

Date: December 7, 2021
To: D.E. Karn Operating Record
From: Joy R. Hwang, Environmental Services Department
RE: Annual Coal Combustion Residual (CCR) Fugitive Dust Control Report
D.E. Karn and J.C. Weadock Facilities

Introduction

This report serves as the Annual CCR Fugitive Dust Control Report required by the United States Environmental Protection Agency (EPA) CCR Resource Conservation and Recovery Act (RCRA) Rule. It describes the measures implemented at Consumers Energy Company's (CE) D.E. Karn (DEK) and J.C. Weadock (JCW) facilities for minimizing fugitive dust emissions from CCR. The DEK facility is located at 2742 N. Weadock Highway in Essexville, Michigan, and employs two coal-fired boilers, Unit 1 and Unit 2, to generate electricity. The JCW facility discontinued coal firing operation in Boiler Units 7 and 8 in March 2016. As both facilities are located on the same site, this report covers all CCR units on the CE DEK/ JCW site.

This annual report has been developed and placed in the facility Operating Record in accordance with 40 CFR 257.80 and 40 CFR 257.105(g), as well as posted to the public website within 30 days in accordance with 40 CFR 257.107(d). This report is required to include a description of the actions taken by CE personnel and contractors to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective measures taken.

Fugitive Dust Control Activities

The dry fly ash, generated from coal combustion in DEK Units 1 and 2 boilers, contains spent and un-spent lime from the Spray Dryer Absorber as well as carbon from the Activated Carbon Injection system. This co-mingled CCR is called "byproduct." The byproduct handling system and corresponding point-source particulate matter controls are properly maintained and inspected daily. Prior to placement in the haul trucks for re-use or disposal, the byproduct is conditioned with water utilizing a paddle mixer (Dustmaster™) to achieve the desired moisture content. Vacuum fans are operated during truck loading to capture and transfer any fugitive dust back up into the silo which is controlled by a dust collector. Dust curtains are employed to increase the capture efficiency of the fugitive dust from the loading process.

At the byproduct placement location, a water truck is available for further conditioning during spreading and compacting as necessary. Activities are suspended to prevent excessive dusting (leaving the site boundaries) or when there are sustained wind speeds of over 25 mph. A permanent dust fence, constructed from Wind Defender™, is located along the southeast corner of the Weadock Landfill. Inactive portions of the open Weadock Landfill have been largely covered in clay and geosynthetic fabric Wind Defender™ to mitigate dust, and additionally, some

areas are treated with dust suppressants Eco-Ultimate™ and DustNot™ as needed to prevent dust in areas coverage does not make sense at the time.

Any excavating and/or transfer activities are visually monitored for potential dusting. The Karn Bottom Ash Lined Impoundment system is actively accepting sluiced CCR material and the impoundment area remains in a wet and/or vegetative condition that minimizes fugitive dust generation. The roadways surrounding the CCR units are well maintained and the 15-mph speed limit is observed when dusting is an issue. Primary roadways were treated with a dust suppressant to further minimize fugitive dust.

Citizen Complaints

There were two citizen complaints pertaining to CCR fugitive dust from the DEK/JCW facility for the time period from December 7, 2020 to December 7, 2021. Both complaints were during extreme weather, high-wind events. One of these complaints was made to CE on May 2, 2021, relating to a high wind event on April 30, 2021, when dust from the exposed area of the Weadock Landfill allegedly left the site in the direction of the citizen's house, east-southeast of the site. The citizen also contacted EGLE, which investigated and issued a Notice of Violation to CE. However, the second complaint was a citizen complaint made directly to EGLE on August 31, 2021, relating to a high wind event on August 24, 2021, and EGLE communicated this complaint to CE.

Corrective Actions

In response to the complaints, onsite corrective actions included installing clay coverage and temporary geosynthetic fabric coverage over 60 acres to date of the Weadock Landfill. A mobile irrigation system consisting of a pump and reel design was put into service in October 2021 and is available to water 30 acres of the Weadock Landfill as necessary during months where the equipment does not require winterization. In addition, the active area of the Weadock Landfill was moved away from the fence line to a more central area of the site, allowing any fugitive dust from the active area of the landfill an opportunity to settle. All potential CCR fugitive dust areas are monitored visually on a daily basis, and general corrective as well as preventive measures are properly implemented as warranted.

The homes in the area where the complaints were received were provided varying levels of cleaning after both high wind events in addition to invitations to tour the landfill area in person in order to maintain positive public relations and give nearby residents an opportunity to observe all the fugitive dust control activity and measures taking place on the site.

Conclusion

EGLE quarterly landfill inspections were performed on March 3, 2021, June 23, 2021, September 8, 2021, and November 19, 2021. For each inspection, EGLE determined that the Karn Lined Impoundment and Weadock Landfill were in compliance with the requirements of Part 115 that were evaluated based on information obtained and observations made during the inspection. A CE site audit was conducted on November 17, 2021; applicable aspects of the Fugitive Dust

Control Plan (FDCP), including impending addition of recent dust mitigation measures, were found to be correctly implemented with no findings to report.

The FDCP has been reviewed and amended, pursuant to 40 CFR 257.80(b)6, to reflect specific measures employed at the Weadock Landfill to enhance fugitive dust control mitigation capacity. The amended plan was finalized and signed by a professional engineer on November 30, 2021, as required by 40 CFR 257.80(b)7 and posted to the Operating Record as required by 40 CFR 257.105(g).