COAL COMBUSTION RESIDUALS FUGITIVE DUST CONTROL PLAN

SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION
R.D. MORROW, SR. GENERATING PLANT
PURVIS, MISSISSIPPI

PREPARED FOR:

Prepared by:

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1.0 INTRODUCTION

South Mississippi Electric Power Association (SMEPA) owns and operates the coal-fired R.D. Morrow, Sr. Electric Generating Plant (Plant) near Purvis Mississippi. The United States Environmental Protection Agency (EPA) has promulgated regulations to regulate the disposal of coal combustion residuals (CCR) in the Federal Register, Vol. 80, No. 74, Final Rule: Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities, dated April 17, 2015. The Final Rule applies to owners and operators of new and existing landfills, and new and existing surface impoundments that dispose or otherwise engage in solid waste management of CCR generated from the combustion of coal at electric utilities and independent power producers. The Final Rule applies to all CCR generated by the Plant and includes fly ash, bottom ash, boiler slag, and flue gas desulfurization byproducts.

The Final Rule, 40 CFR 257.80(b) requires SMEPA to prepare and operate in accordance with a CCR Fugitive Dust Control Plan (Plan), as specified in the regulations. This requirement applies in addition to, not in place of, any applicable standards under the Occupational Safety and Health Act. The purpose of the Plan contained herein is to comply with 40 CFR 257.80(b).

2.0 CCR FUGITIVE DUST CONTROL MEASURES

Fly ash is pneumatically conveyed from the power house area Electrostatic Precipitators (ESPs) to an ash processing area. There the fly ash is separated by a special process into two streams; ash with low levels of unburned carbon, and ash with high levels of unburned carbon. The ash with high carbon is sent back to the boilers for “re-burning”. The ash with low levels of carbon is sold for beneficial use to concrete producers.

The beneficial ash is loaded into transport trucks in an enclosed area under a large concrete storage silo. The onsite third party marketing company that sells fly ash for beneficial use inspects each ash truck before it leaves the site after loading. The trucks are inspected after each load to make sure caps cover ports on the truck trailer and the fill opening on the top of the bulk trailer is closed. If there is spillage in the loading process the ash is washed down.

If the amount of ash that needs to be stored exceeds the available storage volume in the silos, ash is then transported through a pug mill where the ash and water sprays are combined by mechanical mixing. Then the ash is conveyed by a covered rubber belt conveyor to the solid waste landfill where the ash is stacked on the ground as it exits the radial stacker conveyor. Ash is moved frequently and placed in the active landfill which minimizes the amount of material stored on the ground at the radial stacker. Permanent water sprays are available for use at the radial stacker if the ash is too dry.

Scrubber byproducts are generated from the flue gas de-sulfurization process. The byproduct is a gypsum product and has approximately 15% by weight moisture. This byproduct is moved by conveyor to the radial stacker area and also placed on the ground. It is also periodically loaded and hauled to the solid waste landfill. Some of the scrubber byproducts are sold seasonally for beneficial use as a soil conditioner during certain crop planting cycles. During these times the scrubber byproduct is stored for longer periods at the radial stacker area for loading on transport

trucks which are shipped out with covered tarps. Because of its moisture level the scrubber byproduct usually does not create a significant amount of dust.

The fly ash with high levels of carbon is sent back to the boilers for "re-burning". The material is conveyed to a hopper above the main coal feed belt and "dribbled" onto the new coal feed to the boilers. The hopper has a bin vent for dust control and a water mist spray system that wets the carbon rich fly ash when it is placed on the coal feed belt.

Bottom ash is sluiced with water from the boilers and stored in de-watering bins. The wet bottom ash is dropped into transport trucks and shipped to a beneficial use concrete block producer. The trucks leave with cover tarps and the bottom ash is still wet from the sluicing process. If all the bottom ash cannot be sold then it is transported by SMEPA earth moving equipment and placed in the CCR landfill.

A SMEPA onsite water truck with power take-off driven water spray pumps is used to spray water on CCR in the landfill, radial stacker areas, and on dirt roads. Trees cut during a timber harvesting campaign and trees lost during Hurricane Katrina have been replanted with pines and now form a wind screen between most of the plant and the local public road, reducing windblown dust. Most of the trees now are at least ten years old.

Typically, once a year the exposed sides of the active landfill are covered with appropriate layers of clay, topsoil, and grass as interim or final cover to reduce the area of exposed CCR.

3.0 PROCEDURES TO EMPLACE CCR AS CONDITIONED CCR IN LANDFILL

Fly ash destined for the landfill is sprayed with water in a mechanical mixing process and transported by enclosed conveyor to the radial stacker area. Two water spray nozzles attached to the end of the radial stacker arm spray water when dry ash is being stacked from the conveyor. The fly ash is then placed wet into the landfill. If it dries before placement, or after placement, the CCR is wetted in place with the water truck.

Scrubber byproducts after the de-watering process contains approximately 15% by weight of water and this byproduct is conveyed wet in an enclosed conveyor to the landfill. If it dries at the radial stacker area, or if it dries in the active landfill, it is also sprayed with water by the mobile water truck.

Bottom ash is sluiced out of the boilers wet and then goes through a de-watering process prior to loading wet and transporting in trucks with tarps.

The coal yard supervisor assesses if dusting is occurring and initiates water truck use. The water used is sourced from deep wells on site.

4.0 CITIZEN COMPLAINTS

If citizens have complaints they should contact the following person who will log the complaint and initiate an investigation with the appropriate SMEPA leader who will document findings and then officially respond to the complainant.

Sara Peterson
Main Telephone: 601-268- 2083
speterson@smepa.coop

5.0 EFFECTIVENESS ASSESSMENT OF THE DUST CONTROL PLAN

The coal yard supervisor (or his designee) will:

1. Direct moving of stocked-piled CCR material from the radial stacker to the landfill.

2. Initiate landfill covering efforts by coal yard staff or contractors.

3. Assess if excess dust generation is occurring and initiate water truck use.

4. Periodically inspect transports of bottom ash and scrubber byproducts to make sure the trucks have tarps on the truck tops after loading.

If the coal yard supervisor discovers dust issues beyond his control he will discuss same with his supervisor and/or the Morrow Results Engineer who currently has responsibility for Morrow environmental issues. The Morrow Results Engineer has regularly scheduled meetings with the SMEPA Environmental Department where more complex issues are resolved.

6.0 AMENDMENT OF THE DUST CONTROL PLAN

This Plan will be reviewed annually by the Morrow Results Engineer as part of a broader environmental audit program conducted annually. The Results Engineer will:

1. Review the Plan and determine if it is still adequate for current operations.

2. Assess if the Plan is being implemented properly and fully.

The audit findings will be documented in writing and shared with the Plant Morrow Management and the SMEPA Environmental Department.

If the results of this audit warrant a change in this Plan, the Morrow Results Engineer will alter the Plan and provide a new Plan to SMEPA groups that use the Plan.

7.0 PROFESSIONAL ENGINEER CERTIFICATION

The undersigned Registered Professional Engineer is familiar with the requirements of Part 257.80 of Title 40 of the *Code of Federal Regulations* (40 CFR Part 257.80) and has visited and examined the facility, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this Coal Combustion Residuals Fugitive Dust Control Plan (Plan) has been prepared under his/her Responsible Charge and in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR Part 257.80, and that this Plan is adequate for the facility.

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this Plan in accordance with the requirements of 40 CFR Part 257. This Plan is valid only to the extent that the facility owner or operator implements dust control measures and maintains, tests, and inspects equipment and other devices described in this Plan.

Certification:

Date: 10/16/2015

Christopher T. Johnson, P.E., P.S.
Vice President and Engineering Manager
MS Professional Engineer Registration No. 15761

8.0 REFERENCES

Environmental Protection Agency, Federal Register, Vol. 80 No. 74 Part II: *Disposal of Coal Combustion Residuals From Electric Utilitie*s; Final Rule, 40 CFR 257.80, April 17, 2015.