision	Date	Notes
0	January 9, 2023	Initial – AECOM (Latham, NY)
1	October 2026	Revised evaluation and classification based on current site conditions

1. Introduction and Compliance Requirement

Greenidge Generation LLC (Greenidge) manages the Greenidge Power Generating Station (Greenidge Station), which includes a coal combustion residuals (CCR) surface impoundment located in the Town of Torrey, Yates County, New York. Historically, the CCR surface impoundment, or C-Pond, accepted sluiced bottom ash until the plant ceased combusting coal in 2011. The plant was converted to natural gas in 2017. C-Pond was used to manage non-CCR waste streams and stormwater until October 10, 2023, when a bypass pipe was installed. There is no longer any influent being directed to C-Pond.

40 CFR § 257.73 establishes the structural integrity criteria for existing CCR surface impoundments, unless the impoundment is incised. The first step is to determine the hazard potential classification of the impoundment as required by § 257.73(a)(2). Additional criteria apply to those CCR surface impoundments that are determined to be either a high or significant hazard potential. CCR surface impoundments subject to 40 CFR § 257.73(a) are required to re-assess the validity of the initial classification at least once every five years and document the re-assessment in a periodic hazard potential classification assessment.

The purpose of this assessment is to document the periodic hazard potential classification of the C-Pond to re-evaluate its classification in light of the new conditions since installation of the bypass pipe. This periodic hazard potential classification assessment will replace the Initial Hazard Potential Classification certified by AECOM of Latham, NY on January 9, 2023, once it has been placed in the facility's operating record as specified in § 257.73(f)(3).

Within 30 days of placing this periodic hazard potential classification assessment in the C-Pond operating record, this document will be published on Greenidge's publicly accessible website (https://greenidgeccr.com/) and a notice will be sent to the State Director as required by §§ 257.107(f) and 257.106(f), respectively.

2. C-Pond Hazard Potential Classification Assessment and Conclusion

The assessment of the hazard potential classification of C-Pond consisted of a two-part evaluation. First, the construction of C-Pond was evaluated for whether it should be considered incised or a proper dam. Then, under the assumption that C-Pond may be considered a proper dam, the current operating conditions of C-Pond were evaluated to determine dam failure scenarios that were compared to federal and state guidance to determine the appropriate hazard potential classification.

2.1 Incised vs Proper Dam

Based on a map of Greenidge Station from 1937 (1), the C-Pond area was historically swamp land with an average elevation between 444 and 448 fee, Plant Datum. Over a period of decades, the area was built up with fill material to elevations around 458 to 460 feet (2). Subsequently, the current impoundment area (C-Pond with its sinuous discharge channel) was constructed by excavating within the historic fill material between 1976 and 1979 (3 & 4). Based on a subsurface investigation performed by H&A of New York in 1992 (5), the historic fill material consists of 15 to 25 feet of discarded coal, bottom ash, fly ash, and natural materials.

The full aerial extent of historic fill (and the area of C-Pond considered under the written closure plan) is approximately 12 acres, but the impoundment's current footprint covers just 7.2 acres, consisting of the former 1.2-acre pond, a 2.7-acre overflow area, and a 3.3-acre sinuous discharge channel. The western border of the impoundment is defined by a natural elevation increase in the pre-existing topography. The width of historic fill on the northern and southern borders is approximately 40 feet and on the eastern boundary the width is over 100 feet. The historic fill has existed for nearly 50 years and is stable with well-established vegetation including mature trees along the eastern and southern boundaries.

A proper dam must be constructed at least partially above the surrounding ground level. Since C-Pond was constructed by excavating into the pre-existing historic fill, it could be considered incised. However, based on the definition of "incised CCR surface impoundment" in § 257.53, C-Pond may be considered a proper dam. "Incised CCR surface impoundment" is defined in § 257.53 as "a CCR surface impoundment which is constructed by excavating entirely below the natural ground surface, holds an accumulation of CCR entirely below the adjacent natural ground surface, and does not consist of any constructed diked portion." Since C-Pond is situated above the natural ground elevation and the discharge from the sinuous channel was once controlled by a weir discharge structure and a 44-foot culvert that runs under an embankment, C-Pond is evaluated in Section 2.2 under the assumption that it is a proper dam.

2.2 Current C-Pond Operating Conditions and Dam Failure Scenarios

Since installation of the bypass, the only influent C-Pond receives is direct precipitation. Due to the impoundment's design as an infiltration basin, C-Pond does not hold water, typically dries out between precipitation events, and does not discharge. The overflow area, sinuous channel, and most of the former pond are now overtaken by vegetation, primarily stands of common reed and other tall grasses with some encroachment of woody brush and immature trees. Thus, the system has become increasingly more stable, and the probability of failure is low. However, a dam hazard classification is not about the probability of failure, but rather the severity of consequence assuming a failure occurs.

New York State (6) provides useful guidance in making a dam hazard classification that starts with considering two main scenarios of dam failure, a "sunny day" dam break and a "rainy day" breach. A sunny day dam break occurs due to failure of an embankment followed by a sudden release of the impounded water from the normal pool elevation. For C-Pond, under its current operating conditions, there is no normal pool as there is no influent and water typically infiltrates between storms. Therefore, a sunny day scenario is not possible.

A rainy day breach occurs from overtopping the embankment during large storms. However, in the recently updated Inflow Design Flood Control System Plan (7), under highly conservative assumptions and a total precipitation event greater than USGS National Oceanic and Atmospheric Administration's 1,000-year storm, the storage capacities of the three pond sub-basins (i.e., the former pond, the overflow area, and the sinuous discharge channel) were not exceeded. In fact, water levels did not even reach the inverts of the normal outlet culverts meaning no discharge is expected, making the scenario of overtopping highly unlikely.

The fact that the C-Pond area consists of three separate sub-basins means the full storage capacity, should it ever be reached, would never be released all at once. Based on the Inflow Design Flood Control System Plan (7), the full storage capacity is 14.97 acre-feet. However, unless all three sub-basins fail simultaneously, the maximum uncontrolled storage capacity available for a dam failure event is 7.6 acre-feet from the sinuous discharge channel.

Given the above, under New York State guidance, C-Pond would be assigned a Negligible or No Harm hazard potential because the impoundment "no longer materially impounds waters" (6). The federal CCR regulations utilize the federal hazard potential classification system defined by the Federal Emergency Management Agency (FEMA) (8), which does not include this class. Thus, to evaluate C-Pond under the FEMA system, an unrealistic hypothetical scenario of dam failure must be considered. The hypothetical dam failure scenario used in this assessment assumes catastrophic failure of one of the three sub-basins leading to the release of that sub-basin's full storage capacity.

2.3 Hazard Potential Classification Evaluation

The federal CCR regulations utilize the federal hazard potential classification system of low, significant, and high as described by the FEMA. A summary of the primary considerations used to determine dam classifications is provided by FEMA and re-created in Table 2-1.

TABLE 2-1: PRIMARY HAZARD POTENTIAL CLASSIFICATION FACTORS

Hazard Potential Classification	Loss of Human Life	Economic, Environmental, & Lifeline losses
Low	None Expected	Low and generally limited to owner
Significant	None Expected	Yes
High	Probable; One or more expected	Yes (but not necessary for this classification)

SOURCE: FEMA (8)

The New York State guidance (6) outlines the following considerations for evaluating the hazard potential classification of a dam which covers the factors presented in Table 2-1.

2.3.1 Loss of Human Life

The C-Pond is situated on the bank of Seneca Lake. There are no residences downstream of a hypothetical dam failure. Therefore, loss of human life is not expected. This factor alone excludes the high hazard potential classification.

2.3.2 Secondary Consequences and Impairment of Access to Emergency Services

This scenario considers the possibility that dam failure could lead to flooding or other damage that causes the isolation of residences which could result in loss of life due to impairment of the ability of emergency services to reach an injured individual. Again, there are no residences downstream of C-Pond that could be impacted by a hypothetical dam failure. This supports that the dam hazard potential is low.

2.3.3 Damage to Homes or Other Structures

There are no homes nor any other buildings or accessory structures downstream of C-Pond that could be impacted by a hypothetical dam failure. This supports that the dam hazard potential is low.

2.3.4 Damage to Roads or Railroads

There are no major roads nor railroads downstream of C-Pond that could be impacted by a hypothetical dam failure. There is a private access road that would be most likely to be affected by a hypothetical dam failure of the overflow area. Damage to the access road would be Greenidge's own economic responsibility. This supports that the dam hazard potential is low.

2.3.5 Damage to Important Utilities

Important utilities are defined by the New York State guidance as a water supply source, a natural gas pipeline, or an electrical substation that serves 100 or more residential units. There is no natural gas pipeline downstream of C-Pond.

Seneca Lake is utilized by the City of Geneva, several villages, and many individual private homes as the primary source of water, supporting well over 100 residences and thus qualifies as an important water supply source. According to the New York State Department of Environmental Conservation (9), Seneca Lake is 38 miles in length, with a maximum width of approximately 3 miles and a maximum depth of 618 feet. It has the largest volume of the Finger Lakes estimated at 12.6 million acre-feet (10). Seneca Lake is directly downstream of all three sub-basins of C-Pond. In the hypothetical dam break scenario, the impact to the ability of Seneca Lake to provide a source of water would be negligible because storage capacity of C-Pond is much less than the volume of Seneca Lake. Therefore, any potential impact would be minimal.

There is an electrical subtransmission system on the shore of Seneca Lake between C-Pond and the Lake that would be downstream of a hypothetical dam failure of the overflow area or the sinuous discharge channel. This electrical subtransmission system is owned New York State Electric & Gas (NYSEG). It serves no direct customers. An outage of the subtransmission system could affect more than 100 residential units, but impacts would be temporary until alternate connections are activated. All electrical components are pole mounted and the area is elevated compared to the surrounding area. Therefore, the discharge from a hypothetical dam failure would

largely flow around the subtransmission station and ultimately drain away without causing any damage or service disruption.

Thus, a hypothetical dam failure of C-Pond is unlikely to cause widespread damage to important utilities. This supports that the dam hazard potential is low.

2.3.6 Substantial Environmental Damage

The New York State guidance considers loss of endangered species or habitat of significant importance and release of contaminated sediments as the most likely environmental damage that could occur due to dam failure. Given that C-Pond no longer has any influent beyond direct precipitation, any hypothetical dam failure would cause no greater environmental damage than a large natural flooding event. Such flooding may temporarily disrupt habitat downstream of C-Pond along the Seneca Lake shoreline, but any damage would be minimal and repaired by natural processes.

Catastrophic failure or blowout of a C-Pond embankment, given that it consists of historic fill, could release some potentially contaminated fill into the immediate area. Without a continuous influent to C-Pond, the fill would have limited mobility and could be easily contained and remediated. Thus, a hypothetical dam failure of C-Pond would not result in substantial, long term environmental damage, supporting the dam hazard potential is low.

2.3.7 Downstream Dams

There are no additional dams immediately downstream of C-Pond that could be affected by a hypothetical dam failure, therefore this factor does not apply.

2.4 Hazard Potential Classification Conclusion

Based on the evaluation provided in Section 2.3, C-Pond was determined to be a low hazard potential CCR surface impoundment.

3. Certification

I hereby certify that I have reviewed this periodic hazard potential classification assessment completed on September 29, 2026, and based on my knowledge, information and belief, agree with the low hazard classification of the C-Pond CCR surface impoundment. I further certify that the periodic hazard potential classification assessment contained in this report was conducted in accordance with the requirements of 40 CFR Part 257.73 - Structural integrity criteria for existing CCR surface impoundments, and using good, generally accepted, engineering practices.

I am a duly licensed professional engineer in the State of New York.

David A. Lenox, P.E.
NYSPE LIC # 0933384

10/29/2026

4. References

(1) Gilbert Engineering Corp. (1937). Drawing C-10179-3: NYSEG Location Plan of Intake & Discharge Pipes

(2) New York State Electric & Gas. (1991). Drawing GD-22106: Greenidge Station Observation Wells.

(3) New York State Electric & Gas. (1976). Drawing D-6732-1: Greenidge General Location Plan.

(4) New York State Electric & Gas. (1979). Drawing D-8179: Greenidge "C"-Pond Outlet Structure.

(5) H&A of New York. (1992). Hydrogeologic Investigation Coal Storage Area NYSDEC Greenidge Station Dresden, New York. File No. 70215-4. Figure 5.

(6) New York State Department of Environmental Conservation, Division of Water Program Policy (Undated Draft). Guidance for Dam Hazard Classification. DOW TOGS 3.1.5. Accessed at https://extapps.dec.ny.gov/docs/water_pdf/togs315.pdf.

(7) EnSol, Inc. (2026). 2026 Update to the Inflow Design Flood Control System Plan, C-Pond CCR Surface Impoundment, Greenidge Power Generating Station. Greenidge Generation LLC.

(8) US Department of Homeland Security, Federal Emergency Management Agency. (2024). Federal Guidelines for Dam Safety Hazard Potential Classification Systems for Dams.

(9) New York State Department of Environmental Conservation (Undated). Place to Fish – Seneca Lake webpage. Accessed at https://dec.ny.gov/places/seneca-lake?v=1.

(10) US Environmental Protection Agency. (1974). National Eutrophication Survey Report in Seneca Lake Schuyler County, New York. Working Paper No. 170.