

FUGITIVE DUST CONTROL PLAN

FORT MARTIN LANDFILL
Maidsville, WV

Monongahela Power Company
A FirstEnergy Company

October 19, 2015

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INTRODUCTION

Pursuant to the Federal Coal Combustion Residuals (CCR) Rule at 40 CFR §257.80 each CCR unit is required to have a Fugitive Dust Control Plan that will effectively minimize CCR from becoming airborne from the CCR unit, roads leading to and from the CCR unit, and any other CCR management and material handling activities.

This plan must:

- 1) Identify and describe the CCR fugitive dust control measures that will be used to minimize CCR from becoming airborne at the facility, and explain how these measures are applicable and appropriate for the CCR unit;
- 2) Include procedures to emplace the CCR as conditioned CCR by means of wetting with water to a moisture content that will prevent wind dispersal but will not result in free liquids, or by means of a chemical dust suppression agent;
- 3) Include procedures to log citizen complaints received by the owner/operator involving fugitive dust events at the CCR unit;
- 4) Include a description of the procedures the owner/operator will follow to periodically assess the effectiveness of the control plan;
- 5) Be prepared as an initial plan for applicable CCR units by October 19, 2015, or by initial receipt of CCR for any unit subject to the regulation after October 19, 2015;
- 6) Include amendments to the plan whenever there is a change in conditions that would substantially affect the written plan in effect; and
- 7) Be certified by a qualified professional engineer, licensed in the state in which the CCR unit resides, that the initial CCR fugitive dust control plan, or any subsequent amendment thereto, meets the seven requirements as listed here per 40 CFR §257.80.

CCR UNIT DESCRIPTION

The Fort Martin Landfill is an engineered CCR landfill located near the town of Madsville, West Virginia, and is owned by Monongahela Power Company, a wholly owned subsidiary of FirstEnergy Corp. It is regulated by the West Virginia Department of Environmental Protection (WVDEP) under the West Virginia solid waste management regulations. The landfill consists of a lined and unlined portion bisected by an unpaved haul road and a paved ancillary vehicle access road. The lined portion receives primarily flue gas desulfurization (FGD) gypsum but can receive all CCRs produced by the Fort Martin Power Station; and the unlined portion receives only fly ash and bottom ash from the Fort Martin Power Station. Both the fly ash and bottom ash are marketed by a third party as a product for beneficial uses. Bottom ash from the station is also managed as product for use as a landfill liner construction component. The gypsum is transported from the station to the WVDEP permitted landfill via a closed pipe conveyor that

empties onto a containment pad inside of a dome enclosure located on the lined portion of the landfill. Front end loaders then fill trucks inside the dome, which then traverse a short distance to the active face of the landfill. The material is then placed in a lift and compacted by heavy equipment. The other CCRs (fly ash and bottom ash) are transported via trucks that travel along the private (non-public) unpaved haul road. At the landfill, the trucks unload these CCRs in the un-lined portion where it is either placed in lifts and compacted by heavy equipment or processed (size gradation) for specific off-site beneficial uses. The lifts in both portions of the landfill comprise a series of benches that constitute the landfill. As a bench is finished it is contoured for positive drainage and the bench is covered with soil, seeded and mulched. All precipitation contacting the landfill material is collected and routed to a wastewater treatment pond that has a permitted outfall under the WVDEP National Pollution Discharge Elimination System (NPDES) regulations.

CCR FUGITIVE DUST CONTROL MEASURES

There are a series of dust control measures to control and minimize the dispersal of fugitive dust in the operation of the Fort Martin Landfill.

1. Landfill Location and Natural Barriers

The Fort Martin Landfill is located in a remote area of West Virginia with limited neighbors. It has a natural barrier of trees along the edges of the landfill that reduce the exposure of wind to the landfill, thus minimizing the potential for fugitive dust from the site.

2. Conveyor Belt

The FGD gypsum generated at the station is loaded onto a completely enclosed pipe conveyor belt which terminates at a drop point inside a large circular, dome covered stack out building; completely eliminating fugitive emissions from the gypsum as it traverses the distance from the station to the landfill.

3. Truck Loading

The FGD gypsum generated at the station has a latent moisture content of approximately 20 percent, thus the material has sufficient water to keep it from dispersing in the wind when being transferred from the truck to the working face of the landfill. In addition, the fly ash and bottom ash that are transferred to the landfill via truck are conditioned with water at the time of truck loading so as to minimize the production of airborne fugitive dust.

4. **Haul Road**

After being filled, the trucks then drive on a dedicated (non-public) haul road that is paved around the station and out the access gate to the landfill at which point the haul road is composed of gravel up to the point of the landfill's active face, where the trucks then traverse a specified "lane" on the placed and compacted material to the point of active unloading. The haul road and (when weather conditions dictate) the placed and compacted material that is traversed by the haul trucks, is wetted by a water truck. The water truck keeps the unpaved haul road wetted during the daily hauling shift when there is no natural precipitation. On particularly dry days or if excess solids accumulate on the paved road areas around the station or along the paved portion of the haul road up to the access gate to the landfill surface (for example after a heavy downpour that causes gravel and solids to wash over the top of drainage ditches across the road surface) the road is also cleaned by a wet-vacuum sweeper truck to remove the solids that could get crushed under the weight of the haul trucks and form airborne dust. This truck will also clean the paved ancillary vehicle road that parallels the unpaved haul road when conditions dictate. Watering of the road is kept to a minimum during winter months to prevent the formation of ice. In addition, the haul road truck speed is limited to 15 miles per hour (posted) on grades and 25 miles on the level stretches of the road so as to minimize the dispersal of road dust by the movement of the vehicles over the road surface.

5. **Landfilling Process**

As stated in item 2 above, the CCR material has sufficient moisture, as an inherent property of production or by intentional conditioning, to minimize its dispersion as fugitive dust. The material is mechanically compacted essentially forming a large monolithic bench of material that has limited surface area (outer lift slope and bench surface) from which fugitive dust can be generated. Once a bench is completed, it is covered with soil, seeded and mulched. Once vegetated the production of fugitive dust is minimized to its maximum extent.

6. **Suspension of Operations During Severe Weather Conditions**

Due to the composition of the CCR material, weather conditions producing excessive precipitation may halt disposal operations because the operating face of the landfill will become too slick for safe operation of trucks and equipment. Despite any accompanying high winds during these weather conditions the material is far too wet to disperse in the wind. Likewise, operations may also halt during extremely cold temperatures because the material can freeze. High wind conditions (without precipitation) also may temporarily halt

landfill operations. If these weather conditions persist for extended periods (days) the CCRs can be stored in the various collection and process silos at the station proper and in the FGD gypsum dome located on the lined portion of the landfill.

APPLICABILITY AND APPROPRIATENESS OF DUST CONTROL MEASURES

The dust control measures described in this plan are applicable and appropriate as accepted industry best management practices and reasonable engineering controls for industrial landfill operations. Moreover, these measures, practices, and controls are recognized by the United States Environmental Protection Agency (US EPA) as discussed in the “Compilation of Air Pollutant Emission Factors” document (AP-42) detailing fugitive dust emission calculations under uncontrolled and controlled scenarios.¹

PROCEDURE FOR EMPLACEMENT OF CONDITIONED CCR

As described above, the CCR material placed in the Fort Martin Landfill has sufficient moisture, as an inherent property of production or intentional conditioning, to prevent dispersal of fugitive dust in accord with the requirement in the federal CCR rule [40 CFR §257.80(b)(2)].

PROCEDURE TO LOG CITIZEN COMPLAINTS

The station maintains a fugitive dust complaint log. Any complaint that is phoned into the station is recorded on the appropriate log including date, time, name of party lodging complaint, a description of the complaint, and ambient weather conditions at the time the complaint is made. The appropriate station personnel are then notified to verify the continued occurrence of the complaint and the manner in which the issue is to be resolved. These actions are also recorded in the citizen complaint log. If the complaint involves a claim of damage, a company representative contacts the party lodging the complaint to resolve the citizen’s claim. A copy of the fugitive dust complaint log is provided as Attachment A to this plan.

PROCEDURE TO ASSESS CONTROL PLAN EFFECTIVENESS

The Fort Martin Landfill is a permitted facility under the applicable regulations of West Virginia. As such there are existing permit conditions that require the logging of all activities undertaken to minimize the creation of fugitive dust. In the case of the Fort Martin Landfill, for example, the use of water trucks and wet-vacuum trucks on the haul roads are maintained in a log. These logs are required to be provided to the WVDEP upon their request, and during inspections. In

¹ AP-42 was first published in 1968 by the U.S. Public Health Service, and was then revised and reissued by the U.S. EPA in 1972. It is currently available as the 1995 Fifth Edition. Fugitive dust is specifically addressed in Chapter 13, Miscellaneous Sources.

addition, an annual emissions inventory, including fugitive dust emissions from the landfill operation, is submitted to the WVDEP. These logs, limitations, reports, and citizen complaint log will be reviewed to evaluate the effectiveness of the measures taken and practices put in place to minimize the dispersal of fugitive dust.

DATE OF INITIAL PLAN

Since the Fort Martin Landfill is an existing CCR landfill (per 40 CFR §257.53) that is receiving CCRs both before and after October 19, 2015, the initial CCR fugitive dust control plan must be prepared and placed in the operating record by October 19, 2015. The CCR fugitive dust control plan will be placed on the facility's CCR website within 30 days of placing the information in the operating record. The facility will also notify the State Director within 30 days of when the plan is placed in the operating record.

PLAN AMENDMENTS PROCEDURE

The plan will be amended in response to limitations identified during the annual plan review, or if operational or facility changes warrant an update. When changes are made, the title page of the amended plan shall include a notation identifying the date of the initial plan as well as the date of all subsequent revisions. The amendments made to the plan will be identified in an amendment table, attached hereto as Attachment B, identifying the date of the amendment, the reason for the amendment and the sections of the plan amended.

QUALIFIED PROFESSIONAL ENGINEER CERTIFICATION

Pursuant to 40 CFR §257.80(b)(7) the initial fugitive dust control plan and any subsequent amendment of it will be certified by a qualified professional engineer (PE). A copy of the certification is attached hereto as Attachment C.

ANNUAL CCR FUGITIVE DUST CONTROL REPORT

The annual fugitive dust control report will include a description of the actions taken by the facility to control CCR fugitive dust and a record of all citizen complaints logged in the previous twelve months along with corrective measures taken, if any. The initial CCR fugitive dust control report will be completed no later than 14 months after the initial CCR fugitive dust control plan has been placed in the operating record. Subsequent reports will be completed and placed in the operating record within one year of completing the previous year's report.

RECORDKEEPING REQUIREMENTS

As required by the CCR Rule, the CCR fugitive dust control plan and annual CCR fugitive dust control report will be placed in the facility's operating record. As the CCR fugitive dust control report is amended, the most recent version of the plan will be maintained in the facility's operating record. Both the most recent version of the CCR fugitive dust control plan and the annual CCR fugitive dust control report will be placed on the facility's CCR website within 30 days of placing the information into the operating record.

ATTACHMENT A

CITIZEN COMPLAINT LOG

ATTACHMENT B

PLAN AMENDMENTS SUMMARY TABLE

ATTACHMENT C

QUALIFIED PROFESSIONAL ENGINEER CERTIFICATION

Professional Engineer Certification - As required by the U.S. EPA CCR Rule 40 CFR Parts 257 and 261

§257.80 - Air Criteria

CCR Fugitive Dust Control Plan

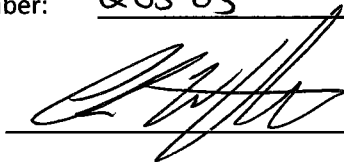
CCR Unit: Fort Martin Landfill

Certification:

I, Adam W. Hoalcraft, a registered professional engineer in the state of West Virginia certify that this Fugitive Dust Control Plan fulfills the minimum requirements of 40 CFR §257.80(b)(1) through §257.80(b)(7), as applicable. This certification is based on my review of the Fort Martin Landfill Fugitive Dust Control Plan and operational information and/or data provided (but not independently verified for accuracy) by FirstEnergy about the CCR Unit listed above.

Printed Name: Adam W Hoalcraft

PE License Number: 20503 State: WV

Signature: 

Date: 10/15/2015

Seal:

Stamp:

