

Annual CCR Fugitive Dust Control Report



Tucson Electric Power

Tucson Electric Power Company
Springerville Generating Station
Springerville, Arizona

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1.0 Introduction

On December 19, 2014, the administrator of the United States Environmental Protection Agency signed the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities final rule (the Rule). The Rule was published in the Federal Register on April 17, 2015 and became effective on October 19, 2015. In accordance with the Rule, Tucson Electric Power Company (TEP) is required to publish an Annual CCR fugitive dust control report within 14 months after placing the initial CCR fugitive dust control plan in the facility's operating record. Subsequent reports are due one year after the date of the previous report. The following are the requirements of what must be included in the annual CCR fugitive dust control report per §257.80(c):

- Description of actions taken by the owner or operator to control CCR fugitive dust
- Record of all citizen complaints
- Summary of corrective measures taken

This report has been prepared to comply with the requirements as specified in §257.80(c) of the Rule. Additionally, this report will be placed in the Springerville Generating Station's (SGS) facility operating record one year after the date of the previous report per §257.105(g)(2), noticed to the State Director per §257.106(g)(2), and posted to the publicly accessible internet site per §257.107(g)(2).

2.0 Summary of CCR Fugitive Dust Control Practices and Procedures

SGS has implemented fugitive dust control practices and procedures which are outlined in Section 4.0 of the Fugitive Dust Control Plan and restated below. The Plan is also readily accessible in the SGS facility operating record as well as a publicly accessible internet site (<https://www.tep.com/ccr/>).

This section details control measures employed at the facility to minimize airborne dust from these sources in accordance with §257.80(b)(1-2) of the Rule.

2.1 CCR Handling

Fly ash mixed with product from the spray dry absorbers is collected from the baghouse hoppers and is pneumatically conveyed to a silo controlled with a bin vent filter for storage. The system is fully enclosed and not exposed to the atmosphere. From the silo, the fly ash is loaded into a truck via screw conveyor where the fly ash is conditioned with water to approximately 20 percent moisture. The high moisture content minimizes airborne dust during loading to the trucks. The facility also practices good housekeeping in the fly ash handling area by cleaning any excess fly ash as soon as practicable and regularly watering the area. Good housekeeping is practiced in areas that bottom ash and spray dry absorber materials are collected by cleaning up any excess material resulting from maintenance, spillage, and track out.

2.1.1 Monitoring

A certified EPA Method 9 observer conducted weekly visual survey of visible emissions from the fly ash handling area when in operation. If the observed opacity exceeded the 20% limit set forth in the facility's Title V operating permit, actions were taken to reduce opacity below the standard and excess emissions were reported. Method 9 observations recorded in 2022 were reviewed and there was one excess emissions incident observed (30% opacity) during this reporting period from the Unit 1 Fly Ash Silo. A Notice of Violation (NOV) was administered by the Arizona Department of Environmental Quality (ADEQ) for the violation. The matter was quickly resolved and the equipment causing the excess emissions was repaired in a timely manner.

2.1.2 Recordkeeping

Records of the opacity observations are maintained and include the name of the observer, the date on which the observation was made and the results of the observation. The records are maintained at the station's Environmental Department and retained for at least five years.

2.2 Transport Roadways

Ash haul roads are regularly maintained with oil and chip surfacing. Plant roadways, including ash haul roads to the ash disposal site, are watered by water trucks on each day on which trucks and/or other vehicular traffic occurs unless roads are naturally wet. The amount of time dedicated to watering the roads is a function of the dryness of the surface and is determined through daily observations by station personnel. The amount of water applied varies seasonally. Dust bearing material spilled in significant amounts onto any roadway is cleaned as soon as practicable. Fugitive dust emissions are further controlled by posting and maintaining a maximum vehicle speed limit of 15 miles per hour within the power plant area and 35 miles per hour on the ash haul roads.

2.2.1 Monitoring

A certified EPA Method 9 observer conducted bi-weekly visual survey of visible emissions from the plant's roadways. If the observed opacity exceeded the standards set forth in the facility's Title V operating permit, actions were taken to reduce opacity below the standard and excess emissions will be reported. Method 9 observations were reviewed and there were not any excess visible emission recorded.

2.2.2 Recordkeeping

Records of the opacity observations are maintained and include the name of the observer, the date on which the observation was made and the results of the observation. Roadway maintenance records regarding watering/dust control are documented in daily logs completed by station personnel. The completed logs are forwarded to the station's Environmental Department and retained for at least five years.

2.3 Ash Disposal Site

Fly ash mixed with product from the spray dry absorber and bottom ash is disposed at the facility's ash disposal site. Fugitive dust is minimized at the ash disposal site by spreading and compacting the materials with a bulldozer as soon as practical after being delivered (i.e., the freshly dumped materials are not left on the landfill surface for extended periods of time). Additionally, a water truck regularly circulates to spread water on the internal roadways and the open operating areas of the disposal site. Only active areas of the ash disposal site are disturbed with vehicle traffic to further minimize airborne dust.

2.3.1 Monitoring

A certified EPA Method 9 observer conducted weekly visual survey of visible emissions from the ash handling areas, and a bi-weekly visual survey of visible emissions from non-point sources. If

the observed opacity exceeded the standards set forth in the facility's Title V operating permit, actions were taken to reduce opacity below the standard and excess emissions will be reported. Method 9 observations were reviewed and there were not any excess visible emission recorded.

2.3.2 Recordkeeping

Records of the opacity observations are maintained and include the name of the observer, the date on which the observation was made and the results of the observation. Watering/dust control activities are documented in daily logs completed by station personnel. The completed logs are forwarded to the station's Environmental Department and retained for at least five years.

2.4 Dust Control Measures during High Wind Conditions

In addition to the dust control methods described above utilized during normal operations, SGS also takes additional measures to reduce fugitive dust during high wind conditions. Total suspended particulate data and weather data, including wind speed and direction, is monitored with an on-site weather station and is displayed in the Unit 1 and 2 control room and in the Unit 3 and 4 control room. An alarm alerts the operator of high winds and visible haze in the Unit 1 and 2 control room. When an alert level is triggered (wind speed and/or haze), the shift supervisor is notified by the control room operator. Upon being notified, the shift supervisor is required to visually inspect the SGS site to assess and, if needed, initiate dust control measures. The shift supervisor will also notify others that high wind dust control practices need to be initiated and will be proactive in initiating dust control practices prior to high wind events.

3.0 Record of Citizen Complaints

There were no citizen complaints to report, and no corrective actions taken in 2022.

4.0 Corrective Measures Taken

Visible emissions from Unit 1 Fly Ash Silo were briefly observed above the opacity limit of 20% one time during the reporting period in 2022. The incident was quickly resolved upon discovery; however, an NOV was issued by ADEQ. The following paragraphs summarize the corrective measures completed in response to the incident.

Upon the observation of visible emissions, SGS Environmental personnel called the Units 1&2 control room operations immediately to initiate isolation/shutdown protocol for the ash handling operation. Operations responded quickly, completing the isolation/shutdown process as soon as reasonably possible from the initial call, causing the cessation of visible emissions. SGS personnel also launched troubleshooting procedures and initiated work orders immediately to investigate possible causes that led to the incident.

As designed, the ash handling system maintains negative pressure within the silo to prevent fly ash from emitting to the atmosphere. SGS's investigation discovered a hardened ash blockage in the duct work near Unit 1 Air Pre-Heater (APH), right before entry into the SDA recycle feed bin. The blockage disrupted silo vent fans from performing their primary function of maintaining a negative draft on Unit 1 Fly Ash Silo and properly directing recycling fly ash back to the SDA recycle feed bin.

Some fly ash was able to escape from the silo as a result, causing visible emissions to exceed the 20% opacity limit. The rainwater from recent monsoon rain events likely leaked into the system at a loose damper flange causing buildup of fly ash to the point of plugging the duct piping. All repairs, including opening duct piping at the loose damper flange and elbows, unplugging the duct piping, resealing the piping, and tightening the loose damper flange were performed on the Unit 1 Fly Ash duct piping.

After all repairs were made to the Unit 1 Fly Ash duct piping, a thorough inspection of the piping and the vent system was performed, and operations commenced shortly thereafter. The Fly Ash Silo and Silo Vent Fans operated properly without issue.