FINAL - REVISION 3

Closure Plan
Coal Combustion Residuals Surface Impoundments Ponds M5 and M7
Reid Gardner Generating Station

Prepared for

NV Energy

July 2024

JACOBS

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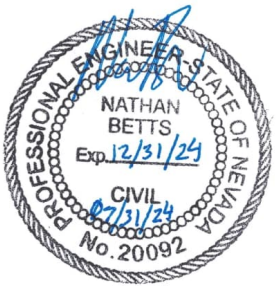
Certification

This section contains the written certification by a qualified professional engineer required by §257.102(b)(4) of the U.S. Environmental Protection Agency's Coal Combustion Residual Rule.



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This revised written closure plan for Ponds M5 and M7, existing coal combustion residual surface impoundments at Reid Gardner Generating Station, meets the requirements of §257.102 of the Coal Combustion Residuals Rule.

Revision Date	Certified By	Revision	Description of Changes
October, 2016	Nathan Betts, PE /Jacobs	0	Final Plan
August 20, 2019	Scott Dethloff, PE /Jacobs	1	Revised Final Plan -Updated Station status
February 5, 2021	Scott Dethloff, PE /Jacobs	2	Revised Final Plan -Added initiation of closure date of April 11, 2021 per §257.101(a)(1) -Updated closure activities and schedule for initiation of closure on April 11, 2021
July 30, 2024	Nathan Betts, PE /Jacobs	3	Revised to include actual dates, change the anticipated closure completion date, and address the Legacy Rule.

Contents

SECTION 1

Introduction

This July 2024 revision to the written closure plan presents the activities that will be performed to close Ponds M5 and Pond M7, existing coal combustion residuals (CCR) surface impoundments at the Reid Gardner Generating Station, in accordance with §257.102 of the U.S. Environmental Protection Agency's CCR Rule.

1.1 Site Description

The Reid Gardner Generating Station (Station) is a former coal-fired electric power generation facility that produced approximately 600 megawatts (MW) of power from four generating units. The Station is located approximately 50 miles northeast of Las Vegas, within the Moapa Valley. (The last unit ceasing operation in March 2017. The Station has been decommissioned and demolished, and no longer generates electricity or produces new CCR.

Ponds M5 and M7 are existing CCR surface impoundments at the Station, and designed to hold flue gas desulfurization (FGD) material. The ponds are formed by earthen embankments with two layers of 80 mil geomembrane liner, have interstitial leak detection and collection systems, and are located on a mesa approximately 3,600 feet south of the former power generating units. Ponds M5 and M7 were designed, permitted, and constructed in conformance with applicable State regulations and placed into service in 2011, prior to the publication of the CCR Rule. The applicable State regulations included water pollution control regulations (Nevada Administrative Code [NAC] 445A), dam safety regulations (NAC 535), and Water Technical Sheet 37 (WTS-37) provided by the Nevada Division of Environmental Protection's (NDEP) Bureau of Water Pollution Control (BWPC). Even though Ponds M5 and M7 have two layers of 80 mil geomembrane liner with interstitial leak detection and collection systems, these ponds are classified as existing unlined CCR surface impoundments under the CCR Rule (§257.71(a)(3)(i)).

1.2 Regulatory Overview

The CCR Rule was published in the Federal Register on April 17, 2015, and became effective on October 19, 2015. The Rule regulates the disposal of CCR as solid waste in landfills, surface impoundments, and lateral expansions under Subtitle D of the Resource Conservation and Recovery Act. The Rule sets forth minimum requirements for written closure plans and the closure of CCR surface impoundments in §257.102. A CCR Rule update in 2020, known as Closure Part A, required owners to cease placing CCR and non-CCR wastes into existing unlined CCR surface impoundments by April 11, 2021. Part A also required owners to commence closure by that date. The most recent update to the CCR Rule, known as the Legacy Rule, was published in the Federal Register on May 8, 2024, and becomes effective on November 8, 2024.

Ponds M5 and M7 are subject to the closure requirements in the CCR Rule because the ponds are considered existing unlined CCR surface impoundments. A CCR surface impoundment is a "man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit, treats, stores, and disposes of CCR" (§257.53). Furthermore, they are classified as existing CCR surface impoundments under the Rule because they received CCR both before and after October 19, 2015. As a result, both ponds must comply with the CCR Rule and more specifically the closure requirements as required by §257.102(a).

The initial written closure plan was placed in the Station's operating record on October 10, 2016, in compliance with §257.102(b)(2)(i) and §257.105(i)(4). The subsequent revisions of this plan were placed in the operating record per the deadlines in §257.102(b)(3) and §257.105(i)(4). Within 30 days of placement, the State Director was notified as required by §257.106(i)(4) and §257.106(d). Also, within 30 days of placement, the initial and revised plans were placed on a publicly accessible Internet site per §257.107(i)(4) and §257.107(d). The initial and revised plans were certified by a qualified professional engineer (§257.102(b)(4)).

This third revision was not triggered by a change of operations or specific triggering event. Rather, it was written to include actual dates, change the anticipated closure completion date, and reflect changes caused by the Legacy Rule. The closure plan may be amended at any time, but it must be amended when "there is a change in the operation of the CCR unit that would substantially affect the written closure plan" or when "unanticipated events necessitate a revision" (§257.102(b)(3)). The plan must be amended at least 60 days before a planned change in operations, and no later than 60 days after an unanticipated event triggers a revision. After closure has commenced, the plan must be amended not more than 30 days after the triggering event. Amended plans have the same requirements for certification, record keeping, public posting, and notification as required for the initial plan.

Ponds M5 and M7 are also regulated under the State and Federal permits summarized in Table 1. The activities and requirements associated with closure under these non-CCR Rule permits are not described in this closure plan.

Table 1. Non-CCR Rule Permits
Closure Plan, Coal Combustion Residual Surface Impoundments Ponds M5 and M7, Reid Gardner Generating Station

Regulatory Agency	Permit Name	Permit Number
Nevada Division of Water Resources	Dam Permit	J-652
Nevada Department of Wildlife	Industrial Artificial Pond Permit	S-32922
Nevada Division of Environmental Protection, Bureau of Water Pollution Control	Authorization to Discharge	NEV91022
United States Bureau of Land Management	Right-of-Way Grant	N-82003

SECTION 2

Impoundment Closure Activities

This section describes the "steps necessary to close the CCR unit at any point during the active life of the CCR unit" and is written to meet the requirements of §257.102(b). The steps listed in this section are "consistent with recognized and generally accepted good engineering practices" and the performance standard in §257.102(c). This section assumes that the CCR unit will be closed by removal of CCR as allowed by §257.102(a).

2.1 Narrative Description

This section contains the narrative description required by §257.102(b)(1)(i) and §257.102(b)(1)(ii) of the CCR Rule.

2.1.1 Initiation of Closure Activities

Closure of Ponds M5 and M7 commenced on April 8, 2021, when "steps necessary to implement [this] written closure plan" were taken as required by §257.102(e)(3). The only way to place CCR in the ponds was eliminated on that date when an FGD inlet pipe, the Mesa Conveyance Pipeline, was air-gapped and capped in two locations: the Effluent Pipeline Valve Station and the Effluent Forwarding Pump Station. Additionally, the receipt of CCR and non-CCR waste ceased before that date. These actions complied with the April 11, 2021, deadline for cessation of waste placement and commencement of closure in §257.101(a)(1).

A notification of intent to close was placed in the Station's operating record on April 6, 2021, as required by §257.102(g) and §257.105(i)(7). Within 30 days of placement, the State Director was notified as required by §257.106(i)(7) and §257.106(d). Also within 30 days of placement, the notification of intent to close was posted on a publicly accessible Internet site per §257.107(i)(7) and §257.107(d). As required by §257.101(a)(2), the notification of intent included a statement that Ponds M5 and M7 are being closed under the requirements of §257.101(a)(1).

2.1.2 Closure Implementation

Implementation of closure activities commenced as described in the preceding section of this plan. Since that time the ponds have been allowed to naturally dry and the owner has started engineering and regulatory coordination. Other closure activities will include allowing the ponds to finish drying, completing engineering design and regulatory coordination, and starting to procure construction services. The ponds are being allowed to naturally dry to improve the stability of the CCR waste during removal and disposal. Site preparation activities may include delivering equipment and supplies, installing temporary erosion/stormwater control measures, and demolishing/decommissioning structures that might interfere with CCR removal. The CCR will be excavated from the ponds and loaded into haul vehicles, containers, or similar devices for disposal in the existing on-site CCR landfill as allowed by the existing landfill permit. As part of the removal process, the CCR may be blended with ash, soil, or other materials to further stabilize the CCR. The existing exterior and/or interior pond embankments may be removed or left in place. The removal process will continue until the CCR has been removed from the ponds and any areas affected by releases have been characterized and remediated. CCR and other wastes removed as part of the project, such as construction and demolition debris and decontamination wastes, will be disposed of in the existing landfill or at permitted disposal facilities in accordance with applicable laws, regulations, and permits. After removing the CCR, a soil cover may be placed in the former pond area and seeded. During closure activities, the groundwater

detection monitoring program will continue per §257.90 - §257.98. Program activities may include sampling, analyses and reporting, including assessment monitoring if triggered by detection monitoring results, and corrective measures if triggered by assessment monitoring results.

2.1.3 Completion of Closure Activities

For existing CCR surface impoundments, closure must be completed within five years of commencing closure activities (§257.102(f)(1)(ii)). Refer to Section 2.3 for the estimated completion date. However, with proper documentation time extensions are possible under the CCR Rule (§257.102(f)(2)). Per Section §257.102(c), CCR removal and decontamination of the unit are complete "when constituent concentrations throughout the CCR unit and any areas affected by releases from the CCR unit have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standard (GWPS) established pursuant to § 257.95(h) for constituents listed in appendix IV to this part." As required by Section §257.102(c)(1)(ii) in the Legacy Rule, it will be demonstrated that no appendix IV constituents are at statistically significant levels above the GWPS for either two consecutive monitoring events or, for units in corrective action, a period of three years.

Upon completion, a qualified professional engineer must certify that the closure was completed in accordance with this closure plan and other closure requirements in the CCR Rule (§257.102(f)(3)). Within 30 days of completing closure, a notification of closure must be placed in the facility's operating record and must include the professional engineer's certification (§257.102(h) and §257.105(i)(8)). Within 30 days of placement, the State Director must be notified as required by §257.106(i)(8)) and §257.106(d). Also, within 30 days of placement, the notification must be posted on a publicly accessible Internet site per §257.107(i)(8) and §257.107(d). No deed notations are required because the ponds will be closed by removal of CCR (§257.102(i)(4)). After closure of this CCR unit is completed, the periodic monitoring, inspection and reporting requirements of the CCR Rule will no longer apply and those activities will cease.

2.2 Estimated Maximum CCR Inventory

The maximum estimated inventory of solid and liquid CCR expected to be on-site during the active life of Ponds M5 and M7 is 17,750,000 gallons. This information is required by §257.102(b)(iv) and based on estimates in the *Annual Coal Combustion Residuals Surface Impoundment Inspection Report* written by Jacobs and dated June 26, 2024.

2.3 Conceptual Closure Schedule

The closure schedule required by §257.102(b)(vi) of the CCR Rule is shown in Figure 1. It is assumed that Ponds M5 and M7 will be closed as part of a single construction event. Pond closure activities are estimated to be completed by April 8, 2026. The sequencing and timing shown in the schedule could change based on the rate of pond natural drying and other factors. Although the schedule includes some of the "major milestones" identified in the CCR rule as part of closure activities, it does not include all of the activities necessary to close the ponds in accordance with "other permits" and applicable state and county regulations.

Figure 1 Conceptual Closure Schedule

Closure Plan, Coal Combustion Residual Surface Impoundments Ponds M5 and M7, Reid Gardner Generating Station

Step or Phase of CCR Unit Closure	Estimated Completion Timeframe [a] (calendar years and quarters)																					
	2021			2022				2023				2024				2025				2026	
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Last Receipt of CCR and non-CCR Waste and Closure Commencement [b]																					
Issue Notifications of Intent to Close for CCR-Rule [c]																					
Pond Dewatering by Evaporation																					
Design Pond Closure Project and Perform Regulatory Coordination																					
Bid, Select, and Award Closure Contract																					
Closure Construction Activities [d]																					
Issue Notification of Closure Completion for both CCR Rule [d] and other permits																					

[a] Typically, timeframes provided are approximate, conceptual, and in calendar days. Actual dates and durations for construction will depend on weather, contractor availability, and other variables.

[b] Closure commenced on April 8, 2021 and the last reciept of waste occured before that date. Regaultory deadline was April 11, 2021.

[c] The notification of intent to close (NOI) was posted to the operating record on April 7, 2021. Within 30 days of placement the NOI was posted on the publicly accessible Internet site and notice was sent to the State Director.

[c] Closure must be completed by April 8, 2026, which is five years after commencing closure activities as required by §257.102(f)(1)(ii)).

[d] The notification must be placed in the operating record within 30 days of the completion of closure. Within 30 days of placement the notification of closure must be posted on the publicly accessible Internet site and notice sent to the State Director. The notification must be certified by a professional engineer.