Gainesville Regional Utilities
Deerhaven Generating Station

Coal Combustion Residual Units
Annual Inspection Report
(December 4, 2024 – December 3, 2025)

Prepared by:

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1 Introduction

Gainesville Regional Utilities (GRU) operates the Deerhaven Generating Station (facility) located in Gainesville, Florida. The facility has the ability to generate electricity from natural gas and coal. Unit #2 was retrofitted in early 2021 to primarily burn natural gas. It has the ability to fire coal as needed. From January through November 2025, coal constituted approximately 2.5% by heat input for Unit #2. Because of the change in operation following the 2021 retrofit, the provisions of the Coal Combustion Residuals (CCR) regulations (40 CFR 257 Subpart D) are not applicable to the residuals generated from the facility. The CCRs generated in the past and managed at this facility include bottom ash, fly ash, and flue gas desulfurization byproduct. A CCR surface impoundment system (SIS) underwent closure by removal of in-place CCRs in March 2024 and these ponds are currently managing waste streams (e.g., cooling tower blowdown, sluice water, etc.) not regulated by the provisions of the federal CCR regulations. GRU submitted a closure certification report to the Florida Department of Environmental Protection in May 2024.

For regulatory purposes, the CCR landfill is considered a CCR unit. GRU operates the landfill per the provisions of an operations permit issued by the Florida Department of Environmental Protection in 2023. The landfill accepts residuals generated from the plant and lime sludge that is periodically removed from front-end treatment sludge ponds. Occasionally, fly ash is also deposited in the landfill when it is not hauled offsite for beneficial use. The landfill is comprised of four cells (i.e., Cells 1-4) sequentially arranged from west to east. The bottom of each landfill cell is graded to drain contact water (i.e., water that contacts CCR) intercepted by the cell bottom. In addition, perforated PVC pipes were installed at the base of the cells. Specifically, these pipes are located in the middle of each cell and between each cell to intercept and gravity-drain the contact water to a drainage ditch located along the northern toe of the landfill (i.e., the Northern Drainage Ditch).

A slurry wall containment system, which is keyed into an existing underlying clay layer, encompasses the landfill and the Northern Drainage Ditch. A series of stormwater ditches outside the slurry wall route stormwater to either a wetland area located just west of the landfill or to a stormwater pond located southeast of the landfill. Currently, Cells 1, 2, and 3 of the CCR landfill still accept non-CCR materials. Figure 1 presents an aerial layout of the CCR landfill at the site, facing east.

Title 40 Code of Federal Regulations (CFR) 257.83(b) and 257.84(b) requires that CCR units be annually inspected by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of each CCR unit are consistent with recognized and generally accepted good engineering standards. 40 CFR 257.53 defines a qualified professional engineer as "*an individual who is licensed by a state as a Professional Engineer to practice one or more disciplines of engineering and who is qualified by education, technical knowledge, and experience to make the specific technical certifications required under this subpart. Professional engineers making these certifications must be currently licensed in the state where the CCR unit(s) is located*". This report was prepared under the supervision of Pradeep Jain, who is a licensed professional engineer in the State of Florida (FL PE License No. 68657).

Figure 1. Aerial Image of the CCR Landfill Facing East

2 CCR Landfill

2.1 Review of Relevant Information

The following additional documents (i.e., beyond those reviewed for previous annual inspections) were reviewed by ITS to understand the design and operation of the CCR landfill located at the site while preparing this annual inspection report:

a. A total 52 weekly CCR landfill inspection worksheets were reviewed; these worksheets covered the period from December 9, 2024 through December 1, 2025. 40 CFR 257.84(a)(1)(i) establishes a maximum time interval of 7 days for weekly inspections of the CCR landfill. All 52 weekly CCR landfill inspections were performed without exceeding the maximum time interval.

The worksheets allow the inspector to categorize observations as *Acceptable*, *Area of Concern*, or *Needs Attention*. The *Area of Concern* is defined in the worksheet as "may develop into a *Needs Attention* area if not addressed. Monitor the situation and reevaluate during the next inspection. Address as necessary." It should be noted that an *Area of Concern* is not indicative of a problem but is used to proactively identify and monitor circumstances that have an elevated chance of developing into a problem. *Needs Attention* is defined in the worksheet as "currently or imminently presents a human-health, operation or environmental hazard/problem. Address as soon as possible."

Twenty-five (25) *Needs Attention* observations were reported in the weekly inspection worksheets reviewed for this report. The majority of these observations (16 instances) were inundated underdrains because of the high-water level in the Northern Drainage Ditch, and the presence of loose ash piles that were not spread and compacted (8 occasions). Based on supervisor notes included in the inspection

worksheets, it appears that GRU made attempts to address the issues expeditiously and were resolved as soon as feasible.

The *Needs Attention* observations corresponded to the following three categories:

1) **Water Level Above Underdrain Outlets (16 instances)** – Four underdrain pipes collect and transport CCR contact water to the Northern Drainage Ditch. During this reporting period, elevated water levels within the ditch were noted on several occasions. A cluster of seven occurrences was recorded within a nine-week span between June 16 and August 11, 2025, which coincides with the rainy season in Gainesville, Florida. The frequency of these observations is likely attributable to seasonal rainfall patterns that periodically increase stormwater and contact water volumes at the site.
2) **Loose Piles of CCR (8 instances)** – Loose piles of CCR accumulated on the landfill surface were observed – these piles have the potential to contribute to dust emissions. In all cases, the material was spread and compacted within one week of observation, as noted by the site supervisor in the weekly inspection reports, except for a three-week period from June 9 through June 23, during which this issue was recorded consecutively.
3) **Overgrown Vegetation (1 instance)** – Vegetation on the side slopes of the CCR landfill was observed to be taller than 6 inches. This issue was resolved within a week.

Thirteen (13) "Areas of Concern" observations were noted. These are listed as follows:

1. **Grass and other vegetation height on external slopes (5 instances)** – The vegetation on external side slopes was reported as an area of concern in 5 instances. This issue was resolved within a week each time.
2. **Hay bales not intact (4 instances)** – Hay bales are installed around the inlets of the culverts that drain contact water accumulated on the top of the landfill to the Northern Drainage Ditch. These bales minimize migration of CCR sediments from the landfill to the drainage ditch. Hay bale maintenance issues, such as missing, deteriorated, or bales with overgrown weeds, were noted four times during the reporting period. In each instance, the supervisor indicated that the necessary repairs or replacements would be completed within 1 to 2 weeks.
3. **Erosion of Access Road (3 instances)** – The access road was reported to be eroded on three consecutive occasions in July 2025, likely due to heavy rain events.
4. **Sediments Accumulation in Northern Drainage Ditch (1 instance) –** Sediment accumulation in the ash canal was reported as a "Area of Concern" item during one weekly inspection during the reporting period.

Based on supervisor notes included in the inspection worksheets, it appears that these issues were addressed expeditiously and were generally resolved as soon as practically feasible.

2.2 Field Inspection

ITS inspected the CCR landfill on December 3, 2025. The following section describes observations made during the inspection event.

2.2.1 Signs of Distress or Malfunction

Cell 1 underdrain was partially inundated due to elevated water levels in the Northern Drainage Ditch (Figure 2). All the underdrains exhibited some level of sediment accumulation. GRU should consider draining the ditch and jet cleaning the pipes.

(a) (b) (c) (d)

Figure 2. Condition of Underdrain Outlets of (a) Cell 1, (b) Cell 2, (c) Cell 3, and (d) Cell 4 on December 3, 2025.

2.2.2 Geometrical Changes of CCR Landfill

No changes in the geometry of the landfill indicative of structural instability or weakness were noted. Since the last inspection, no modification has been made to the design and operational procedures of the landfill.

2.2.3 Volume of CCR

ITS conducted a topographic survey of the landfill on December 2-3, 2025 and used AutoCAD Civil 3D 2026 cut-and-fill procedures to estimate the in-place CCR volume; the landfill bottom elevation was assumed to be 184 feet NGVD29 (as approximately shown in B&M 1981). Approximately 568,000 cubic yards of CCR and other materials (i.e., cover soil, FET lime sludge) have been deposited in the landfill to date. The topographic survey and the estimated in-place volume should be considered as a rough approximation as the survey was not performed by a licensed surveyor.

2.2.4 Structural Weaknesses and Adverse Conditions

ITS performed a visual inspection of all exterior slopes of the CCR landfill for any appearance of actual or potential structural weakness, including signs of erosion, bulging, depressions, cracks, animal forage holes, boils, or excessive, turbid, or sediment-laden seepage. No signs of structural weakness or adverse conditions were observed.

2.2.5 Other Changes Affecting Stability or Operation

Apart from those discussed above, no other changes or circumstances that may impact the stability or operation of the landfill were noted during the inspection.

3 Summary of Deficient Conditions and Recommendations

Table 1 presents a summary of the locations of each deficient condition observed during the annual inspection of the CCR Landfill.

Table 1. Location Summary of Deficient Conditions Observed During the Annual Inspection

Location	Condition
Underdrains	Cell 1 underdrain was partially submerged due to elevated water levels in the Northern Drainage Ditch. All the underdrains exhibited some level of sediment accumulation.

One deficient condition, as listed in Table 3-1, were observed during the annual inspection that require GRU's attention. 40 CFR 257.84(a)(1)(i) establishes a maximum time interval of 7 days for weekly inspections of the CCR landfill. All the weekly inspections were performed within this maximum time interval of 7 days.

4 References

B&M (1981). Deerhaven Generating Station – Unit 2 Construction, Contract 29C – Yard Structures III. Drawing set conforming to construction records. Prepared for the City of Gainesville, Florida – Alachua County Regional Utilities Board, by Burns and McDonnell. Revised 1 July 1981.

6 Professional Engineer Certification

This plan was prepared under the supervision, direction, and control of the undersigned registered professional engineer (PE). The undersigned PE is familiar with the requirements of 40 CFR 257.83(b) and 84(b). The undersigned PE certifies that this CCR unit annual inspection report meets the requirements of 40 CFR 257.83(b) and 84(b).

Name of Professional Engineer: Pradeep Jain

Company: Innovative Waste Consulting Services, LLC

PE Registration State: Florida

Florida PE License No.: 68657

Pradeep Jain

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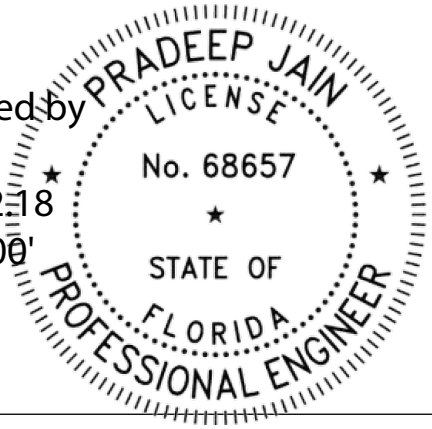

This item has been digitally signed and sealed by Pradeep Jain, PE, on the date adjacent to the seal.
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