FUGITIVE DUST CONTROL PLAN

HATFIELD'S FERRY LANDFILL
Masontown, PA

FirstEnergy Generation, LLC
A FirstEnergy Company

October 19, 2015

CONTENTS

ATTACHMENTS

Attachment A: Citizen Complaint Log

Attachment B: Plan Amendments Summary Table

Attachment C: Qualified Professional Engineer Certification

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 DESCRIRTION

The Hatfield's Ferry Landfill is an engineered CCR landfill located near the town of Masontown, Pennsylvania, and is owned by FirstEnergy Generation, LLC, a wholly owned subsidiary of FirstEnergy Corp. It is regulated by the Pennsylvania Department of Environmental Protection (PADEP) under the Pennsylvania residual waste regulations. Up until 2012 the landfill received CCRs from the Hatfield Ferry's Power Station. Since then only maintenance activities have occurred. In the future (2017) stabilized flue gas desulfurization (FGD) material from the Bruce Mansfield Power Station may be placed in the landfill. The FGD will be transported by barge from the station to the PADEP permitted and lined landfill, then unloaded directly into trucks that traverse a private (non-public) haul road to the landfill. At the landfill, the trucks will unload the FGD material, where it will be placed in lifts, and compacted by heavy equipment. These lifts comprise a series of benches that constitute the landfill. Soil cover is placed concurrently

as the CCRs are placed. When a bench is finished it is contoured for positive drainage. The soil cover is seeded and mulched within 30 days of being placed. All precipitation contacting the CCR material is collected and routed to a storm water and leachate treatment pond that has a permitted outfall under the PADEP 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 Hatfield's Ferry Landfill.

1. **Landfill Location and Natural Barriers**

   The Hatfield's Ferry Landfill is located in a remote area of Greene County, Pennsylvania, with limited neighbors, at the site of a former coal strip mine. It is essentially a valley fill landfill and as such has a natural barrier of trees along the high edges of the valley. These trees act as a barrier to reduce wind speed and reduce the potential for fugitive dust from the site.

2. **Barge Loading**

   The stabilized FGD material to be generated at the Bruce Mansfield station has a latent moisture content of 20 to 30 percent, thus the material has sufficient water to keep it from dispersing in the wind when being loaded onto river barges using enclosed belt conveyors. In order to transport the material down the Ohio and Monongahela Rivers to the landfill, the barges will be covered, or the material treated / sealed with a dust suppression agent.

3. **Barge Unloading**

   The stabilized FGD material will be unloaded from the barges using an environmentally friendly clamshell and placed directly into trucks via a hopper with a chute. As noted in item 2 above, the stabilized FGD material will have sufficient latent moisture and/or be coated with a dust suppression agent; thus, fugitive dust dispersion is expected to be negligible to non-existent. However, in the event that the material creates fugitive dust it will be manually wetted with water before unloading resumes.

4. **Truck Loading**

   The stabilized FGD material generated at the station has a latent moisture content of 20 to 30 percent in addition to being treated with a dust suppression agent or water. It is anticipated that the material will have sufficient moisture to keep it from causing fugitive dust while being transferred from the truck loading hopper to the haul truck.

5. **Haul Road**

The filled trucks will then drive on a dedicated (non-public) paved haul road up to the point of the landfill's active face, where the trucks will traverse a specified "lane" on the landfill to the point of active unloading. The paved haul road will be cleaned by a sweeper vacuum truck to remove the solids that could get crushed under the weight of the haul trucks and form airborne dust. The haul road and the lane on the landfill (when weather conditions dictate) will be wetted by a water truck. The water truck keeps the paved haul road wetted during the daily hauling shift when there is no natural precipitation. In addition, the paved haul road truck speed is limited to 15 miles per hour to minimize the dispersal of any potential road dust by the movement of the vehicles over the road surface.

6. **Landfilling Process**

As stated previously, the FGD material has a 20% to 30% moisture content so the material is more like a paste or has a wet clay consistency that does not readily disperse fugitive dust. The material is mechanically compacted essentially forming a large monolithic layer of material that has limited surface area from which fugitive dust could possibly be generated. Once a lift is completed, the soil cover is vertically extended, seeded, and mulched. Once mulched the production of fugitive dust is minimized to its maximum extent.

7. **Dust Fall Monitoring Network**

In accordance with the PADEP issued permit for this landfill, a fugitive dust monitoring system, based on a wind rose of the area and consisting of six distinct monitoring points, is maintained at the facility. Results from this monitoring network are reviewed and submitted to the PADEP on a quarterly basis.

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

Due to the composition of the FGD 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. During such periods the material will remain on the barges until landfill operations can resume.

9. **Optional Use of Dust Dispersal Suppression Agents**

   In the event that landfilling operations are halted for a prolonged period, the exposed working face can be sprayed with a dust dispersal suppression agent. This agent is sprayed on the exposed surface to form a uniform crust that is resistant to wind dispersal. Such agents can be effective for periods of several weeks to months prior to reapplication. The use of these agents, sometimes generally referred to under the trademark name "soil sements," is not routine but is available as an option if necessary and approved by the PADEP.

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 FGD material placed in the Hatfield Landfill has a latent moisture content of 20 to 30 percent; thus, it contains enough moisture 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

Because of the distance between the Bruce Mansfield Power Station and the landfill, the citizen complaint log will be maintained at the landfill. Any complaint that is phoned into the station or the landfill will be recorded in the fugitive dust complaint log including date, time, name of party lodging complaint, description of the complaint, and ambient weather conditions at the time the complaint is made. The appropriate landfill personnel are then notified to verify the continued occurrence of the complaint and direct 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 log is provided as Attachment A to this plan.

[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.

PROCEDURE TO ASSESS CONTROL PLAN EFFECTIVENESS

The Hatfield's Ferry Landfill is a permitted facility under the applicable regulations of Pennsylvania. 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 Hatfield's Ferry Landfill, for example, the use of water trucks and wet-vacuum trucks on the haul roads are maintained in a log. Aside from the date and time, this log also indicates the amount of water used and the number of trips made by each vehicle. These logs are required to be provided to the PADEP upon their request, and during inspections. The dust fall monitoring system surrounding the landfill serve to verify that the controls and practices in place to minimize and prevent fugitive dust are working. In addition, to limit the amount of fugitive dust potentially created by the landfill operation, the PADEP permit limits the amount of CCRs that can be hauled to the landfill each operating day. These logs, limitations, reports, dust fall monitoring results, and the 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 Hatfield's Ferry Landfill is an existing CCR landfill (per 40 CFR §257.53) that may be receiving CCRs 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 are warranted. 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 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

Hatfield's Ferry Landfill Fugitive Dust Control Plan
Citizen Complaint Log

Call No.	Date (mm/dd/yyyy)	Caller's Name	Description of Complaint	Time	Weather Conditions	Action Taken

ATTACHMENT B

PLAN AMENDMENTS SUMMARY TABLE

Hatfield's Ferry Landfill Fugitive Dust Control Plan
Plan Amendments Summary Table

NOTE: All amendments to plan must be indicated on the title page with a Revision number and corresponding date

Rev No.	Date (mm/dd/yyyy)	Section Title Amended	Reason for Amendment	Amendment Description	Initials

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: Hatfield's Ferry Landfill

Certification:

I, Ralph Edward Borsani, a registered professional engineer in the state of PA 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 Hatfield 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: Ralph Edward Borsani

PE License Number: PE029478E State: PA

Signature: Ralph Edward Borsani

Date: 10/15/2015

Seal:

Stamp: