

# CHOLLA POWER PLANT BOTTOM ASH MONOFILL

Periodic Run-on And Run-off Control System Plan

October 2021  
AECOM Project 60664605

Prepared for:

Arizona Public Service  
400 North 5<sup>th</sup> Street  
Phoenix, AZ 85004

Prepared by:

AECOM  
7720 North 16th Street, Suite 100  
Phoenix, AZ 85020  
[aecom.com](http://aecom.com)

## Table of Contents

<b>1. Introduction</b>	<b>1</b>
<b>2. Methodology</b>	<b>1</b>
<b>3. 2017–2021 Annual Inspection Reports</b>	<b>2</b>
<b>4. 2016 Plan – Review by Section</b>	<b>2</b>
4.1 “Overview”	2
4.2 “§257.81 (a)(1)(2) Run-on and Run-off Controls for CCR Landfills”	2
4.3 “§257.81 (b) Run-on and run-off controls for CCR landfills”	2
4.4 “§257.81 (c)(1)(2)(3)(4)(5) Run-on and run-off controls for CCR landfills”	3
4.5 “§257.81 (d) Run-on and run-off controls for CCR landfills”	3
<b>5. Recommended Additional Technical Investigations or Evaluations</b>	<b>3</b>
<b>6. Conclusion</b>	<b>3</b>
<b>7. Limitations</b>	<b>3</b>
<b>8. Certification Statement</b>	<b>5</b>

## Attachment

Attachment A: AECOM, 2016, *Cholla Power Plant, Bottom Ash Monofill, Run-on and Run-off Control System Plan*, CH\_RunOO\_001\_20161017, October 17, 2016.

## 1. Introduction

This periodic update to the Run-On and Run-Off Control System Plan for the Bottom Ash Monofill at Cholla Power Plant, operated by Arizona Public Service (APS), has been prepared in accordance with the requirements of Title 40 of the Code of Federal Regulations Part 257 (40 CFR 257) (“the Coal Combustion Residuals [CCR] Rule”, or “the Rule”) and the specific requirement of 40 CFR § 257.81(c)(4) that “(t)he owner or operator of the CCR unit must prepare periodic run-on and run-off control system plans required by paragraph (c)(1) of this section every five years.”

## 2. Methodology

The methodology used to prepare this 2021 Update and Recertification of the Run-on and Run-off Control System Plan for the Bottom Ash Monofill at the Cholla Power Plant is for the certifying Qualified Professional Engineer (QPE) to:

1. Perform a documented review of the 5 years of annual inspection reports since 2016;
2. Perform a documented review of each major component of the contributing technical information from:
  - a. AECOM, 2016. *Cholla Power Plant, Bottom Ash Monofill, Run-on and Run-off Control System Plan*, CH\_RunOO\_001\_20161017, October 17, 2016 (hereafter referred to as the “2016 Plan” and incorporated and referenced directly as Attachment A to this document).
3. Consider and document whether the 2016 Plan and its conclusions:
  - a. Meet the current reporting requirements of the Rule;
  - b. Reflect the current condition of the structure, as known to the QPE and documented in the annual inspections;
  - c. Are compromised by any identified issues of concern; and
  - d. Are consistent with the standard of care of professionals performing similar evaluations in this region of the country; and
4. Identify any additional analyses, investigations, inspections, and/or repairs that should be completed in order to complete this 2021 Recertification.

This report documents the results of these considerations, incorporates the 2016 Plan as an Appendix, identifies any additional technical investigation or evaluations (if needed), and presents an updated certification by the QPE.

### **3. 2017–2021 Annual Inspection Reports**

Information relevant to the current adequacy and performance of the run-on and run-off control system were reviewed. No issues were identified during the review that would affect the performance of the system and its compliance, as described in the 2016 Plan, with the requirements of 40 CFR § 257.81(c)(5).

### **4. 2016 Plan – Review by Section**

Other than as described in the remainder of this section, the details presented in this section of the 2016 Plan adequately represent current conditions and satisfy the requirements of the Rule.

#### **4.1 “Overview”**

The details presented in this section of the 2016 Plan adequately represent current conditions and satisfy the requirements of the Rule.

#### **4.2 “§257.81 (a)(1)(2) Run-on and Run-off Controls for CCR Landfills”**

The 2016 Plan presents the details of a control system to capture and convey the 24-hour, 100-year off-site, run-on design storm event. The design storm exceeds the minimum (24-hour, 25-year) event required by §257.81 (a)(1).

The review addressed the suitability of the hydrologic basis used for the 2016 Plan. The methods used to estimate the rainfall and losses were based on the Arizona Department of Transportation *Highway Drainage Design Manual* published 1993. A newer manual was released in 2007 that is similar to the original manual. In this application, the 1993 Manual is assessed to be conservative in that it did not account for a reduction in the C-value for smaller return events (such as the 25-year).

The details presented in this section of the 2016 Plan adequately represent current conditions and satisfy the requirements of the Rule.

#### **4.3 “§257.81 (b) Run-on and run-off controls for CCR landfills”**

The 2016 Plan presents the details of a control system to capture, convey, and store the 24-hour, 25-year on-site, run-off design storm event as required by §257.81 (a)(2). As described in the 2016 Plan, there will be no discharge from the on-site retention basin.

The details presented in this section of the 2016 Plan adequately represent current conditions and satisfy the requirements of the Rule.

#### **4.4 “§257.81 (c)(1)(2)(3)(4)(5) Run-on and run-off controls for CCR landfills”**

The owner or operator continues to acknowledge and will comply with these requirements.

A certification of this Periodic Run-On and Run-Off Control Plan by a QPE is included in this document per the requirement of §257.81 (c)(5).

#### **4.5 “§257.81 (d) Run-on and run-off controls for CCR landfills”**

The owner or operator continues to acknowledge and will comply with these requirements.

### **5. Recommended Additional Technical Investigations or Evaluations**

None identified and none recommended.

### **6. Conclusion**

The 2016 Plan and its conclusions meet the current reporting requirements of the Rule, reflect the current condition of the structure as known to the QPE and documented in the annual inspections, are not compromised by any identified issues of concern, and are consistent with the standard of care of professionals performing similar evaluations in this region of the country.

### **7. Limitations**

This document is for the sole use of APS on this project only and is not to be used for other projects. In the event that conclusions based upon the data presented in this document are made by others, such conclusions are the responsibility of others.

The Periodic Run-on And Run-off Control System Plan presented in this document is based on the 2016 Plan and relies and incorporates any Limitations expressed in that document.

The Certification of Professional Opinion in this report is limited to the information available to AECOM at the time this Assessment was performed in accordance with current practice and the standard of care. Standard of care is defined as the ordinary diligence exercised by fellow practitioners in this area performing the same services under similar circumstances during the same period. Professional judgments presented herein are primarily based on information from previous reports that have been assumed to be accurate, knowledge of the site, and partly on our general experience with dam safety evaluations performed on other dams.

No warranty or guarantee, either written or implied, is applicable to this work. The use of the word “certification” and/or “certify” in this document shall be interpreted and construed as a

Cholla Power Plant  
Bottom Ash Monofill  
Periodic Run-on And Run-off Control System Plan

Statement of Professional Opinion and is not and shall not be interpreted or construed as a guarantee, warranty, or legal opinion.

## 8. Certification Statement

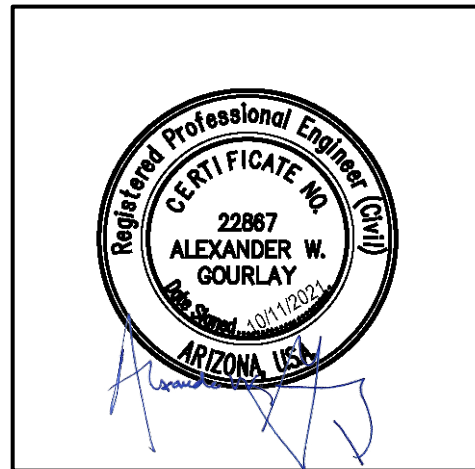
### Certification Statement for:

- Certification Statement 40 CFR § 257.81(c)(5) – Periodic Run-on and Run-Off Control System Plan for an Existing CCR Landfill
- CCR Unit: Arizona Public Service; Cholla Power Plant; Bottom Ash Monofill

I, Alexander W. Gourlay, being a Registered Professional Engineer in good standing in the State of Arizona, do hereby certify, to the best of my knowledge, information, and belief, that the information contained in this certification has been prepared in accordance with the accepted practice of engineering. I certify, for the above-referenced CCR Unit, that the information contained in this Periodic Run-On and Run-Off Control System Plan dated October 2021, including the technical content in Attachment A, meets the requirements of 40 CFR § 257.81.

Alexander W. Gourlay, P.E.  
Printed Name

October 11, 2021  
Date



### Attachment A:

AECOM, 2016. *Cholla Power Plant, Bottom Ash Monofill, Run-on and Run-off Control System Plan*, CH\_RunOO\_001\_20161017, October 17, 2016.

**ATTACHMENT A**

**AECOM, 2016. *Cholla Power Plant, Bottom Ash Monofill, Run-on and Run-off Control System Plan, CH\_RunOO\_001\_20161017,*  
October 17, 2016.**

[aecom.com](http://aecom.com)