

FINAL, REVISION 1

# Post-Closure Plan Coal Combustion Residual Landfill Reid Gardner Generating Station

*Prepared for*  
NV Energy

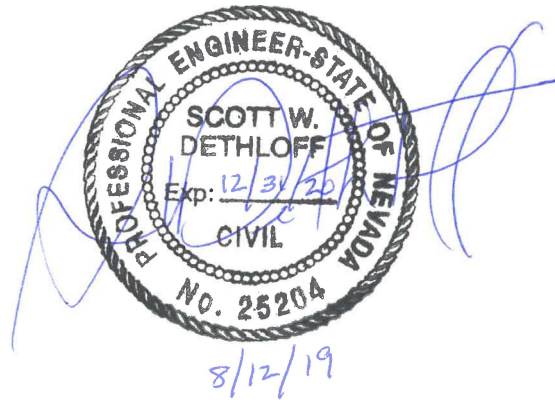
July 2019

**JACOBS®**

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# Certification

This page contains the written certification by a qualified professional engineer as required by §257.104(d)(4) of the U.S Environmental Protection Agency's Coal Combustion Residual Rule.



This initial post-closure plan for the coal combustion residual landfill at Reid Gardner Generating Station meets the requirements of section §257.104 of the Coal Combustion Residual Rule.

Revision Date	Certified By	Revision	Description of Changes
October, 2016	Nathan Betts, PE /Jacobs	0	Final Plan
August 12, 2019	Scott Dethloff, PE /Jacobs	1	Revised Final Plan -Updated Station status

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# Introduction

This July 2019 revision to the initial written post-closure plan presents the activities that will be performed to care for the Reid Gardner Generating Station's coal combustion residuals (CCR) landfill after closure as required by §257.104 of the U.S Environmental Protection Agency's CCR Rule.

## 1.1 Site Description

The Reid Gardner Generating Station (Station) is a retired 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 Station has been decommissioned and is undergoing demolition; thus, no longer generating electricity or producing new CCR.

Located approximately 4,000 feet southwest of the Station, the CCR landfill is a partially-lined monofill landfill that currently has waste placed over approximately 111 acres. The waste fill currently extends 40 or more feet above the adjacent ground surface and generally has 3:1 (horizontal to vertical) or flatter side slopes. The landfill's surface is generally graded to drain stormwater to basins located at the perimeter of the landfill.

## 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, impoundments, and lateral expansions under Subtitle D of the Resource Conservation and Recovery Act. The Rule sets forth minimum requirements for written post-closure plans and the post-closure care of CCR landfills in §257.104. Because the landfill is being closed with CCR left in place and is therefore subject to the closure requirements of §257.102, §257.104(a) further requires that the post-closure care be performed in accordance with the requirements in the CCR Rule.

The initial written post-closure plan was placed in the Station's operating record on October 10, 2016 per §257.104(d)(2) and §257.105(i)(12). Within 30 days of placement, the State Director was notified as required by §257.106(i)(12) and §257.106(d). Also within 30 days of placement, the plan was posted on a publicly accessible Internet site per §257.107(i)(12) and §257.107(d). The initial plan was certified by a qualified professional engineer (§257.104(d)(4)).

The post-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 post-closure plan" or when "after post-closure care activities have commenced, unanticipated events necessitate a revision" (§257.104(d)(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 post-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. This amendment was not triggered by a specific event or change but serves to bring the description of the station up to date. The landfill, originally regulated by the Southern Nevada Health District, is now regulated by the State of Nevada Division of Environmental Protection's Bureau of Sustainable Materials Management, the current Solid Waste Management Authority, as a Class III (industrial waste) landfill under Permit to Operate a Solid Waste Management Facility LF006-CMF-01. The activities and requirements associated with closure under that permit and applicable local and state regulations are not described in this closure plan.



# Landfill Post-Closure Activities

This section contains the minimum requirements for a written post-closure plan required by §257.104(d)(1) of the Rule. This section assumes that the CCR unit will be closed by leaving CCR in place and installing a final cover as allowed by §257.102(a).

## 2.1 Description of Monitoring and Maintenance Activities

As required by §257.104(d)(1)(i), this section contains the description and frequency of the monitoring and maintenance activities required by §257.104(b).

### 2.1.1 Timing and Completion

Post-closure care must commence following closure of the CCR unit and must be provided for a post-closure care period of 30 years (§257.104(c)(1)). However, if the CCR unit is under assessment groundwater monitoring at the end of the post-closure care period then post-closure care must be provided until the unit returns to detection groundwater monitoring per §257.95.

No later than 60 days after completing the post-closure care period a notification to verify completion must be placed in the Station's operating record per §257.104(e) and §257.105(i)(13). Within 30 days of placement, the State Director must be notified as required by §257.106(i)(13) and §257.106(d). Also within 30 days of placement, the plan must be posted on a publicly accessible Internet site per §257.107(i)(13) and §257.107(d). The notification must include a certification by a qualified professional engineer that post-closure care was completed in accordance with this plan and the Rule (§257.104(e)).

### 2.1.2 Final Cover System Maintenance

The final cover system will be inspected periodically during the post-closure care period to monitor "the integrity and effectiveness of the final cover system" (§257.104(b)(1)). More specifically, the inspections will visually check for signs of "settlement, subsidence, erosion, or other events" such as erosion and other damage caused run-on and run-off. In addition, stormwater management features will be inspected. The inspections will generally follow the procedures used for the operational landfill inspections required by §257.84. Inspections will be performed at least annually during the post-closure care period.

If deficiencies are identified during the post-closure care period, repairs will be made as necessary to maintain "the integrity and effectiveness of the final cover system" (§257.104(b)(1)). This will include correcting "the effects of settlement, subsidence, erosion, or other events" such as erosion and other damage caused by run-on and run-off. Repairs to significant deficiencies will be made as soon as feasible after identifying the deficiency. Minor deficiencies may be monitored until they require action.

### 2.1.3 Groundwater Monitoring and System Maintenance

Per §257.104(b)(3), groundwater monitoring during the post-closure care period will meet the same requirements used for groundwater monitoring during the active life of the CCR unit (i.e. §257.90 thru §257.98). The monitoring frequency will be semi-annual as required by §257.94(b) unless an alternative frequency has been implemented as allowed by §257.94(d).

The groundwater monitoring system will be inspected annually, typically during a periodic groundwater monitoring event. The above ground portions of the well will be inspected visually for damage. Monitoring data, such as total well depth and turbidity, will be inspected for indications that below

ground portions of the well have been damaged or degraded. Repairs will be made and maintenance performed as soon as feasible after identifying the deficiency.

## 2.2 Post-Closure Contact Information

As required by §257.104(d)(1)(ii), the contact information for the person or office that should be contacted about the facility during post-closure care is listed below.

Manager, Environmental Services  
NV Energy  
6226 W. Sahara Ave. M/S 30  
Las Vegas, NV 89146  
702-402-5767  
TGarcia@nvenergy.com

## 2.3 Planned Post-Closure Property Use

The property on which the landfill is located may be used for industrial purposes during the post-closure period. If additional uses are planned in the future, this plan will be amended as described in an earlier section and the additional planned uses will be described in this section as required by §257.104(d)(1)(iii).

In accordance with the requirements in §257.104(d)(1)(iii), the industrial uses will be managed so they do not “disturb the integrity of the final cover... or any other component of the containment system, or the function of the monitoring system”. Any disturbances to the integrity of the systems would be allowed only after demonstrating that the disturbances would not “increase the potential threat to human health for the environment.” The demonstration would need to be certified by a qualified professional engineer and placed in the Station’s operating record. A notification would need to be sent to the State Director and the demonstration would need to be posted to the publicly accessible Internet site.