

# Appalachian Power Company **Mountaineer Plant**

## Coal Combustion Residuals Fugitive Dust Control Plan

(Revision 1.3)



Original Plan – July 2015

Revised Plan – July 2019

Revised Plan – April 2022

Prepared By:  
Appalachian Power Company  
Mountaineer Plant  
State Route 62  
New Haven, WV 25265

and

American Electric Power  
Environmental Services  
1 Riverside Plaza  
Columbus, Ohio 43215

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## Appendices

**Appendix A – Air Criteria of 40 CFR Part 257.80**

**Appendix B – Site Map for Plant**

**Appendix C – Site Map for the Landfill**

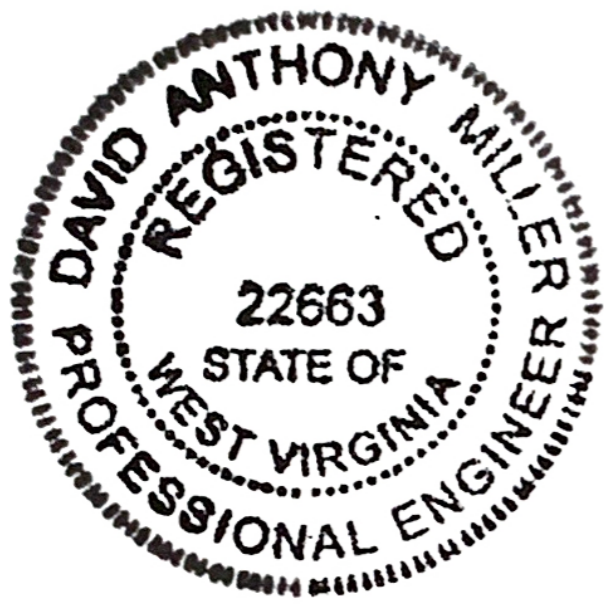
**Appendix C – Record of Plan Amendments**

*Professional Engineer's Certification:*

*By means of this certification, I certify that I have reviewed this CCR Fugitive Dust Control Plan and it meets the requirements of section 40 CFR 257.80(b).*

DAVID ANTHONY MILLER

Printed Name of Registered Professional Engineer



David Anthony Miller

Signature

22663

WEST VIRGINIA

04.05.22

Registration No.

Registration State

Date

## 1.0 – Introduction

This CCR Fugitive Dust Control Plan (Plan) has been prepared pursuant to the air criteria of 40 CFR part 257.80 (see Appendix A). The Plan has been prepared in accordance with the air criteria and following good engineering practices to include measures that will effectively minimize CCR from becoming airborne at the facility. The Plan and subsequent amendments will be placed in the operating record. The Plan and subsequent amendments will also be placed on Mountaineer Plant’s publicly accessible internet website titled “CCR Rule Compliance Data and Information.” The Plan will be amended whenever there is a change in conditions that would substantially affect the written plan in effect, such as the construction and operation of a new CCR unit. Where appropriate, the Plan incorporates fugitive dust control requirements as contained in the West Virginia DEP air permits issued for the plant.

There are two CCR surface impoundments and one CCR landfill located at Mountaineer Plant that are subject to the Plan. The surface impoundments are one bottom ash pond (BAP) complex. The Mountaineer Little Broad Run Residual Waste Landfill (Landfill) receives gypsum, fly ash and bottom ash. The Plan addresses these CCR units and the associated paved and unpaved roadways.

## 2.0 Facility Description and Contact Information

### 2.1 Facility Information

Name of Facility: Appalachian Power Company – Mountaineer Plant

Street: State Route 62

City: New Haven

State: West Virginia

Zip Code: 25265

County: Mason

Latitude: 38° 58' 46" N

Longitude: 81° 56' 05" W

### 2.2 Contact Information

Facility Operator

Name: Appalachian Power Company - Mountaineer Plant

Attention: Bryan K. Mabe - Plant Manager

Street: State Route 62

City: New Haven

State: West Virginia

Zip Code: 25265

## Facility Owner

Name: American Electric Power  
Attention: Scott Weaver – Director, AQS  
Street: 1 Riverside Plaza  
City: Columbus  
State: Ohio  
Zip Code: 43215

## Plant Contact

Name: Randy Brown - Plant Environmental Coordinator– Mountaineer Plant  
Street: State Route 62  
City: New Haven  
State: West Virginia  
Zip Code: 25265  
Telephone Number: 304-882-4024  
E-mail Address: [rlbrown4@aep.com](mailto:rlbrown4@aep.com)

## 2.3 Facility Activities

The Mountaineer Plant is located along the Ohio River near New Haven, West Virginia, and consists of a single electric generating unit nominally rated 1300 megawatts. Appalachian Power Company owns Mountaineer Plant's Unit 1. Coal is combusted and its energy is converted to electricity at the Mountaineer Plant, powering thousands of homes, businesses, schools, and industrial facilities. Approximately 3.25 million tons of coal was burned in 2014 at the Mountaineer Plant.

The unit is equipped with limestone spray tower flue gas desulfurization (FGD) technology and an electrostatic precipitator. The FGD produces synthetic gypsum as a by-product of the reaction of the sulfur compounds in the flue gas and the FGD liquor. The gypsum slurry is dewatered, and transported by conveyor and trucked to the Landfill or sold for beneficial uses. The Mountaineer plant is also equipped to receive and handle coal combustion residual materials from other facilities through the gypsum conveying system. The Landfill is located on plant property approximately 3 miles southwest of the FGD systems.

Fly ash is produced during the combustion of coal in the steam generator and has a density that allows the ash to be carried along in the flue gas stream. The electrostatic precipitator collects fly ash from the flue gas and deposits it into collection hoppers. The fly ash handling system removes fly ash from the hoppers using a vacuum system. The ash is drawn from the hoppers to a silo for temporary storage prior to being loaded into trucks and transported to the Landfill or sold for beneficial uses.

Bottom ash is also produced by combusting coal in the Mountaineer Plant Unit, is collected in the bottom of the steam generator and is wet sluiced to the BAP complex during unit operations. One pond is out of service to allow the ash to be reclaimed while the other pond remains in service. The reclaimed bottom ash is loaded into trucks and transported to the Landfill for storage and use as a construction material. Bottom ash that is not used for construction purposes will be placed within the Landfill.

## 2.4 Site Maps

A site location map for the Plant is included in Appendix B. Appendix C contains a site location map for the Landfill.

## 3.0 Fugitive Dust Controls

### 3.1 Paved and Unpaved Roadways

#### 3.1.1 Overview

Trucks and conveyors are used to transport CCR to the Landfill from the plant site. Fly ash is hauled by trucks from the plant over plant paved roadways to the Landfill. The trucks travel approximately 6.0 round trip miles over paved roadways to the disposal area, followed by a much shorter unpaved roadway that varies with the location of the active fill area. Similarly, bottom ash trucks travel approximately 5.0 round trip miles over plant roadways (75% paved and 25% unpaved) to the Landfill, followed by a much shorter unpaved roadway that varies with the location of the active fill area.

The dewatered gypsum is transported over a series of conveyors to a temporary load-out pile near the Landfill. Gypsum is hauled from the conveyor load-out pile over plant roadways (paved and unpaved) that vary with the location of the active fill area. Alternatively, during periods of conveyor system maintenance, trucks hauling gypsum travel approximately 6.0 round trip miles over paved roadways to the disposal area, followed by a much shorter unpaved roadway that varies with the location of the active fill area.

The applicable and adequate fugitive dust control measures were primarily selected in accordance with the measures contained in West Virginia DEP Title V Air Permit for the landfill roads and plant roads. The roadways are also subject to a requirement to minimize visible emission as contained in the air permits.

#### 3.1.2 Landfill and Plant Roadways

The primary appropriate and applicable fugitive dust control measures for roadways are watering, sweeping, and speed controls. Water trucks are used as needed based upon the Title V Permit inspection requirements and other observations to minimize or eliminate fugitive dust. The Title V Permit requires as a minimum an inspection of all fugitive dust control systems weekly from May 1 through September 30 and monthly from October 1 through April 30 to ensure that they are operated as necessary and maintained in good working order. Chemical suppressants or stabilizers are also used a minimum of twice

per year on unpaved roadways depending on specific site conditions. A street sweeper/vacuum truck may be used to clean paved roadways. Posted speed limits for paved and unpaved roads are set for safety and reduction of fugitive emissions. Earth or other materials that may be deposited onto paved roadways from trucks will be promptly removed to minimize fugitive emissions. Implementation of control measures will not be necessary for roadways that are covered with snow and/or ice or if sufficient precipitation occurs to minimize or eliminate fugitive dust. Implementation of any control measures may be suspended if unsafe or hazardous driving conditions would be created by its use.

## 3.2 Landfill

### 3.2.1 Overview

The landfill receives gypsum, fly ash and bottom ash from the Mountaineer Plant or from other facilities through the barge unloading system. All materials contain moisture (conditioned) but water or chemical suppressants may be added at the landfill as necessary to minimize fugitive dust emissions. The landfill activities are subject to the West Virginia Title V Air Permit. This permit specifies the applicable and appropriate fugitive dust control measures for the site to minimize fugitive emissions. The permit also includes visible particulate emissions requirements as well as monitoring, recordkeeping and reporting requirements. [Note: “conditioned” CCR means the material has sufficient moisture content to prevent wind dispersal but will not result in free liquids]

### 3.2.2 Unloading and Placement

Gypsum and fly ash is unloaded from trucks in the active fill area of an open landfill cell, where a bulldozer or similar equipment will spread and compact the materials. A roller may also be used for compaction. Bottom ash is unloaded from trucks into a storage pile for use in construction or disposal within the landfill. The fugitive dust control measures for truck unloading includes maintaining moisture in the material and taking precautionary measures (minimize drop height). The measures for spreading and compacting include maintaining vehicle speed and watering materials.

### 3.2.3 Wind Erosion

Generally, landfill disposal areas can be classified as closed or open. Closed areas have received cover and vegetation has been established. Open areas contain both the active fill area and areas that have been compacted but not yet received cover. The open area fugitive dust control measures include: precautionary measures such as minimizing the amount of open area and pile height; compacting material as it is unloaded; and watering. The bottom ash storage pile fugitive dust emissions are minimized by watering and pile height control.

### 3.3 Bottom Ash Pond

Bottom ash is produced by the operating unit and is wet sluiced to the BAP complex. While one pond is used to collect the bottom ash during unit operation, the other is isolated and taken out-of-service. The out-of-service bottom ash pond is drained and the ash is dewatered. The ash is then loaded onto trucks for transport to the landfill. While the bottom ash typically remains wet, depending on the amount of moisture remaining in the ash and seasonal conditions, there may be fugitive emissions from the pile or truck loading activities. A review of potential control measures concluded that the applicable and appropriate options consist of: watering and minimizing drop height. Water is applied to the pile to minimize fugitive emissions as needed. Water spray is applied as needed to the material handling activities and the drop from the loader into the trucks is minimized to further minimize fugitive emissions. Enclosures, compaction and daily cover are not applicable given the size of the area and characteristics of the material.

### 4.0 Plan Assessment

The Plan will be periodically assessed to verify its effectiveness, and if necessary, amended in accordance with Section 7.0 below. The BAP and Landfill are inspected weekly. For roadways, the Title V Permit requires as a minimum an inspection of all fugitive dust control systems weekly from May 1 through September 30 and monthly from October 1 through April 30 to ensure that they are operated as necessary and maintained in good working order. The purpose of the inspections is to determine if the control measures for each CCR unit as described above are being implemented as necessary to minimize or eliminate fugitive emissions. Records of inspections and the control measures implemented as a result of the inspections will be maintained. The PEC will review the inspection records annually to assess the effectiveness of the Plan and determine if additional or modified measures are warranted. No inspection is necessary if the surface is covered with snow and/or ice or if precipitation has occurred that is sufficient to minimize or eliminate fugitive emissions.

### 5.0 Citizen Complaints

#### 5.1 Plant Contacts

Generally, complaints made to the plant are by telephone and received by the Plant Environmental Coordinator (PEC) (Plan Contact). In the case of holiday, weekends, or other times when the PEC may not be onsite, the plant guard house or plant general phone number may receive complaint information by telephone that is provided to the PEC at the earliest convenience. Complaints may also be made to the West Virginia DEP who in turn will contact the PEC.

#### 5.2 Follow-up

All complaints will be entered into a log by the PEC with details noted such as the nature of the complaint, date, time, and other relevant details. All complaints will be followed up which may include: checking plant operations at the time of the event, reviewing inspection records, discussing with other plant



personnel, reviewing weather data, collecting samples and contacting the person making the complaint to obtain additional information.

### 5.3 Corrective Action and Documentation

Corrective actions will be taken as needed and documented. If it is determined that the Plan needs to be amended as a result of the corrective actions, it will be amended in accordance with the Plan. If possible, the PEC will follow-up with the complainant and/or West Virginia DEP to explain the findings of the complaint investigation, corrective actions or sampling results. Citizen complaints will be recorded in the annual Report.

## 6.0 Annual Report

The Annual CCR Fugitive Dust Control Report (Annual Report) will be prepared which includes the following components: description of actions taken to control CCR fugitive dust; a record of all citizen complaints; and a summary of any corrective measures taken. The initial Annual Report will be completed no later than 14 months after placing the initial CCR fugitive dust control plan in the facility's operating record. The deadline for completing subsequent reports is one year after the date of completing the previous report. The Annual Report will be deemed complete when the plan has been placed in the facility's operating record as described in Section 8.0.

## 7.0 Plan Amendments

This Plan is a "living" document and will be amended, as necessary, whenever there is a change in condition that would substantially affect the written plan in effect. The Plan will be amended in the case of construction and operation of a new CCR unit. Amendments made to the Plan will be documented in Appendix D. The amended Plan will be placed into the facility's operating record as described in Section 8.0.

## 8.0 Records, Notification and Internet Requirements

### 8.1 Records

The Plan and files of all related information will be maintained in a written operating record at the facility for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, record or study. Files may be maintained on a computer or an electronic storage system accessible by a computer. One recordkeeping system may be used for the BAP and Landfill if the system identifies each file by the name of each unit (i.e. BAP or Landfill). The Plan (and any subsequent amendment of the plan) and the Annual Report will be kept in the facility's operating record as they become available. Only the most recent Plan must be maintained in the record. [§ 257.105]

### 8.2 Notification

West Virginia DEP will be notified within 30 days of placing the Plan (or any subsequent amended Plan) or the Annual Report into the operating record and on the publicly available internet site. This notification

will be made before the close of business on the day the notification is required to be completed. “Before the close of business day” means the notification must be postmarked or sent by e-mail. If the notification deadline falls on a weekend or federal holiday, the notification is automatically extended to the next business day. [§ 257.106]

### 8.3 Internet Site Requirements

The most recent Plan and annual Report will be placed on the facility’s CCR website titled “CCR Rule Compliance Data and Information” within 30 days of placing them in the operating record. [§ 257.107]

# Appendix A

Air Criteria of 40 CFR Part 257.80

## **Operating Criteria**

### **§ 257.80 Air criteria.**

(a) The owner or operator of a CCR landfill, CCR surface impoundment, or any lateral expansion of a CCR unit must adopt measures that will effectively minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads, and other CCR management and material handling activities.

#### *(b) CCR fugitive dust control plan.*

The owner or operator of the CCR unit must prepare and operate in accordance with a CCR fugitive dust control plan as specified in paragraphs (b)(1) through (7) of this section. This requirement applies in addition to, not in place of, any applicable standards under the Occupational Safety and Health Act.

(1) The CCR fugitive dust control plan must identify and describe the CCR fugitive dust control measures the owner or operator will use to minimize CCR from becoming airborne at the facility. The owner or operator must select, and include in the CCR fugitive dust control plan, the CCR fugitive dust control measures that are most appropriate for site conditions, along with an explanation of how the measures selected are applicable and appropriate for site conditions. Examples of control measures that may be appropriate include: Locating CCR inside an enclosure or partial enclosure; operating a water spray or fogging system; reducing fall distances at material drop points; using wind barriers, compaction, or vegetative covers; establishing and enforcing reduced vehicle speed limits; paving and sweeping roads; covering trucks transporting CCR; reducing or halting operations during high wind events; or applying a daily cover.

(2) If the owner or operator operates a CCR landfill or any lateral expansion of a CCR landfill, the CCR fugitive dust control plan must include procedures to emplace CCR as conditioned CCR. Conditioned CCR means wetting CCR with water to a moisture content that will prevent wind dispersal, but will not result in free liquids. In lieu of water, CCR conditioning may be accomplished with an appropriate chemical dust suppression agent.

(3) The CCR fugitive dust control plan must include procedures to log citizen complaints received by the owner or operator involving CCR fugitive dust events at the facility.

(4) The CCR fugitive dust control plan must include a description of the procedures the owner or operator will follow to periodically assess the effectiveness of the control plan.

(5) The owner or operator of a CCR unit must prepare an initial CCR fugitive dust control plan for the facility no later than October 19, 2015, or by initial receipt of CCR in any CCR unit at the facility if the owner or operator becomes subject to this subpart after October 19, 2015. The owner or operator has completed the initial CCR fugitive dust control plan when the plan has been placed in the facility's operating record as required by § 257.105(g)(1).

(6) *Amendment of the plan.* The owner or operator of a CCR unit subject to the requirements of this section may amend the written CCR fugitive dust control plan at any time provided the revised plan is placed in the facility's operating record as required by § 257.105(g)(1). The owner or operator must amend the written plan whenever there is a change in conditions that would substantially affect the written plan in effect, such as the construction and operation of a new CCR unit.

(7) The owner or operator must obtain a certification from a qualified professional engineer that the initial CCR fugitive dust control plan, or any subsequent amendment of it, meets the requirements of this section.

*(c) Annual CCR fugitive dust control report.* The owner or operator of a CCR unit must prepare an annual CCR fugitive dust control report that includes a description of the actions taken by the owner or operator to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective measures taken. The initial annual report must be completed no later than 14 months after placing the

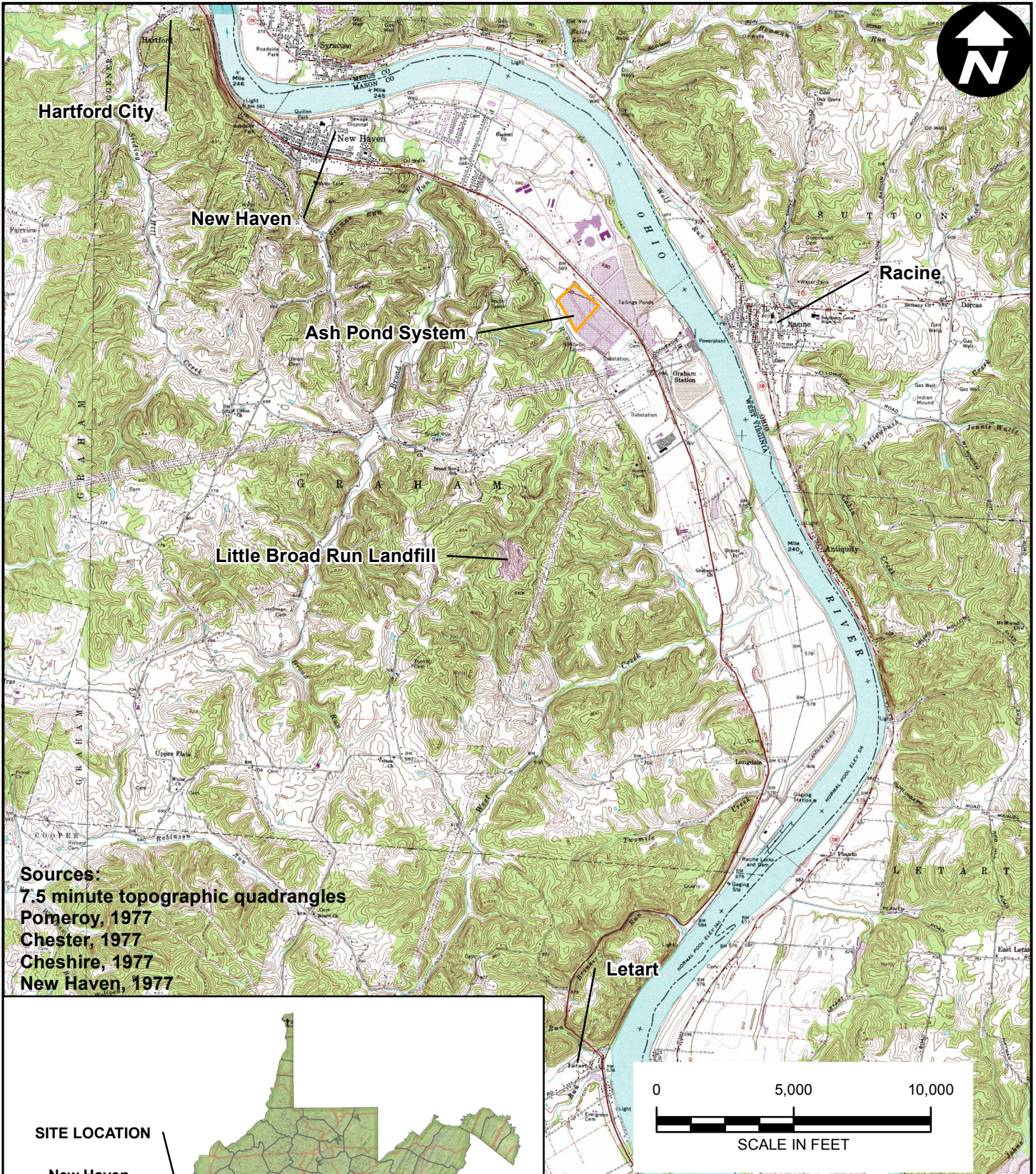
initial CCR fugitive dust control plan in the facility's operating record. The deadline for completing a subsequent report is one year after the date of completing the previous report. For purposes of this paragraph (c), the owner or operator has completed the annual CCR fugitive dust control report when the plan has been placed in the facility's operating record as required by § 257.105(g)(2).

(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(g), the notification requirements specified in § 257.106(g), and the internet requirements specified in § 257.107(g).

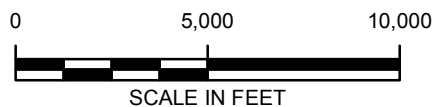
# Appendix B

## Site Map for the Plant





**Sources:**  
 7.5 minute topographic quadrangles  
 Pomeroy, 1977  
 Chester, 1977  
 Cheshire, 1977  
 New Haven, 1977



AEP MOUNTAINEER GENERATING PLANT - ASH POND SYSTEM  
 GRAHAM STATION ROAD  
 NEW HAVEN, WEST VIRGINIA

**SITE LOCATION MAP**

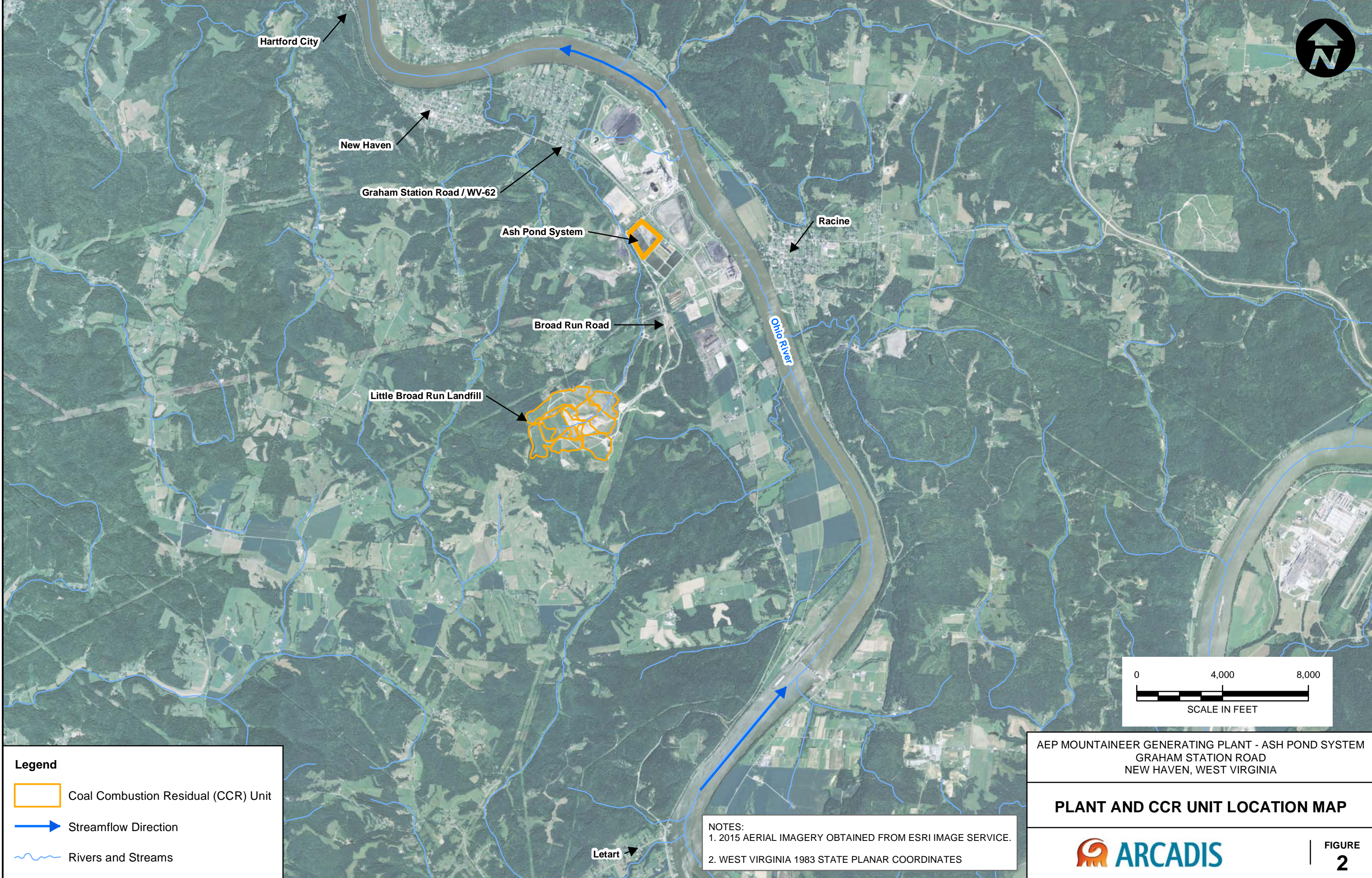


# Appendix C

## Site Map for the Landfill



City: CITRIX Div/Group: IMDV Created By: K.Ives Last Saved By: webb  
OH:015976.0009.00001 (Mountaineer Ash Pond)  
Z:\GIS\PROJECTS\ENV\AEP\Mountaineer\MXD\Ash Pond Report\F2\_MountaineerRegionalMap.mxd 11/12/2015 11:44:46 AM



**Legend**

- Coal Combustion Residual (CCR) Unit
- Streamflow Direction
- Rivers and Streams

NOTES:  
1. 2015 AERIAL IMAGERY OBTAINED FROM ESRI IMAGE SERVICE.  
2. WEST VIRGINIA 1983 STATE PLANAR COORDINATES

AEP MOUNTAINEER GENERATING PLANT - ASH POND SYSTEM  
GRAHAM STATION ROAD  
NEW HAVEN, WEST VIRGINIA

**PLANT AND CCR UNIT LOCATION MAP**





# Appendix D

## Record of Plan Amendments

