

Desert Basin Generating Station – Spoils Pile Area

Aquifer Protection Permit 512778

Place ID # 13272, LTF #71003

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an Aquifer Protection Permit for the subject facility that covers the closure of a discharge, including operational, closure, and post-closure periods unless suspended or revoked pursuant to A.A.C. R18-9-A213. This document gives pertinent information concerning the issuance of the permit. The requirements contained in this permit will allow the permittee to comply with the two key requirements of the Aquifer Protection Program: 1) meet Aquifer Water Quality Standards at the Point of Compliance; and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). The purpose of BADCT is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., local subsurface geology) to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer, or to keep pollutants from reaching the aquifer.

I. FACILITY INFORMATION

Name and Location

Name of Permittee:	Salt River Project Agriculture Improvement and Power District (SRP)
Mailing Address:	P.O. Box 52025, Mail Station DBS100 Phoenix, Arizona 85072
Facility Name and Location:	Desert Basin Generating Station – Spoils Pile Area 1872 North Burriss Road Casa Grande, Arizona 85193 Pinal County

Regulatory Status

This Individual Aquifer Protection Application to close a discharging facility was received on September 14, 2018.

Facility Description

The Spoils Pile Area is located in the northeastern quadrant of Pinal County Parcel No. 50369004A.

On April 6, 2018, SRP notified ADEQ of a potential APP violation at the SRP-Desert Basin Generating Station facility. Evaporation sediments from the evaporation impoundments permitted under APP P-501832, had been removed and deposited on top of the adjacent approximately 1100 X 1100 square foot (ft²) spoils pile area (the spoils pile is the soil from the initial excavation of the pond at the time of construction) located east of the northwest evaporation impoundment. The transportation of the evaporation sediments (approximately 1,500 cubic yard) to the spoils pile area occurred between July 2015 and March 2017. Approximately 3,588 tons of solid waste materials (sediments and underlying soil) was removed from the spoils pile area during the remediation activities from June 10, 2018 thru July 10, 2018.

The site includes the following permitted discharging facility:

Facility	Latitude	Longitude
Spoils Pile Area	32° 55' 41.92" N	111° 49' 10.69" W

II. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)

BADCT employed in closing this facility included the removal approximately 3,588 tons of solid waste materials. After the materials was removed, 25 confirmation soil sample were collected from eight (8) areas within spoils pile area for laboratory analysis.

Closure Design and Site Characterization

Approximately 3,588 tons of solid waste materials was removed and disposed to the Butterfield Station Landfill. The exposed underlying native soil was sampled. Following the sampling activities the area was regraded and 4,990 tons of #57 sized rock was brought in and spread to cap the spoils pile area to prevent erosion and for dust control. Future changes in use of the spoils pile area shall be addressed through an amendment to the Salt River Project Agriculture Improvement and Power District (SRP) - Desert Basin Generating Station P-501832.

Applicable Remediation or Institutional Control

1. One composite background sample for every 500 cubic yards of material was sampled required by the disposal facility. Based on the distribution on material on the spoils pile, five (5) composite samples were taken, one from each area, with the composite consisting of two (2) to six (6) individual samples. The background samples were taken to ensure that the material removal was complete, by comparing the composite sampling results to the confirmation sampling results.
2. 25 confirmation soil samples were collected from eight (8) areas within the spoils pile area and one composite background sample was taken from various different locations within the spoils pile (locations where no salts or other solid waste is visually present). Background samples were taken from approximately 6” below ground surface (bgs). Soil samples were collected from approximately 0 to 12 inches, 12 to 24 inches and 24 to 36 inches below the underlying native soil of the spoils pile area on June 20, 2018 and submitted the same day to a Test America Laboratories, licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification.
3. The samples were analyzed using USEPA SW-846 Method 6010 for eight total Resource Conservation and Recovery Act (RCRA) metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver) and USEPA Methods 200.7, 6010, or 300 for the additional constituents as requested by ADEQ (potassium, magnesium, fluoride and chloride). The soil sample results for Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Nickel showed no exceedance of the GPLs or non-residential Regional Screening Levels (RSLs). Potassium, magnesium, fluoride, and chloride have no calculated GPLs. SPLP extracts of samples were analyzed. Maximum Chloride concentration was 530 mg/l with an

average concentration of 213 mg/l. Secondary MCL for Chloride is 250 mg/l. Maximum Fluoride concentration was 1.3 mg/l with an average concentration of 1 mg/l. Secondary MCL for Fluoride is 2mg/l. Maximum concentration of Potassium was 39 mg/l. Maximum concentration of magnesium was 63 mg/l.

4. Based on the soil sample test results, the soil does not contain pollutants in concentrations that could cause or contribute to an exceedance of AWQS at the POC.

The closure activities and changes in operations shall prevent the spoils pile area from causing or contributing to a violation of the AWQS at the POC in the future. The closure investigation has met the clean closure criteria as defined in A.R.S. §49-201(5). No post closure monitoring is required.

III. COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS

The closure investigation demonstrated that the discharge to the spoils pile area did not cause or contribute to concentrations of pollutants above the AWQS at the POC. There is no reasonable probability of further discharge of pollutants from the spoils pile area and of exceeding or contributing to an exceedance of aquifer water quality standards at the POC resulting from past discharges. The closure activities and changes in operations at the permitted facility shall prevent the spoils pile area from causing or contributing to a violation of the AWQS at the POC in the future. The closure investigation has met the clean closure criteria as required in A.R.S. §49-252 and §201(5).

Point of Compliance (POC)

The POC location is within the footprint of the spoils pile area.

POC #	Latitude	Longitude
1 (Conceptual)	32° 55' 41.92" N	111° 49' 10.69" W

The POC is conceptual; groundwater monitoring is not required at the POC at permit issuance. The Director may designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

IV. COMPLIANCE SCHEDULE

There is no compliance schedule required by this permit.

V. OTHER REQUIREMENTS FOR ISSUING THIS PERMIT

Technical Capability

The SRP has demonstrated the technical competence necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A202 (B).

The permit requires that appropriate documents be sealed by an Arizona-registered geologist or professional engineer. This requirement is a part of an on-going demonstration of technical capability. The permittee is expected to maintain technical capability throughout the life of the facility.

Financial Capability

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203 (B) in current APP Permit # 501832, the SRP- Desert Basin Generating Station. The permittee shall maintain financial capability throughout the life of the facility.

Zoning Requirements

The SRP- Desert Basin Generating Station has been properly zoned for the permitted use and the permittee has complied with applicable zoning ordinances in accordance with A.R.S. § 49-243(O) and A.A.C. R18-9-A201(B)(3).

VI. ADMINISTRATIVE INFORMATION

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft permit or other significant action with respect to a permit or application. The aquifer protection program rules require that permits be public noticed in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum of 30 calendar days for interested parties to respond in writing to ADEQ. The basic intent of this requirement is to ensure that all interested parties have an opportunity to comment on significant actions of the permitting agency with respect to a permit application or permit.

Public Comment Period (A.A.C. R18-9-109(A))

The Department shall accept written comments from the public before a new permit is issued or a significant permit amendment is made. The written public comment period begins on the publication date of the public notice and extends for 30 calendar days. After the closing of the public comment period, ADEQ is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

Public Hearing (A.A.C R18-9-109(B))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if the Director determines there is a significant amount of interest expressed during the 30-day public comment period, or if significant new issues arise that were not considered during the permitting process.

VII. ADDITIONAL INFORMATION

Additional information relating to this permit may be obtained from:

Arizona Department of Environmental Quality

Water Quality Division – Groundwater Protection Value Stream – APP and Reuse Unit 1

Attn: Monica Phillips



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