# Appalachian Power Company
# **Mountaineer Plant**

# Coal Combustion Residuals
# Fugitive Dust Control Plan
(Revision 1.4)

Original Issue – September 2017
Revision 1.1 – October 2018
Revision 1.2 – July 2019
Revision 1.3 – April 2022
Revision 1.4 – October 2024

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

# Table of Contents



**Appendices**

*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 | 10.31.2024 |
|---|---|---|
| **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 is one CCR landfill located at Mountaineer Plant that is subject to the Plan. The Mountaineer Little Broad Run Residual Waste Landfill (Landfill) receives gypsum, fly ash and bottom ash. The Plan addresses this CCR unit 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: Letart
State: West Virginia
Zip Code: 25253
County: Mason
Latitude: 38º 58' 46'' N
Longitude: 81º 56' 05'' W

2.2 Contact Information

Facility Operator

Name: Appalachian Power Company - Mountaineer Plant
Attention: Jerry L. Perry II - Plant Manager
Street: State Route 62
City: Letart
State: West Virginia
Zip Code: 25253

Facility Owner

Name: American Electric Power
Attention: Jill Lukehart – Manager – Air Quality Services
Street: 1 Riverside Plaza
City: Columbus
State: Ohio
Zip Code: 43215

Plant Contact

Name: Charles W Cunningham, Jr – Chemist Principal
Street: State Route 62
City: Letart
State: West Virginia
Zip Code: 25253
Telephone Number: 304-882-4020
E-mail Address: cwcunningham@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 truck 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 from the combustion of coal in the Mountaineer Plant Steam Generator. It is collected in the bottom of the steam generator under water in an ash hopper and removed from via

submerged chain conveyor and is transferred to another conveyor that moves it to the bottom ash storage area. It is then loaded into trucks using heavy machinery that minimized the drop height of the material during loading and transported to the Landfill for storage for use as a construction material. Bottom ash that is not used for construction purposes is placed within the Landfill.

The bottom ash storage ponds have been closed in accordance with the PE certified closure plan. These ponds have been lined and repurposed for use as wastewater ponds for general plant wastewater.

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

The Bottom Ash Ponds have been closed in accordance with the PE certified closure plan and are no longer capable of emitting CCR fugitive dust due to the physical removal of the CCR materials.

3.4 Bottom Ash Bunker and Transportation to Landfill

Bottom Ash is conveyed from the bottom ash hopper to an outdoor bunker via a submerged chain conveyor prior to being sent to the landfill. The ash being conveyed on a continuous basis still has sufficient moisture content to prevent fugitive dust from occurring. Trucks are loaded by heavy equipment and covered before hauling the bottom ash to the landfill over a dedicated haul road.

**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.

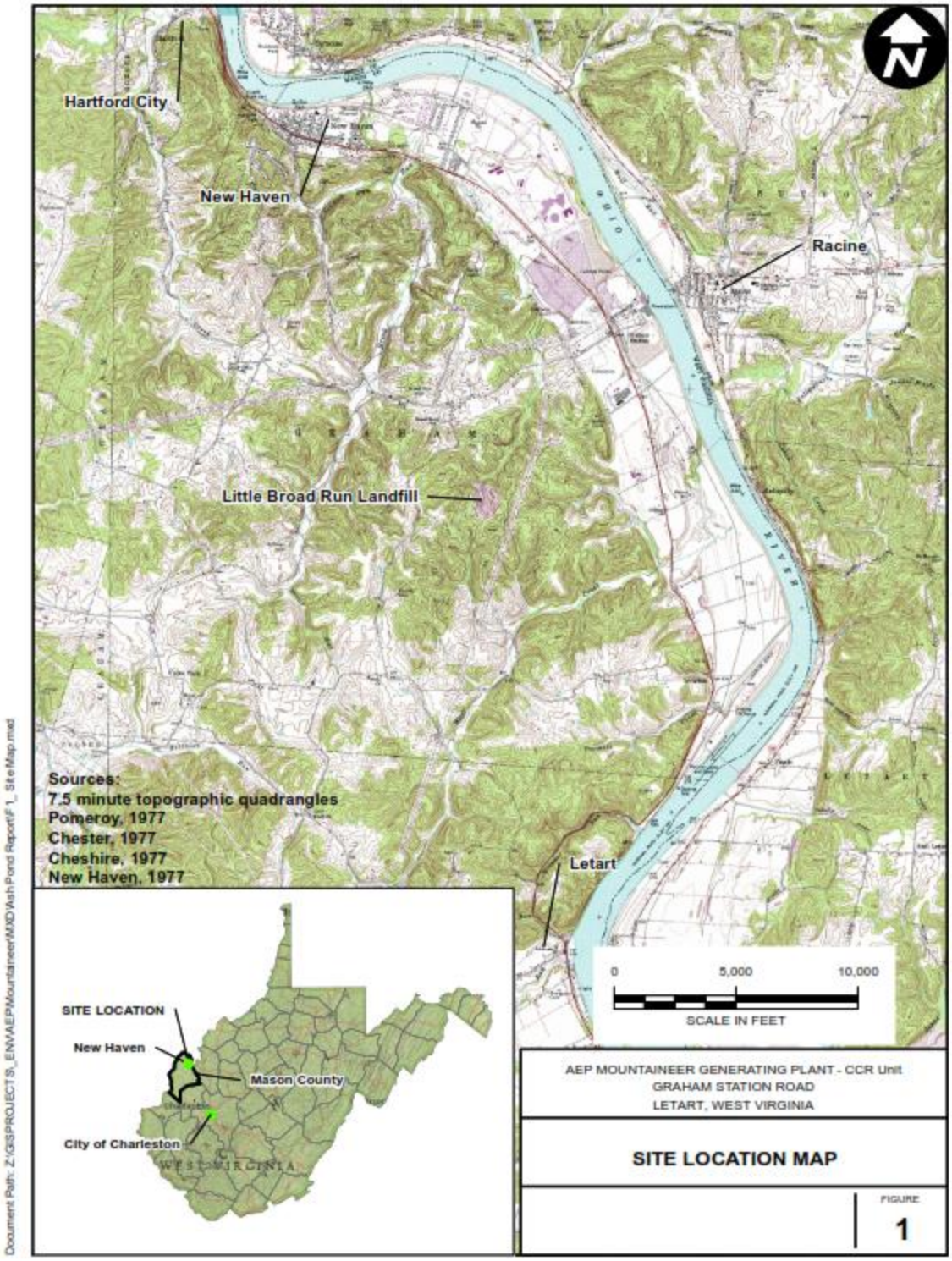
(c) *Annual CCR fugitive dust control report.* The owner or operator of a CCR unit must prepare an annual CCR fugitive dust control report that includes a description of the actions taken by the owner or operator to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective 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).

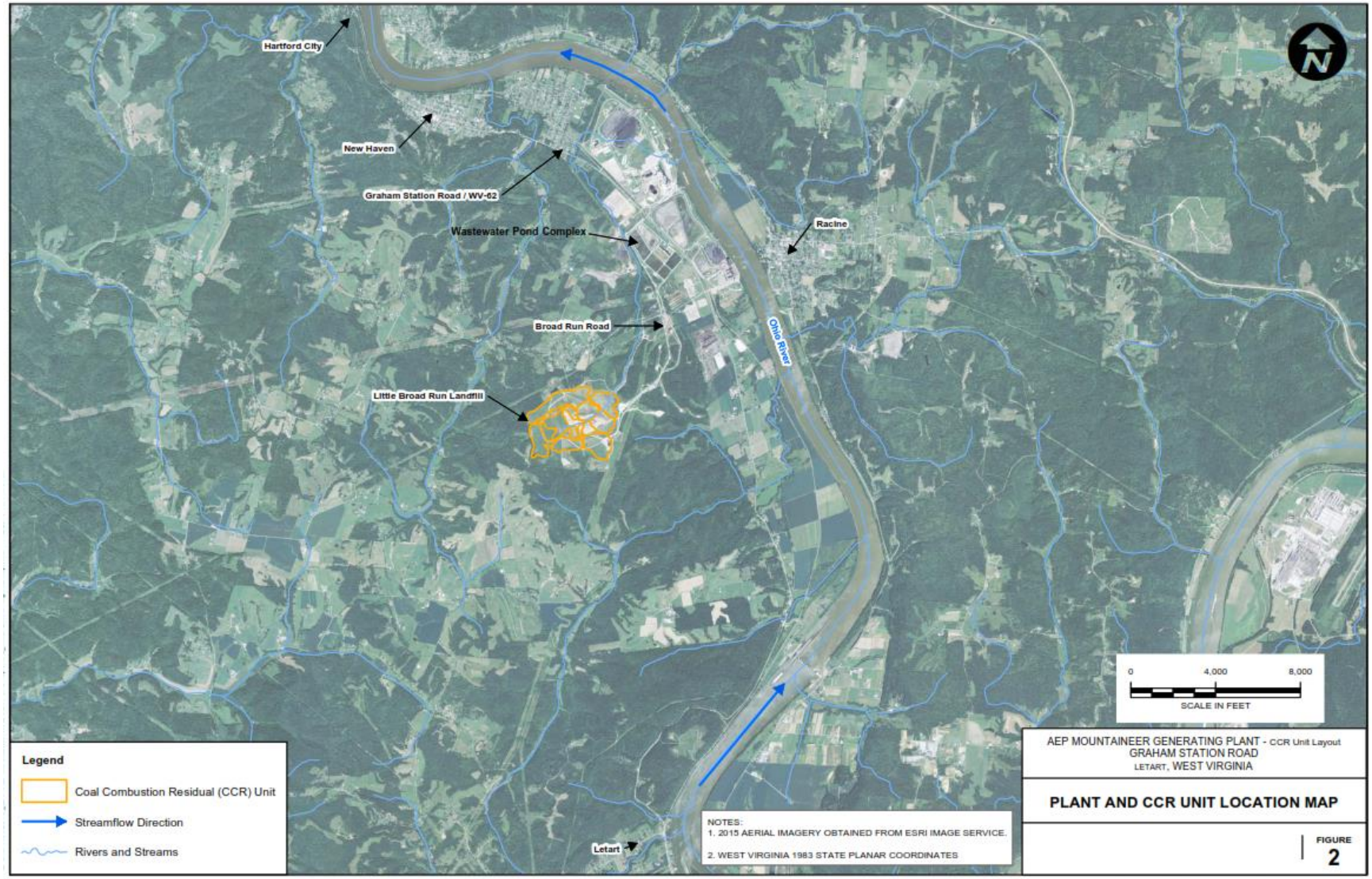
(d) The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(g), the notification requirements specified in § 257.106(g), and the internet requirements specified in § 257.107(g).

# Appendix B

## Site Map for the Plant


Hartford City
New Haven
Racine
Little Broad Run Landfill
Letart
Sources:
7.5 minute topographic quadrangles
Pomeroy, 1977
Chester, 1977
Cheshire, 1977
New Haven, 1977
0
5,000
10,000
SCALE IN FEET
SITE LOCATION
New Haven
Mason County
City of Charleston
WEST VIRGINIA
AEP MOUNTAINEER GENERATING PLANT - CCR Unit
GRAHAM STATION ROAD
LETART, WEST VIRGINIA
SITE LOCATION MAP
FIGURE
1
Document Path: Z:\GIS\PROJECTS_ENV\AEP\Mountaineer\MXD\Ash Pond Report\F 1_Site Map.mxd

# Appendix C
## Site Map for the Landfill


Hartford City
New Haven
Graham Station Road / WV-62
Wastewater Pond Complex
Broad Run Road
Little Broad Run Landfill
Racine
Ohio River
Letart
N
0
4,000
8,000
SCALE IN FEET
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 - CCR Unit Layout
GRAHAM STATION ROAD
LETART, WEST VIRGINIA
PLANT AND CCR UNIT LOCATION MAP
FIGURE
2

# Appendix D

## Record of Plan Amendments

| Record of Plan Changes | | |
|---|---|---|
| Revision Number | Date | Description of Change |
| 1.0 | September 2017 | Section 2.2 - Changed Plant Manager from Debra Osborne to Bryan Mabe. |
| 1.1 | October 2018 | Added Table of Contents and Page Numbers.<br>Section 1.0 – Removed requirement for maintaining copy on file at PEC's Office;<br>Section 2.2 – Changed Facility Owner Director, AQS from John Hendricks to Scott Weaver. |
| 1.2 | July 2019 | Added original date and revised date to cover page.<br>Section 1.0 – Added bottom ash pond complex<br>Section 2.2 - Updated Plant Environmental Coordinator to Randy Brown<br>Section 2.3 - Added bottom ash pond complex<br>Section 3.3 - Added bottom ash pond complex |
| 1.3 | April 2022 | Added revised date to cover page.<br>Section 2.3-Added beneficial reuse for Gypsum |
| 1.4 | October 2024 | Changed Owner contact to Jill Lukehart – Manager – Air Quality Services<br>Section 2.2 – Changed multiple named individuals due to retirements.<br>Section 2.3 – Changed description of Bottom Ash System to reflect the installation of the Dry Bottom Ash System and closure of Bottom Ash Ponds<br>Section 3.3 – Revised to reflect the closure of the Bottom Ash Ponds<br>Section 3.4 – New section added to reflect the handling of bottom ash using the newly installed dry bottom ash handling system.<br>Appendices B and C – Revised drawings to reflect changes to the facility related to the closure of the Bottom Ash Ponds. |
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