

COAL COMBUSTION RESIDUALS FUGITIVE DUST CONTROL PLAN

NRG WESTLAND COAL ASH
MANAGEMENT SITE



Prepared for

NRG MD Ash Management LLC

25100 Chalk Point Road
Aquasco, MD. 20608

September 28, 2015



12420 Milestone Center Drive, Suite 150
Germantown, MD 20876
Job No: 60429240

**NRG Westland Ash Management Site
CCR Fugitive Dust Control Plan Revision Register**

CCR Fugitive Dust Control Plan Revision Cycle	Date	Revision No.
Initial CCR Fugitive Dust Control Plan	September 28, 2015	Rev 0

Professional Engineering Certification

I have visited the NRG Dickerson Generating Station and the associated Westland Ash Storage Site located in Dickerson, Maryland, and I hereby certify that this initial CCR Fugitive Dust Control Plan meets the requirements of the Code of Federal Regulations (CFR), 40 CFR § 257.80 (Subpart D—Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, § 257.80 – Air Criteria). Any subsequent amendments to this Plan will be reviewed by a Professional Engineer to ensure that it meets the requirements of 40 CFR §257.80.

Name of Registered Professional Engineer: Jeffrey Hutchins

Registration Number: MD PE 13186

Expiration Date: October 10, 2016

Signature and Seal: 

Date: 9/28/15



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1.0 INTRODUCTION

The Westland Ash Management Site (Westland Ash Site) is owned by NRG MD Ash Management LLC (NRG) and is operated as a management facility for coal combustion residuals (CCRs) also referred to as coal fly ash and bottom ash, produced at NRG's adjacent Dickerson Generating Station.

The Westland Ash Site is located on Martinsburg Road in Dickerson, Montgomery County, Maryland. The street address of the Westland Ash Site is:

NRG MD Ash Management LLC
Westland Ash Management Facility
20831 Martinsburg Road
Dickerson, MD 20842

Maps showing the location of the Dickerson Generating Station and the Westland Ash Site are presented in Appendix A.

1.1 OBJECTIVE OF THE FUGITIVE DUST CONTROL PLAN

The purpose of this document is to provide a framework to guide NRG in its operation and management of CCR activities at the Westland Ash Site in a manner that will effectively minimize CCR from becoming airborne, in accordance with relevant federal regulations. These requirements apply in addition to, not in place of any applicable standards under the Occupational Safety and Health Act or any applicable State or local CCR or erosion and sediment control regulations.

1.2 REGULATORY BASIS

Since December 1, 2008 the Westland Ash Site has been regulated for CCRs by the Maryland Department of the Environment (MDE) under the Code of Maryland (COMAR) §26.04.10.01 through .04 and related sections.

As of April 17, 2015, the Westland Ash Site has also been regulated by the Code of Federal Regulations (CFR) under 40 CFR §257.80. That regulation requires operators of CCR units to prepare a CCR Fugitive Dust Control Plan by October 19, 2015, and to operate the facility in accordance with the Plan thereafter. This CCR Fugitive Dust Control Plan is prepared to comply with that and related regulations.

Additionally, §257.80(d) makes reference to requirements for recordkeeping, notification, and public accessibility to this Plan via the internet as established in §257.105(g), §257.106(g), and §257.107(g).

1.3 IMPLEMENTATION RESPONSIBILITIES

The Westland Site Supervisor is responsible for implementing procedures for the reduction and prevention of dust in and around the site and ensuring compliance with applicable requirements, specifically including 40 CFR §257.80, as well as other applicable federal, state, and local regulations.

1.4 DOCUMENT INFORMATION

This CCR Fugitive Dust Control Plan was prepared on behalf of NRG and was accepted into the NRG operating record in accordance with 40 CFR §257.105(g)(1) on October 19, 2015.

A Register of Revisions and Amendments to this CCR Fugitive Dust Control Plan is presented on page i of the Plan. Any Revisions or Amendments to the Plan are included in Appendix B with a statement of certification by a licensed professional engineer and placed into NRG operating record in accordance with 40 CFR §257.105(g)(1).

1.5 REGULATORY CROSSWALK TABLE

A regulatory crosswalk table mapping the required plan elements under 40 CFR §257.80 against the elements of this Plan is presented in Table 1 below.

Table 1 Regulatory Crosswalk Table

40 CFR 257 Citation	Description of Rule	CCR Fugitive Dust Control Plan Section
80(b)(1)	Identify dust control measures for CCR unit Describe dust control measures for CCR unit Explanation of why selected dust control measure is applicable and appropriate for site conditions of CCR unit	4.0
80(b)(2)	Emplacement of CCR into landfill as conditioned CCR	4.2
80(b)(3)	Procedures to log citizen complaints	6.1
80(b)(4)	Procedures for assessment of CCR Fugitive Dust Control Plan	5.0
80(b)(5)	Date of initial CCR Fugitive Dust Control Plan	1.4
80(b)(6)	Date of CCR Fugitive Dust Control Plan Amendments	1.4
80(b)(7)	Certification of CCR Fugitive Dust Control Plan	1.6
80(c)	Annual CCR Fugitive Dust Control Report	6.2
80(d)	Recordkeeping 257.105(g)(1) Notification 257.106(g)(1) Reporting 257.107(g)(1)	6.3

1.6 CERTIFICATION

A statement of certification by a licensed professional engineer that this initial CCR Fugitive Dust Control Plan meets the requirement of 40 CFR 257.80 is presented on Page ii of this Plan.

2.0 BACKGROUND

The Westland Ash Site is located on Martinsburg Road in Dickerson, Maryland. The facility and access road connecting the facility to the Dickerson Generating Station were initially designed by D'Appolonia for Potomac Electric Power Co. in 1977. The facility design received regulatory authorization and construction began in 1979.

The design of the facility consisted of the construction of three disposal cells, Cells A, B, and C:

- Cell C, which encompasses approximately 18.5 acres, was completed and closed many years ago. Cell C is located at the northwest corner of the site, separated from Cell B by a 250-foot transmission line right-of-way which runs along the eastern edge of Cell C.
- Cell B, which is the current operational cell, encompasses approximately 64.4 acres over the center of the site. The access road from the Dickerson Generating Station enters the facility at the northwest corner of Cell B. Approximately 22.8 acres of Cell B along the northern, western, and southern perimeter slopes are currently complete and closed.
- Cell A, the largest planned disposal cell (approximately 96.6 acres), is situated directly east of Cell B, and divided from Cell B by an approximately 400 ft. wide strip of land denoted as "Preservation Area D." There are no current plans to construct Cell A.

Cell C and the western portion of Cell B are being capped with an engineered capping system under a Consent Decree with MDE. As of March 2014, NRG was in the construction phase of a project to permanently close the 22.8-acre portion of Cell B and all of Cell C with a low permeability cap consisting of geosynthetic 40-mil HDPE liner, a 250-mil geocomposite drainage layer, a 2-foot final earthen cover, and vegetative stabilization.

3.0 SOURCES OF CCR FUGITIVE DUST

Fugitive dust is generated when dry fine grained material becomes airborne, thus removing it from the control of the owner/operator of the facility. Since CCR is generated by the combustion of coal, it may be very dry when it exits the burner. For this reason all CCR at the Dickerson Generation Station is handled in closed systems and conditioned with water before loading and leaving the station.

3.1 CCR GENERATION AREAS

All CCR that is deposited at the Westland Ash Site is generated from burning of raw coal for the production of electricity at the adjacent NRG Dickerson Generating Station. The Westland Ash Site does not accept CCR from any other sources.

The CCR that is generated at the Dickerson Generating Station is broadly separated into two types: fly ash and bottom ash. The two types of coal ash are handled differently.

Fly ash is stored in two large diameter concrete silos at the generating station. Once sufficient fly ash has been stored in the silos as determined by the NRG operator, the fly ash is released from the silo through a closed trough system and into a conditioning mixer located on a superstructure adjacent to the silos above the haul truck loading area. Inside the conditioning mixer, water is sprayed into the fly ash via a multi-spray nozzle configuration inside the mixer. The ash is mixed with the water by a rotating paddle system until the operator determines that the ash has an approximate 15-percent moisture content throughout the ash in the mixer. At that point it is ready for loading in a truck for hauling to the Westland Ash Site.

Bottom ash generated from the burning of the raw coal is transferred as a slurry mix in a pipeline from the plant burners to a large cone-bottom Hydrobin located on the truck loading superstructure adjacent to the fly ash silos. The bottom ash settles and decants, and the supernatant water is subsequently drawn off by way of valves and a pipeline into a dedicated decant water storage tank. Once the NRG operator determines that the bottom ash is at an acceptable consistency with a moisture content of approximately 15- to 20-percent it is ready for loading in a truck for hauling to the Westland Ash Site.

3.2 TRANSPORTATION OF CCR

3.2.1 Fly Ash

Once the NRG operator determines that the fly ash is properly conditioned in the mixer assembly, the operator opens a bottom door on the mixer and the ash is loaded into a waiting tractor trailer or dump truck (fully enclosed on four sides) equipped with a tarp that snugly and securely covers the entire load of ash. The truck then drives the approximate 1.3 miles from the ash loading area to the Westland Ash Site on internal plant roads for offloading of the conditioned fly ash into the active portion of Cell B.

3.2.2 Bottom Ash

Once the operator determines that the bottom ash is ready for loading, the operator opens a valve on the bottom of the cone-bottom tank and the bottom ash is loaded into a waiting dump truck. Similar to the fly ash trucks, the dump truck is equipped with a tarp that snugly and securely covers the entire load of ash. The truck then drives the approximate 1.3 miles from the ash loading area to the Westland Ash site on internal plant roads for offloading the bottom ash into the active portion of Cell B.

3.2.3 Transportation of CCR to Storage Sites

CCRs are transported from NRG's Dickerson Generating Station by means of semi-trucks and dump trucks that are fully enclosed on all four sides and have been completely covered with a firmly secured tarp system to prevent loss of CCR and to minimize dust emissions during transportation. Transport of CCR to the Westland Ash Site has been regulated by MDE for several years in accordance with COMAR 26.04.10.03 which requires NRG to take all reasonable precautions to prevent particulate matter from becoming airborne or causing fugitive air emissions during the transportation of CCRs from the generating plant to the Westland Ash Site. In addition to covering all transport vehicles with a tarp system, the following steps are also taken:

- Before leaving a site where CCRs are loaded or off-loaded, vehicles transporting CCRs will be rendered clean and free of excess material or debris that could blow off, fall off, or spill during transportation.
- CCRs being loaded or off-loaded from a vehicle will be sufficiently moistened or otherwise conditioned or contained to prevent CCRs from becoming airborne or causing fugitive emissions.
- Following loading but prior to departure from the plant, the transporter will inspect each vehicle that contains CCR. An inspection log will be maintained in the truck for 30 days for each of these inspections.
- Truck speeds will be limited to 15 mph on the ash site haul roads.

CCR's, when delivered to Westland Ash Site, will be directed to offload in the active fill area of Cell B.

3.2.4 Truck Washing

During hauling operations, before leaving a site where CCRs are loaded, measures are taken to control tracking of CCRs onto plant roads and beyond. Washing of trucks at truck washing station will be conducted. All trucks will be cleaned prior to leaving the Generating Station Property.

3.3 OFFLOADING AND EMPLACEMENT OF CCR

When the CCR haul trucks arrive at the active fill area of Cell B, they are routed to the active disposal area. Ash Site haul roads are multi-directional and are currently posted with a maximum speed limit of 15 mph. This is both a safety measure and it minimizes the possibility that trucks will kick up dust. CCRs are deposited at the working face under the direction of a site operator also serving as a spotter; spread over the current working face with a bulldozer in uniform lifts; and compacted with a smooth-drum roller. Emplaced CCR

is regularly watered by a dedicated water truck that is permanently on site. This prevents the ash from drying out and becoming airborne.

4.0 CCR DUST CONTROL MEASURES

The Westland Ash Site will continue to use the fugitive dust control measures that are currently in practice, and that have proven to be highly effective at controlling and preventing fugitive CCR dust.

4.1 ROAD WATERING

NRG currently controls the presence of CCRs, dust, and mud on the Westland site access roads and fugitive emissions generated by traffic over paved areas by frequent wetting of the roads by way of the site's dedicated water truck. The water truck refills by using resources on site and water from the Dickerson Generating Station, if required.

In general, water trucks will apply water at regular intervals – no less than once every three hours – during daily operations and construction, beginning at the start of each day's activities and as needed thereafter. In the event that this is not adequate to control dust, broom sweeping and/or vacuum sweeping may be used in concert with water.

During hauling operations, tracking of CCRs onto the site access roads will be controlled at all times to prevent transport of CCRs beyond Cell B. Tracking of CCRs onto access roads from Cell B will be strictly controlled by periodic washing of trucks and equipment, and scraping material from tires and equipment tracks. Trucks and equipment will be cleaned and/or washed inside Cell B. All trucks will be cleaned prior to leaving the Westland Ash Site and crossing Martinsburg Road.

The site access roads will be inspected by the Site Supervisor at the end of each day and cleaned of any CCRs. In the event sediment or CCRs from the site are observed on the access roads, the Site Supervisor will immediately coordinate with plant personnel to have the road cleaned. All CCRs and/or sediment material collected during cleaning activities will be disposed of back into Cell B.

All water that has come into contact with CCRs shall be managed in accordance with the site's NPDES permit and shall be directed to Pond 3.

4.2 OFFLOADING AND PLACEMENT OF CCR

- CCR Watering: The active CCR working areas are watered as necessary by the facility's water truck to maximize ash compaction and minimize dust, as directed by the Site Supervisor.
- Compacting: All exposed areas of the active fill area not currently being worked will be rolled with a smooth drum roller in accordance with site operating procedures.

4.3 IN-PLACE CONTROL MEASURES

- Temporary Covers: If needed, CCR may be covered to prevent it from drying out and becoming airborne. The Westland Ash Site receives only CCR from the Dickerson Generating Station. Daily cover application for vectors, odor, and material scatter is not required. Daily cover may be applied if operating conditions dictate a need for cover. Operating conditions that may warrant application of daily cover include predicted high winds; immediate need because of sustained high winds; a shortage of water for CCR conditioning/dust control. The operations supervisor/foreman will determine if, and when, daily cover is needed. Daily cover may include use of a thin layer of soil, tarps, or other approved material. NRG has been authorized by MDE to use “Posi-Shell”, a spray on application, as an alternative to the temporary soil cap.
- Completed and closed areas will be capped with an engineered geosynthetic closure cap including a 2-foot earthen cover and permanent stabilization with vegetation.

5.0 PROCEDURES FOR PERIODIC ASSESSMENTS

5.1 SITE INSPECTIONS

The Site Supervisor (or designee) will perform inspections to verify compliance with these dust control procedures. Inspections of paved and unpaved areas are as follows.

- Daily Inspections
 - Paved Areas – These areas will be visually inspected on a daily basis during construction and operations. Monitoring of plant access roads leading to the ash facility will be conducted on the same schedule as on-site roadways. The primary objective of these measures will be to reduce the silt loading on the traveled road portions.
 - Unpaved Areas – These areas will be monitored on a daily basis during construction and operations. Parking lot areas which carry less traffic than access roads may be monitored less frequently. Dust emissions generated on unpaved areas will be controlled primarily through the use of the dedicated mobile water truck. This will be conducted on a daily basis depending on the weather conditions, beginning at the start of each day’s work. In general, all unpaved areas which are traveled will receive water to reduce dust.
- Weekly Inspections

When the site is idle (no CCR activities) the site will be inspected weekly at a minimum (as required by 40 CFR §257.84) to ensure that no portion of the site has a potential to generate fugitive dust emissions.

- Annual Inspection

Under 40 CFR 257.84 the CCR unit is required to be inspected by a qualified professional engineer annually. CCR fugitive dust control issues would be one element of this inspection.

5.2 ASSESSING THE EFFECTIVENESS OF THE PLAN

At any time during normal daily operations, any individual conducting CCR activities is authorized and expected to notify the Site Supervisor of any condition observed which could potentially result in fugitive dust emissions. The Site Supervisor will be responsible to initiate corrective action, and if needed, will recommend revisions to the Fugitive Dust Control Plan. Weekly inspections of the operational areas performed by qualified individuals should also be used to identify any fugitive dust issues that might arise during operations.

At a minimum, preparation of the annual CCR Fugitive Dust Control Report will stimulate a review of the entire Plan and its effectiveness, and any revisions or amendments needed.

6.0 REPORTING AND RECORDKEEPING

6.1 CITIZEN INPUT

The Site Supervisor (or designee) will maintain a log of citizen input and any complaints received. The log will include the date and time the input was received, the name of the citizen (if given), the details of the input, and any response or corrective action taken. Any individual involved in any CCR activities is authorized and expected to notify the Site Supervisor of any citizen input or complaint received.

This information will be included in Appendix C of this Plan and in the annual CCR Fugitive Dust Control Report as discussed in Section 6.2.

6.2 ANNUAL CCR FUGITIVE DUST CONTROL REPORT

The Site Supervisor (or designee) will annually prepare a 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. The annual CCR Fugitive Dust Control Report will not be considered complete until the report has been placed in the facility's operating record as required by 40 CFR §257.105(g)(2).

6.3 RECORDS, NOTIFICATIONS, AND INTERNET ACCESS

In accordance with 40 CFR 257.105 a written operating record will be maintained at the CCR facility. This operating record will include the most recent version of this CCR Fugitive Dust Control Plan, any subsequent revisions or amendments, and the annual CCR Fugitive Dust Control Report. Annual reports must be maintained for a minimum of five years. The written record may also be maintained as computer files.

In accordance with 40 CFR 257.107 NRG will maintain a publicly accessible internet website entitled "CCR Rule Compliance Data and Information". The most recent version of the CCR Fugitive Dust Control Plan, along with any revisions or amendments will be maintained on this website. The annual CCR Fugitive Dust Control Report will also be maintained on this website. Required information must be posted to the CCR website within 30 days of being entered into the facility's operating record, and must be available to the public for a minimum of five years.

In accordance with 40 CFR 257.106 NRG will notify the Director of the MDE Solid Waste Program whenever information has been placed in the facility's operating record and/or posted to the CCR website. Copies of such information will be provided to MDE as required.

Appendix A – Figures

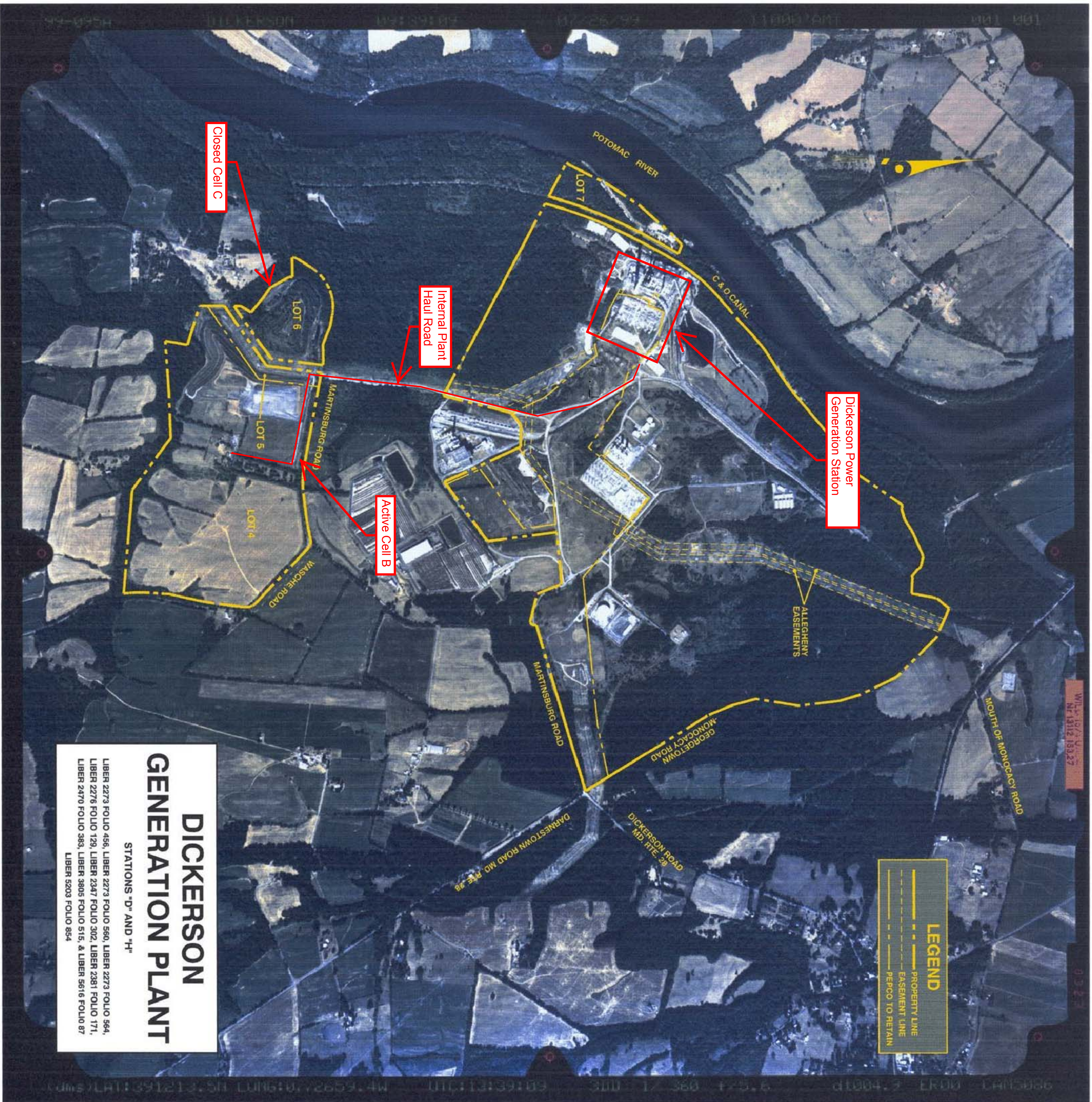
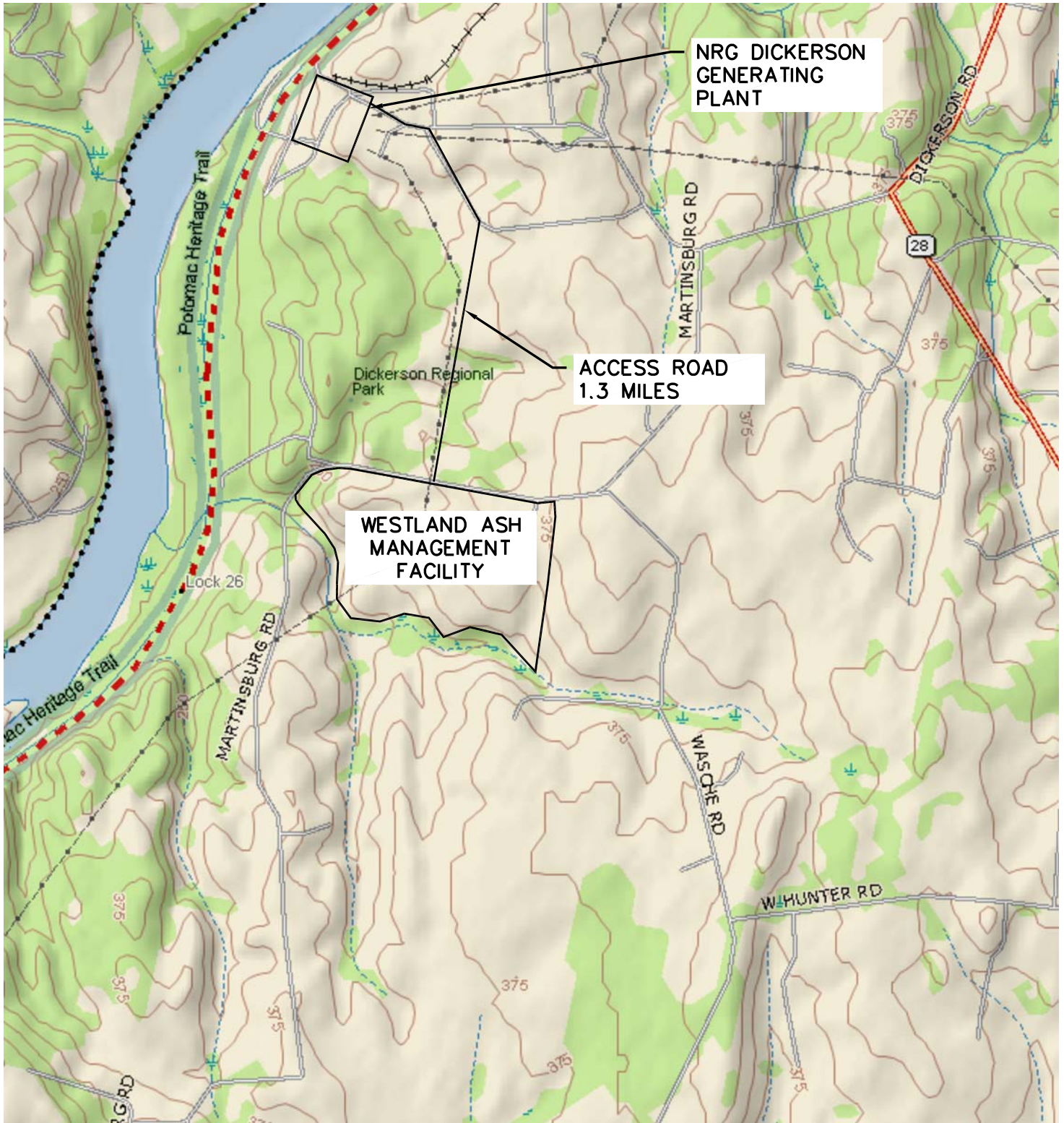


Figure 1
 NRG Dickerson Generating Station
 & Westland Ash Management
 Facility Location Map

09/2015

AECOM



**NRG DICKERSON
GENERATING
PLANT**

**ACCESS ROAD
1.3 MILES**

**WESTLAND ASH
MANAGEMENT
FACILITY**

Potomac Heritage Trail

Dickerson Regional Park

Lock 26

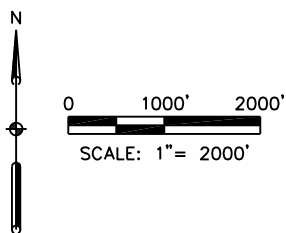
MARTINSBURG RD

DICKERSON RD

28

WASCHE RD

HUNTER RD



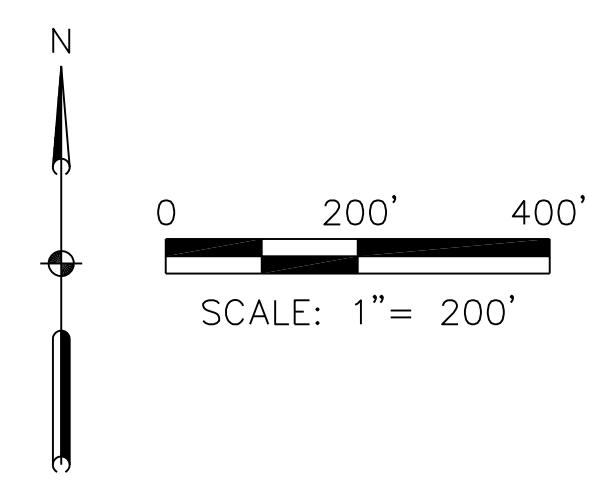
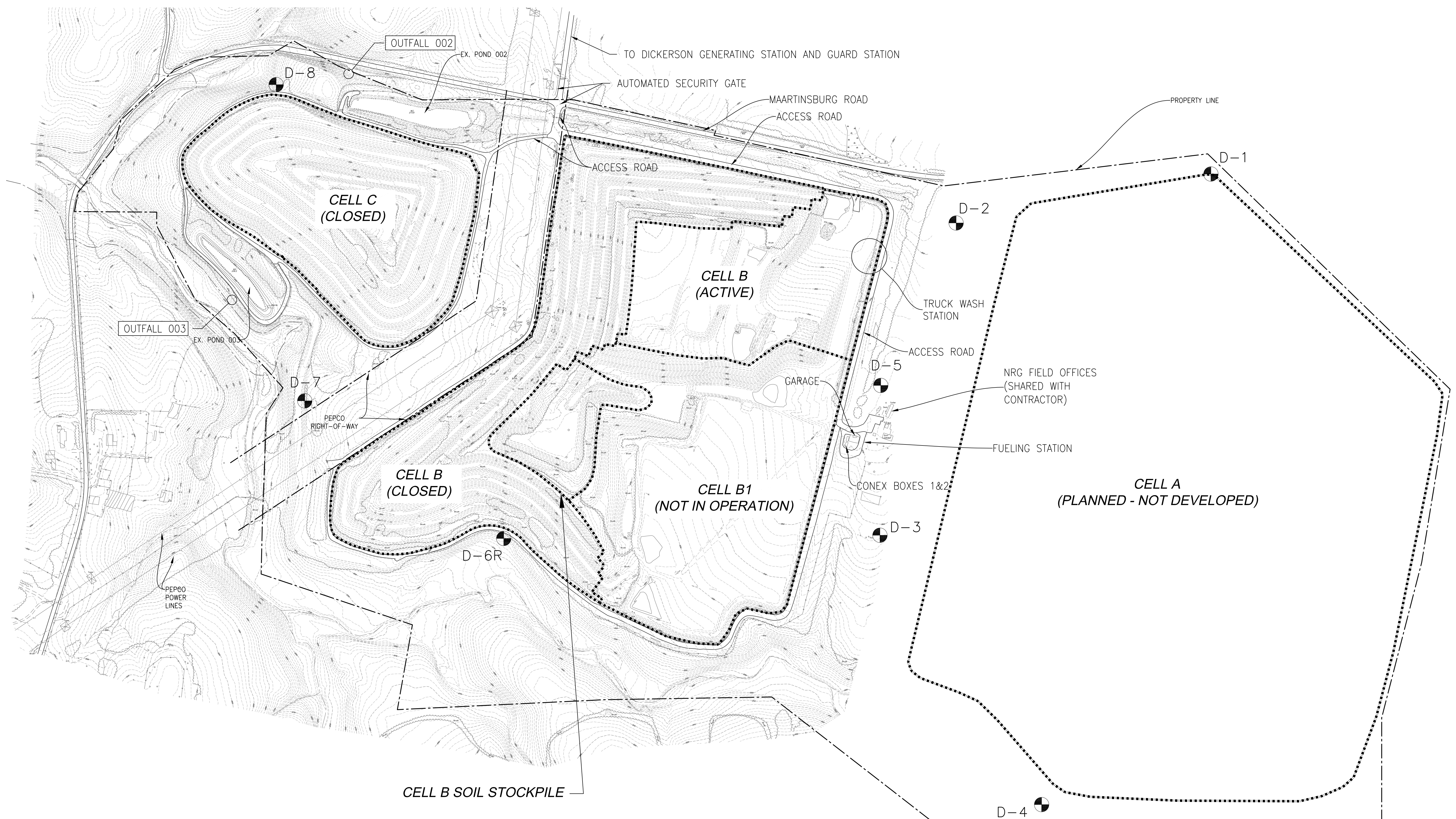
OWNER:  WESTLAND ASH MANAGEMENT FACILITY

SITE LOCATION MAP


PREPARED BY: **AECOM** 12420 MILESTONE CENTER DRIVE, SUITE 150
GERMANTOWN, MD 20876
TEL: 301.820.3000 FAX: 301.820.3009

CHECKED BY: JRH	PROJECT No.: 60429235	DATE: 09/2015	FIGURE No.: 2
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LEGEND
 D-4 EXISTING GROUNDWATER MONITORING WELL

OWNER:		 WESTLAND ASH MANAGEMENT FACILITY		
WESTLAND FACILITY SITE MAP				
PREPARED BY:		AECOM 12420 MILESTONE CENTER DRIVE, SUITE 150 GERMANTOWN, MD 20876 TEL: 301.820.3000 FAX: 301.820.3009		
CHECKED BY:	PROJECT No.:	DATE:	FIGURE No.:	
JRH	60429235	09/2015	3	

Appendix B – Plan Revisions and Amendments

Appendix C – Community Contact Form

