



## **FOUR CORNERS - CCR DUST CONTROL PLAN**

### **LEVEL 3**

#### **Section 1. Introduction:**

Arizona Public Service Four Corners Steam Electric Generating Station operates two pulverized coal-fired, steam boilers which each generate approximately 750 megawatts of electricity. The facility is located on the Navajo Nation, southwest of Fruitland, New Mexico.

The facility is located in the semi-arid San Juan Basin on the Colorado Plateau, at an elevation of approximately 5,500 feet above sea level, receiving average rainfall of approximately 8-10 inches of rain annually. The dust control measures outlined in Section 2 of this document are appropriate for site conditions because controls are available for immediate use at the facility. These controls are commonly utilized and determined to be functional in other similar and more arid climates, located in Arizona, such as Maricopa and Pinal Counties.

Coal combustion residuals (CCR) generated at the facility and covered by this Plan are bottom ash, fly ash, cenospheres, and flue gas desulfurization (FGD) materials.

#### **Section 2. CCR Dust Activities and Control Measures:**

This section outlines general CCR related activities that may be conducted at Four Corners Steam Electric Generating Station and the control measures implemented to minimize fugitive dust.

2.1 CCR Material Stacking, Loading and Unloading: When CCR material stacking, loading and/or unloading occur, the material is either wet or water is applied to the material and the operation may be enclosed.

2.2 Transport of CCR Materials: CCR material is typically transported wet, meaning it has been mixed with a liquid or water application has occurred. When work requires the dry handling of CCR material, the following controls may be implemented to control CCR fugitive dust:

- Covering/tarping and/or cleaning of trucks during transport, or
- Limiting transport speeds.

2.3 CCR Material Storage: Any CCR material stored within the facility boundary is maintained wet by mixing/slucing materials with water/liquid or by water application. If the CCR material cannot be maintained wet, the following controls may be implemented to control CCR fugitive dust:

- Utilization of suitable wind barrier/enclosure,
- Reduce drop height when handling material
- Maintain suitable crust and/or moisture
- Application of dust suppressant agent.

2.4 Unpaved Roads Constructed with CCR Material: The unpaved roads/access areas located within the Combined Waste Treatment Pond, on the Dry Fly Ash Disposal Area (DFADA), and other access roads may be constructed utilizing bottom ash. To prevent CCR fugitive dust emissions, these roads are stabilized by the application of water and speed limits are imposed to ensure drivers maintain reduced vehicle speeds. Ice formation may preclude water application due to safety considerations.

2.5 Active Landfills and Surface Impoundments: CCR materials located in active surface impoundments are maintained wet. CCR materials located in active landfills are maintained by either moisture content, development of a suitable crust, and/or application of water as to prevent wind dispersal, so free liquid will not be present. Other stabilization methods may include application suppressants to maintain crust.

2.6 General Housekeeping: Spilled, leaked, and/or deposited CCR within the facility will be removed and may utilize vacuuming or stabilized by application of water until the area can be appropriately cleaned up. CCR leaks are identified and repaired during periods of outage as often as practicable.

### **Section 3. Assessment of Effectiveness:**

3.1 Review of Control Measures: In order to ensure that control measures implemented at the facility are meeting the requirements of 40 CFR §257.80, monthly visual inspections of the areas where CCR fugitive dust has the potential to be generated are conducted. Records of visual inspections are maintained at the facility. When deficiencies are noted, corrective measures are taken as necessary.

3.1.1 DFADAs: Inspection of areas, including unpaved CCR roadways are conducted monthly.

3.1.2 Lined Decant Waste Pond & Lined Ash Impoundment: Inspection of areas, including unpaved CCR roadways are conducted monthly.

3.1.3 Combined Waste Treatment Pond: Inspection of areas, including unpaved CCR roadways are conducted monthly.

3.1.4 Plant Walk Down: The Upper Retention Pond, Lower Retention Sump, electric generating units and surrounding areas inspections are monthly.

3.2 Review of the CCR Dust Control Plan: The CCR Dust Control Plan will be reviewed by Environmental Operations when changes to the facility occur that could affect the generation of CCR fugitive dust. When amendments are made to the plan, it will be reviewed and certified by a qualified professional engineer. The CCR Dust Control Plan will be placed in the operating record.

**Section 4. Citizen Complaints:**

APS can accept citizen complaints through their Customer Care Center or the facility directly. Citizen complaints involving CCR fugitive dust events at the facility will be tracked using Four Corners' Internal and External Communication Process found in the facility's Environmental Management System and the Annual CCR Fugitive Dust Control Report.

**Section 5. Certification:**

Based on information provided by APS, this Dust Control Plan was developed for Four Corners Steam Electric Generating Station. The representations made in this document are true and accurate to the best of my knowledge and meet requirements outlined in 40 CFR §257.80 b(1) through b(7).



Signature



Date



Professional Engineer Stamp

## Appendix A: List of CCR Related Activities at Four Corners Generating Station

Below is a list of CCR related activities conducted at Four Corners Generating Station. When other CCR related activities occur at the facility, controls described in Section 2 are implemented to ensure fugitive dust emissions are minimized.

Activity	Control Measure(s)
1. Dry collection and transport of fly ash to Salt River Materials Group (SRMG) or wet disposal system via pipeline	This is an enclosed system vented through fabric filters.
2. Transporting fly ash (FA) to Dry Fly Ash Disposal Area (DFADA)	Fly ash is moisture conditioned, mixed with water or process liquid and/or wet or pressed FGD sludge, loaded into trucks and hauled and stacked on the DFADA.
3. Fly ash and bottom ash stacking and storage at the DFADA	Fly ash, bottom ash, and FGD is stacked on the DFADA in a layer and compacted. The material is moisture conditioned with water, and or dust suppressant is applied as necessary.
4. Dry fly ash collection system maintenance	Fly ash is either vacuumed out of equipment to facilitate maintenance or water sprays are used to minimize emissions during maintenance of the fly ash collection system. Collected fly ash is dewatered if necessary and transported to the DFADA for disposal.
5. Conditioning and loading fly ash for beneficial reuse by SRMG	Fabric filters are used on equipment that conditions and loads fly ash for beneficial re-use.
6. Replacement of fabric filter bags	Fabric filter bags are either bagged in plastic bags at the point of generation or dropped to ground level using an enclosed tube and placed into a roll off dumpster, covered, and transported to the DFADA for disposal.
7. Collecting bottom ash from boilers is transported to hydrobins via pipeline	This is a wet process and pipelines are enclosed.
8. Collection and disposal of ash from economizer hoppers	Ash (bottom and/or fly ash) is occasionally collected from economizer hoppers with the use of a commercial vacuum truck equipped with a filter type collection system and transported to the DFADA.
9. Loading bottom ash material to haul trucks	Bottom ash shall have sufficient moisture content to minimize emissions.
10. Movement of bottom ash to DFADAs from Units 4&5 hydrobins.	Bottom ash shall have sufficient moisture content to minimize emissions but will not have any free liquids. Dust suppressant is applied to CCR material at the DFADA as necessary.
11. Transporting Bottom Ash to DFADA.	The material is dewatered in a contained environment until no free liquid remains but will have sufficient moisture remaining to minimize emissions as well as reducing speed when in transport to the DFADA.
12. Removing bottom ash from boilers manually during breakdown of bottom ash removal system	Bottom ash removed from the boiler is saturated. The material is dewatered in a contained environment until no free liquid remains but will

	have sufficient moisture remaining to minimize emissions and then is transported to the DFADA.
13. The Particulate flow path from units to baghouse, collection & storage, FA removal, transport & disposal systems	This is a dry process and pipelines are enclosed.
14. Removal of raw bottom ash from the Bottom Ash Sluice Water Recycle Tank.	Bottom Ash is removed wet, allowed to dewater, then transported to the DFADA for disposal. The material is transported while sufficient moisture remains to minimize emissions.
15. Unpaved Roads Constructed with CCR Materials	Roads are stabilized by application of water and enforcement of limits to ensure reduce vehicle speed.
16. General Housekeeping	Spilled, leaked, and/or deposited CCR within the facility are removed.
17. LAI Closure Project	Bottom ash will be used as a stabilization to prevent fugitive dust off the LAI by keeping CCR material wet or with a crust.