

CCR COMPLIANCE

FUGITIVE DUST CONTROL PLAN

Prepared for:



New Castle Power, LLC
New Castle Generating Station
West Pittsburg, Pennsylvania

Prepared by:



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Pittsburgh, Pennsylvania 15235

October 2015
Rev. 01 November 2019

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Figure 1 – Site Layout and Potential CCR Fugitive Dust Sources

Attachment A – Recordkeeping Log

Plan Review/Assessment Log

Date of Review	Reviewer Name	Amendment Required (YES/NO)	If Amended: Rev. No., Section(s) Amended and Reason(s)
October 2015	Steve Brown, NRG Steve Frank, NRG Jesse Varsho, CB&I	NA	Original Plan
November 2019	Brian Baierl, GenOn Steve Frank, GenOn David Shott, APTIM Richard Southorn, APTIM	Yes	Rev. 01: All Sections; Various administrative revisions and technical updates to reflect gas-addition and North Bottom Ash Pond closure

1.0 Introduction

On December 19, 2014, the administrator of the United States Environmental Protection Agency signed the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities final rule (the Rule). The Rule was published in the Federal Register on April 17, 2015 and becomes effective on October 19, 2015. The Rule establishes a comprehensive set of requirements for the disposal of CCR in landfills and surface impoundments at coal-fired power plants under Subtitle D of the Resource Conservation and Recovery Act. These requirements include compliance with location restrictions, design criteria, operating criteria, groundwater monitoring and corrective action, and closure and post-closure care aspects. The operating criteria include air criteria specified in Title 40 of the Code of Federal Regulations (CFR), §257.80 to address the potential pollution caused by windblown dust from CCR units. According to the Rule, owners or operators of CCR units must adopt measures that will effectively minimize CCR from becoming airborne at the facility by developing and operating in accordance with a fugitive dust control plan (Plan) with adequate dust control measures.

The New Castle Generating Station, operated by New Castle Power, LLC, a subsidiary of GenOn Holdings, Inc. (GenOn), is a coal-fired power plant (now firing on natural gas) located in West Pittsburg, Pennsylvania. The Rule applies to this facility due to the management of CCR that was formerly generated from the combustion of coal. Following the closure of the North Bottom Ash Pond (documented in the June 2019 Closure Certification Report), only the New Castle Plant Ash Landfill remains as a designated CCR unit.

This Plan has been prepared to comply with the requirements as specified in §257.80(b)(1-7) of the Rule, including certification by a professional engineer. Additionally, this Plan will be placed in the New Castle facility's operating record per §257.105(g)(1), noticed to the State Director per §257.106(g)(1), and posted to the publicly accessible internet site per §257.107(g)(1).

The current Plan revision (November 2019) incorporates significant changes to reflect the station's transition to natural-gas firing and closure of the North Bottom Ash Pond (previously a designated CCR unit). As the likelihood of resuming coal-fired operations is remote, the discussion of managing CCR-derived fugitive dust has been reduced to encompass only the ash landfill and internal roadways leading thereto. In the event that coal-fired operations are re-started, this Plan will be appropriately updated to document the relevant procedures for minimizing fugitive dust associated with the transport and handling/disposal of fly ash and bottom ash materials.

2.0 Facility Description

2.1 Process Overview

The New Castle station is an electric generating facility located on State Route 168 in West Pittsburg, Pennsylvania. The facility utilizes three main boilers (exhausting to a common stack) which fire natural gas as the primary fuel and No.2 fuel oil as an auxiliary fuel. With the addition of natural gas, the station effectively transitioned away from burning coal on June 1, 2016, although this capability is retained. Pollution control equipment for the main boilers includes low nitrogen oxide (NO_x) burners and selective non-catalytic reduction (SNCR) systems for NO_x control, and electrostatic precipitators (ESP) for particulate matter control. The station additionally has one oil-fired auxiliary boiler which exhausts to its own stack, an electromotive diesel engine that exhausts to its own stack, and two emergency diesel generators that exhaust to their own stack.

2.2 CCR Fugitive Dust Sources

The Rule applies to fugitive dust originating from CCR units, roads, and other CCR management and material handling activities. CCR generated at the station previously included fly ash and bottom ash, which were transported and disposed at the on-site New Castle Plant Ash Landfill. With the transition to natural gas, this routine management of CCR is no longer conducted, and additions of CCR materials to the Ash Landfill have essentially ceased. Future cleaning, maintenance, and/or decommissioning of certain equipment items may generate incidental amounts of CCR and non-CCR materials, which would be taken to the Ash Landfill.

2.2.1 New Castle Plant Ash Landfill

The New Castle Plant Ash Landfill is a captive residual waste management area owned and operated by GenOn, and located completely within the limits of the station property (see Figure 1). The Ash Landfill has been identified as an existing CCR landfill according to the Rule. When previously generated, CCR materials including fly ash and bottom ash were transported by trucks from the main station area to the Ash Landfill where they were dumped and the materials spread and compacted with a bulldozer. No public road access is required to travel from the station to the Ash Landfill.

2.2.2 Fly Ash Handling

With the transition to natural gas based operations, fly ash is no longer generated at the station.

2.2.3 Bottom Ash Handling

With the transition to natural gas based operations, bottom ash is no longer generated at the station. In further support of this transition, the former North Bottom Ash Pond was taken out of service,

cleaned, and subjected to successful “closure by removal” in accordance with §257.102(c) of the Rule.

2.2.4 Transport Roadways

Should future needs dictate, trucks would transport conditioned CCR materials to the New Castle Plant Ash Landfill within the limits of the station on a combination of paved and unpaved roads. The internal haul routes to the Ash Landfill are shown on Figure 1 included with this Plan.

3.0 Fugitive Dust Control Regulatory Requirements

3.1 CCR Rule Air Criteria

Under the Rule, the owner or operator of a CCR unit must adopt measures that will effectively minimize CCR from becoming airborne at the facility, including fugitive dust originating from CCR units, roads, and other CCR management and material handling activities.

In order to document these measures, the owner or operator of the CCR unit must prepare and operate in accordance with a CCR fugitive dust control plan. According to §257.80(b), the Plan must include the following elements:

- Identification and description of the CCR fugitive dust control measures that will be used to minimize CCR from becoming airborne at the facility, along with an explanation of how the measures selected are applicable and appropriate for site conditions.
- Description of procedures used to emplace CCR as conditioned CCR at CCR landfills. (Conditioned CCR means wetting CCR with water to a moisture content that will prevent wind dispersal but will not result in free liquids.)
- Description of procedures used to log citizen complaints received by the facility involving CCR fugitive dust events.
- Description of procedures to periodically assess the effectiveness of the Plan.

The Plan should be updated anytime there is a change in conditions that would substantially affect the written Plan.

In addition to the fugitive dust control plan, §257.80(c) requires the owner or operator of a CCR unit to file an annual fugitive dust control report.

3.2 Other Fugitive Dust Regulatory Requirements

Prior to the promulgation of the Rule, the New Castle station has been required by other regulations and permits to minimize and monitor fugitive dust from the site.

3.2.1 Title V Operating Permit

The facility is operated according to Title V Operating Permit No. 37-00023 issued by the Pennsylvania Department of Environmental Protection (PADEP). The permit incorporates fugitive dust emission requirements as codified in Title 25 Article III of the Pennsylvania Code (Pa. Code). The following citations are relevant to fugitive emission restrictions:

- According to 25 Pa. Code §123.1, the person responsible for a source of fugitive emissions shall take all reasonable actions to prevent fugitive air contaminants from becoming airborne.
- According to 25 Pa. Code §123.2, a person may not permit fugitive particulate matter to be emitted into the outdoor atmosphere from a source specified in §123.19(a)(1-9) (relating to prohibition of certain fugitive emissions) if such emissions are visible at the point the emissions pass outside the person's property.
- According to 25 Pa. Code §123.41, a person may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following: (1) Equal to or greater than 20% for a period or periods aggregating more than three minutes in any one hour. (2) Equal to or greater than 60% at any time.

The permit includes site level requirements that address fugitive dust. Site level requirements include maintaining a log of all reported fugitive emission deviations and the corrective action taken.

3.2.2 Solid Waste Permit

The New Castle Plant Ash Landfill is operated under Solid Waste Permit No. 300818 issued by PADEP. The disposal site is operated according to the terms in this permit and the associated PADEP Form G(A), "Air Resources Protection Dust Emissions Estimate and Control Plan," submitted with the solid waste permit application. The permit, Form G(A), and Form 12R include the following requirements related to fugitive emissions at the Ash Landfill:

- Vehicle traffic is limited to 10 miles per hour (mph) on unpaved roadways.
- A water tank truck will be used as necessary to suppress dust on active disposal areas and roadways.
- A temporary berm will be used as a wind block along the perimeter to minimize dusting on the primary working face.
- In extreme cases, cover soil will be applied to control dust.

4.0 Fugitive Dust Control Practices and Procedures

Potential CCR fugitive dust sources have been identified and described in Section 2.0 of this Plan. This section will detail control measures employed at the facility to minimize airborne dust from these sources in accordance with §257.80(b)(1-2) of the Rule.

4.1 Fly Ash Handling

With the transition to natural gas based operations, fly ash is no longer generated at the station.

4.2 Transport Roadways

Road surfaces leading to the New Castle Plant Ash Landfill (refer to Figure 1) are watered to reduce fugitive dust emissions. The amount of time dedicated to watering the roads is a function of the dryness of the surface and is determined through daily observations by station personnel. The amount of water applied varies seasonally. Fugitive dust emissions are further controlled by posting and maintaining a maximum vehicle speed limit of 10 mph on unpaved roadways within the boundaries of the station property.

4.2.1 Monitoring

The facility maintains a log of all reported fugitive emissions that deviate from the permitted opacity standards.

4.2.2 Recordkeeping

The facility maintains a dust suppression log that includes the date and time of water application, the weather condition, the gallons of water applied and the area where water was applied. A blank copy of this log is included in Attachment A. The logs are forwarded to the station's Environmental Coordinator and retained for at least five years.

4.3 New Castle Plant Ash Landfill

Fugitive dust is minimized at the Ash Landfill by spreading and compacting the materials with a bulldozer as soon as practical after being delivered (i.e., the freshly dumped materials are not left on the landfill surface for extended periods of time). Additionally, a water truck regularly circulates to spread water on the internal roadways and is able to service the open operating areas of the disposal site. Vehicle traffic operating within the disposal site is restricted to a 10 mph speed limit on unpaved roadways.

4.3.1 Monitoring

The facility maintains a log of all reported fugitive emissions that deviate from the permitted opacity standards.

4.3.2 Recordkeeping

The facility maintains a log of all reported fugitive emissions that deviate from the opacity limitations set forth in the Title V Operating permit, the cause of the deviation and the corrective action taken to abate the situation. The facility also maintains a dust suppression log that includes the date and time of water application, the weather condition, the gallons of water applied and the area where water was applied. A blank copy of this log is included in Attachment A. The logs are forwarded to the station's Environmental Coordinator and retained for at least five years.

4.4 Annual Reporting

In accordance with §257.80(c), the station must prepare an annual fugitive dust control report that includes the following information:

- A description of actions taken to control CCR fugitive dust
- A record of all citizen complaints
- A summary of any corrective actions taken

The first annual report must be completed no later than 14 months after placing the initial CCR fugitive dust control plan in the New Castle facility's operating record. Subsequent annual reports will be completed one year after the date of the initial annual report. Additionally, as required, the annual reports will be placed in the New Castle facility's operating record per §257.105(g)(2), noticed to the State Director per §257.106(g)(2), and posted to the newly established publicly accessible internet site per §257.107(g)(2).

5.0 Procedures for Citizen Complaints

In accordance with §257.80(b)(3) of the Rule, this section outlines the procedures that are followed to log citizen complaints involving fugitive dust events at the station and the Ash Landfill. Within 24 hours of receiving a citizen complaint, the station's Environmental Coordinator will log the complaint in the station's Environmental Management Information System (EMIS) database. The EMIS database will automatically forward notice of the complaint to the station manager and GenOn's corporate Environmental Department. GenOn will then conduct a thorough investigation. The results of the investigation will be recorded, entered into the EMIS database, and communicated to the appropriate parties. If the investigation confirms a fugitive dust emission event, GenOn will undertake a root cause analysis to address the source of the excess fugitive dust and will develop a plan to mitigate future occurrences and remediate impacts, as necessary.

Citizens can contact the New Castle Generating Station directly at 724-535-1835.

6.0 Procedures for Plan Assessments and Amendments

Fugitive dust control practices for each source of CCR fugitive dust are described in Section 4.0 of this Plan. Based on current monitoring requirements and observations, these control measures have been determined to be effective. This Plan will be periodically reviewed by the station's Environmental Coordinator to ensure full compliance with all fugitive dust control, monitoring, and recordkeeping procedures as outlined herein. During this review, the Plan's effectiveness will be assessed as required per §257.80(b)(4) of the Rule. This review will serve to either confirm the continuing effectiveness of the Plan or will identify sections which require revision/upgrade to reflect any relevant changes in station operations, CCR unit aspects, or necessary improvements in fugitive dust control protocols.

Accordingly, when new processes or modifications of existing processes are planned, the station's Environmental Coordinator will evaluate the project for potential changes to this Plan. In accordance with §257.80(b)(6) of the Rule, the Plan will be amended to add/delete CCR units or to update any modifications in the operation of existing fugitive dust sources. The amended Plan will be reviewed and recertified by a registered professional engineer and will be placed in the New Castle facility's operating record as required per §257.105(g)(1). The amended Plan will supersede and replace any prior versions. Availability of the amended Plan will be noticed to the State Director per §257.106(g)(1) and posted to the publicly accessible internet site per §257.107(g)(1).


A record of Plan reviews/assessments is provided on the first page of this document, immediately following the Table of Contents.

7.0 Professional Engineer Certification

The undersigned registered professional engineer is familiar with the requirements of §257.80 and has visited and examined the New Castle station or has supervised examination of the New Castle station by appropriately qualified personnel. The undersigned registered professional engineer attests that this CCR Fugitive Dust Control Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and meets the requirements of §257.80, and that this Plan is adequate for the New Castle station. This certification was prepared as required by §257.80(b)(7).

Name of Professional Engineer: Richard Southorn, P.E., P.G.

Company: Aptim Environmental & Infrastructure, LLC

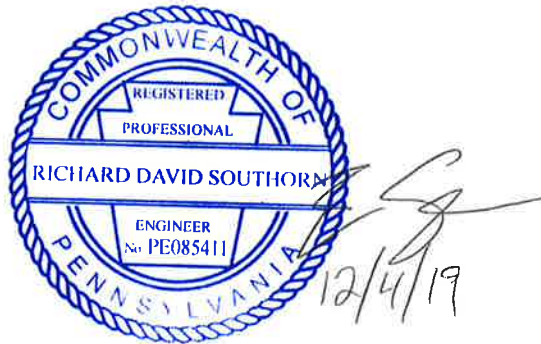
Signature: 

Date: 12/4/19

PE Registration State: Pennsylvania

PE Registration Number: PE085411

Professional Engineer Seal:



Figure

OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
Pittsburgh, PA	10/23/19	DJS	GSI	DJS	RDS	631003785-A1



	500 Penn Center Boulevard, Suite 900 Pittsburgh, Pennsylvania 15235
	

REFERENCE:
 GOOGLE EARTH AERIAL PHOTOGRAPHY,
 DATED 4/15/2016.



FIGURE 1
 SITE LAYOUT AND POTENTIAL CCR
 FUGITIVE DUST SOURCES
 NEW CASTLE GENERATING STATION
 LAWRENCE COUNTY, PENNSYLVANIA

Attachment A
Recordkeeping Log

New Castle Generating Station

Suppression Log

Date:

Time:

Person applying water:

Weather condition:

Number of gallons applied:

Area water is being applied:

_____ Stage 4 (Ash Landfill)

_____ Road between Station and Ash Landfill (Stage 4)

_____ Perimeter Roads around Entire Site

_____ Coal Pile/Area

_____ Other _____