

# **Post-Closure Care Plan**

Pond 1 Ash Disposal Area Closure  
Clinch River Plant

Appalachian Power Company  
Clinch River Plant, Carbo, Virginia

**November 2016**

Prepared By: American Electric Power Service Corporation  
And Appalachian Power Company  
1 Riverside Plaza  
Columbus, OH 43215  
And  
Amec Foster Wheeler  
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1070 West Main Street, Suite 5  
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## Pond 1A/1B Closure – Clinch River Plant

### I. **Post-Closure Care Plan**

Appalachian Power Company (APCo), doing business as American Electric Power (AEP), is submitting a landfill application for Closure of Ash Pond 1 at the Clinch River Plant in Russell County, Virginia. Ash Pond 1 was used to dispose of bottom ash produced at the Clinch River Plant. The post-closure care activities described include long-term inspections, maintenance, and monitoring. The facility, once closed, will require a post-closure care period of 30 years (per the EPA 2015 Final Rule on the Disposal of Coal Combustion Residuals).

The post-closure care activities identified in this section address the requirements of the VADEQ Office of Waste Permitting and Compliance document “Submission Instruction No. 6, Closure and Post-Closure Care Plans for Solid Waste Disposal and Management Facilities. This Post-Closure Care Plan meets the requirements of 40 CFR 104 of the Federal CCR Rule, which is evidenced by and further detailed in Appendix D.

#### I.A **Post-Closure Contact**

Appalachian Power Company  
1 Riverside Plaza  
Columbus, Ohio 43215

Contact Name: Mr. Thomas E. Webb, P.E.  
Director, Land Environment and Remediation Services  
Telephone: (614) 716-1266

#### I.B **Security**

Access to the closed solid waste management facility is primarily controlled by guards at the Clinch River facility. Vehicle access can be denied by physical barriers (natural treeline, surface water channels/streams, and roadway barricades). No waste will remain exposed upon completion of closure. Access to the closed site will not pose a health hazard.

#### I.C **Inspection Plan**

Inspections are performed for the items noted below. The frequencies of inspections are detailed in Table 1 of Appendix A. The inspection frequencies are scheduled to properly detect any issues so that repairs can be performed before significant harm occurs. A checklist for facility inspections is located in Appendix A.

- **Security Control Devices:** The serviceability of the roadway barricades will be inspected during regular inspections.
- **Embankment:** The entire waste embankment, including top surface and side-slopes, will be inspected for slides, settlement, subsidence, displacement, and cover condition (see below).
- **Soil Dike:** The soil dike will be inspected for slides, displacement, seepage, and erosion.

## Pond 1A/1B Closure – Clinch River Plant

- **Cover:** The final cover will be inspected for erosion and for the condition of the vegetated cover, i.e., gaps in vegetation or presence of undesirable trees or brush. The integrity of the cover drainage system will also be inspected.
- **Closure Cap Surface:** The Pond Closure Cap surface will be inspected for any ponding of water or flat areas. Due to the design contours required to achieve the final cap grade, special attention will be focused to ensure that no depressions or flat areas exist and that no water is allowed to pond above the cap system.
- **Surface Drainage System:** The surface drainage system, including channels, culverts, slope drains, etc., will be inspected for erosion, integrity of channel lining, ponding, and accumulated sediment.
- **Interceptor Toe Drain and Reclaim Pond:** Currently, the interceptor toe drains along the southwestern toe of Pond 1 gravity flow directly into the Reclaim Pond located directly south of the Pond 1 dam structure, at the intersection of County Road 616 and County Road 665. Additionally, the interceptor toe drains along the southeastern toe of Pond 1 gravity flow to a central collection sump where the water is then pumped directly to the Reclaim Pond. The discharge pipes of the Leachate Collection System at the Leachate Collection Pond (Reclaim Pond) will be inspected for clogging or damage. Other exposed portions of the Leachate Collection System including cleanouts will be inspected for damage. Similarly, the Leachate Collection Pond (Reclaim Pond) will be inspected for general damage to the pond and perimeter berms, and for accumulation of sediment in the pond.
- **Groundwater Monitoring System:** The groundwater monitoring system will be inspected for the general integrity of the wells, well casings, and protective casings.
- **Benchmark:** The benchmarks will be inspected for general damage.

**Table 1**  
**Existing Benchmarks**

<b>Point No.</b>	<b>Northing</b>	<b>Easting</b>	<b>Elevation</b>
3403	3519306.010	10401991.100	1566.550
3401	3522615.360	10403848.100	1570.580
6211	3522564.324	10403152.962	1584.990
6214	3522649.439	10404104.643	1516.894

### **I.D Maintenance Plan**

Maintenance during the post-closure care period will be performed as discussed below, based upon the facility inspections described above and in the checklist in Appendix A.

- **Security Control Devices:** Any portions of the roadway barricades which might be damaged will be repaired or replaced as necessary.
- **Erosion Damage Repair:** Any areas exhibiting erosion will be repaired by replacing and compacting the material in-kind to design grade/specifications, and reseeding the area to the specifications. Applications of additional fertilizer, selective herbicides, rodent control

## Pond 1A/1B Closure – Clinch River Plant

measures, etc. will be implemented as necessary. In the selection of fertilizers and herbicides, ensure their use will not impact the groundwater negatively. Follow-up monitoring of the repaired area will be conducted to ascertain the integrity of the repair.

- Settlement, Subsidence, Displacement: Any areas at the closed site exhibiting evidence of settlement, subsidence, or displacement will be examined to determine the cause of the movement. If backfilling or placing additional fill material is needed to maintain the integrity of the closed structure, it will be performed in accordance with the site/closure specifications, including seeding. If the condition reoccurs or persists, or if the severity of the condition initially is judged to warrant it, a detailed investigation of the cause will be performed and remedial action will be performed. Similarly, any areas of the soil dike exhibiting sliding, displacement, or seepage will be investigated. Repairs will be made as necessary. Follow-up monitoring of the area will be performed to ascertain that the problem has been corrected.
- Closure Cap Surface: Any areas that show signs of ponding water or flat contours will be examined and rectified. Due to the design contours required to achieve the final cap grade, special attention will be focused on the cap surface to ensure that any areas that hold water are re-graded to promote drainage, re-seeded to promote vegetative growth, and maintained to ensure that the ponding of water does not persist.
- Surface Water Drainage System: The channel linings are designed to withstand the design velocities. Maintenance of the surface water drainage system will consist of removing sediment and/or undesirable vegetation from the surface water runoff control system (channels and culverts) as required. Eroded areas will be repaired by back-filling and reseeded according to the specifications. Damage to culverts will be repaired; structure replacement will be performed if needed.
- Interceptor Toe Drain and Reclaim Pond: Maintenance of the leachate collection system, collection sump, Reclaim Pond, and leachate pumps will consist of repairing and/or replacing in-kind any damaged or eroded portions of the system and pond, cleaning pipes, and removing leachate and sediment from the collection sump and the Leachate Collection Pond (Reclaim Pond), as needed.
- Groundwater Monitoring Wells: Any damaged portions of the monitoring wells and/or their protective casings will be replaced in-kind. The protective casings are steel casings with locking covers to minimize tampering or damage due to vandalism.

### **I.E Monitoring Plan**

The Pond 1 groundwater has been monitored under a voluntary program for five years with no significant impacts to the groundwater and/or Clinch River. Information regarding the proposed groundwater monitoring program can be found in the Pond 1 - Groundwater Monitoring Plan (dated October 2015).

**I.F Post-Closure Uses**

There are no current plans to develop the site, which will remain closed to the general public. The anticipated post-closure use is open space. The site will be revegetated to create a herbaceous rangeland habitat. AEP will notify the Virginia Department of Environmental Quality (VDEQ) if the site use changes during the post-closure care period.

**I.G Training**

Company landfill personnel responsible for post-closure monitoring, inspection, and maintenance will be under the direct supervision of the company's engineering staff during performance of these duties. If qualified company personnel are not available to perform these post-closure duties, then the company shall hire the services of a professional consultant registered with the Commonwealth to insure compliance with applicable provisions of the Solid Waste Management Regulations.

**I.H Post-Closure Care Termination**

AEP shall perform post-closure care for thirty (30) years following the completion of construction. As required by 10.1-1410.2 B, the facility shall submit to VDEQ a certificate, signed by a registered professional engineer Licensed in the Commonwealth, verifying post-closure care has been completed in accordance with the approved post-closure care plan. To discontinue post-closure care, the PE certificate shall be accompanied by an evaluation, prepared by a professional engineer licensed in the Commonwealth and signed by the facility, assessing and evaluating the landfill's potential for harm to human health and the environment in the event that all corrective action, post-closure monitoring, and maintenance are completed in accordance with the approved post-closure care plan. The certification and evaluation shall be submitted no less than 180 days prior to completion of post-closure care period specified in the plan to be evaluated by the Department.

**Appendix A**

**INSPECTION CHECKLISTS**

**TABLE 1  
GENERAL INSPECTION SCHEDULE**

<b>ITEM</b>	<b>POSSIBLE DEFICIENCY</b>	<b>INSPECTION FREQUENCY SITE</b>
Closed Ash Embankment*	Surface breaks or slides, erosion, settlement, subsidence, displacement	M/Q
Vegetated Cover*	Brush, trees, gaps in cover, erosion	M/Q
Soil Dike and Bank*	Slides, sloughs, scarps, displacements, seepage, erosion	Q
Surface Water Collection System*	Accumulated sediment, ponding, erosion, vegetation	M/Q
Cap System Drainage	Flat areas or depressions resulting in the ponding of water.	M/Q
Interceptor Toe Drain and Reclaim Pond*	Erosion, damage, siltation/clogging, maintenance	M/Q
Monitoring Wells	Misc. damage	Q
Roadway Barricades, Benchmark(s)	Misc. damage	M/Q
Leakage Monitoring System (If Needed)	Clogging, miscellaneous damage, discharge	M/Q

**INSPECTION FREQUENCY CODE**

M/Q – Monthly for first 12 months; quarterly thereafter  
Q – Quarterly

\* Additionally, the integrity of the embankment, cover, vegetation, soil dike, surface water collection system and Interceptor Toe Drain and Reclaim Pond will be inspected after the spring thaw, after any rainfall exceeding two inches, or any major rainfall event resulting in localized flooding.

**\*\*This Page Intentionally Left Blank\*\***





Pond 1A/1B Closure – Clinch River Plant

Inspector Name: \_\_\_\_\_ Site: \_\_\_\_\_ Inspection Date: \_\_\_\_\_

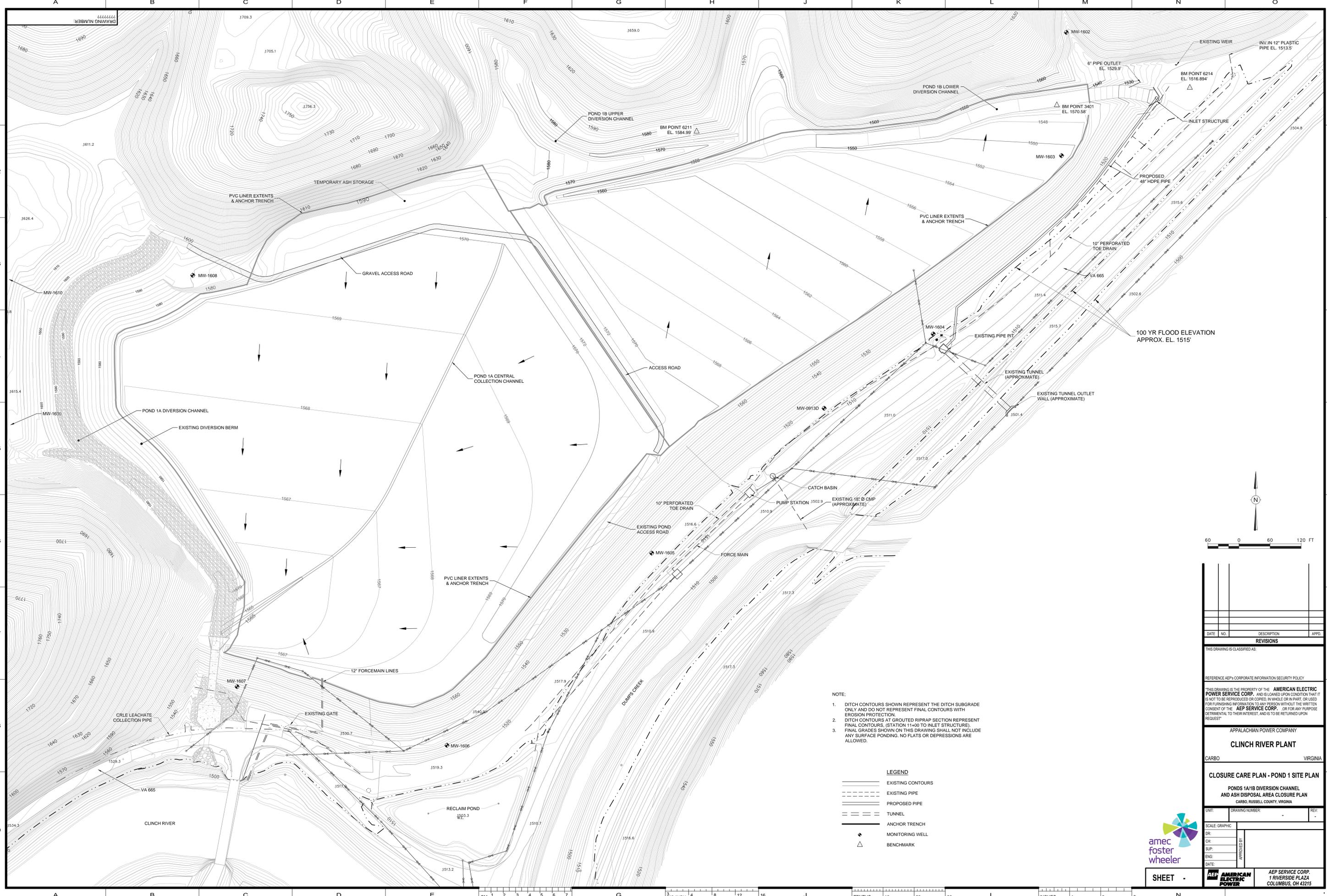
Area Inspected	Condition	Action Required		Observations/Location (Note on Attached Site Plan)
		Yes	No	
Interceptor Toe Drain and Reclaim Pond	Erosion			
	Siltation/Clogging			
	Damage			
Surface Water Drainage System	Ditches, Swales:			
	- Accumulated Sediment			
	- Erosion			
	- Vegetation Condition			
	- Ponding			
	Culverts:			
	- Accumulated Sediment			
	- Structural Integrity			
	- Inlet Condition			
- Outlet Condition				
Leakage Monitoring System (If Needed)	Misc. Damage			
	Clogging			
	Discharging			
Monitoring Wells	Misc. Damage			
	- casing			
	- Cover			
	- Lock			
Additional Comments:				

**Appendix B**

**Pond 1 Site Plan**

CROSS REFS.

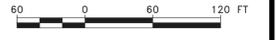
Project: Bldg E - Sheet: SCL-11-A - Layout: 01 - June 24, 2016 12:23:29pm P:\CADD\Projects\13050\13050\30220 American Electric Power\Ash Pond Reclamation\2015 Design\Post Closure Care Plan\2016-0616 - Post Closure Care Plan Rev 1.dwg



- NOTE:
1. DITCH CONTOURS SHOWN REPRESENT THE DITCH SUBGRADE ONLY AND DO NOT REPRESENT FINAL CONTOURS WITH EROSION PROTECTION.
  2. DITCH CONTOURS AT GROUDED RIPRAP SECTION REPRESENT FINAL CONTOURS. (STATION 11+00 TO INLET STRUCTURE).
  3. FINAL GRADES SHOWN ON THIS DRAWING SHALL NOT INCLUDE ANY SURFACE PONDING. NO FLATS OR DEPRESSIONS ARE ALLOWED.

**LEGEND**

—	EXISTING CONTOURS
- - -	EXISTING PIPE
— — —	PROPOSED PIPE
- - - - -	TUNNEL
— — — — —	ANCHOR TRENCH
⊕	MONITORING WELL
△	BENCHMARK



DATE	NO.	DESCRIPTION	APPR.
REVISIONS			

THIS DRAWING IS CLASSIFIED AS:  
 REFERENCE AEP'S CORPORATE INFORMATION SECURITY POLICY

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APPALACHIAN POWER COMPANY  
**CLINCH RIVER PLANT**  
 CARBO VIRGINIA

**CLOSURE CARE PLAN - POND 1 SITE PLAN**  
 PONDS 1A/1B DIVERSION CHANNEL  
 AND ASH DISPOSAL AREA CLOSURE PLAN  
 CARBO, RUSSELL COUNTY, VIRGINIA

UNIT:	DRAWING NUMBER:	REV:
SCALE GRAPHIC	DR:	CH:
SUP:	ENG:	DATE:
APPROVED BY:		



**SHEET** - **AMERICAN ELECTRIC POWER** AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215

CROSS REFS.

**Appendix C**

**Post Closure Cost Estimate**

**Worksheet CEW-02: FORMAT FOR THE ESTIMATION OF POST-CLOSURE COSTS**  
**CLINCH RIVER POND 1 SWP620**

**\*FILL IN THE BOXES. THE REST WILL BE CALCULATED FOR YOU\***

**I. Groundwater Monitoring**

		Calculation or Conversion	
a. Total number of monitoring wells	<input type="text" value="11"/>	wells	
b. Total number of sampling events/year	<input type="text" value="2"/>	events/yr	a x b
c. Quantity of additional samples (e.g. QA/QC)	<input type="text" value="5"/>	samples/event	b x c
d. Total samples per year			b + c
e. Analysis unit cost (Table 3.1 constituents)	<input type="text" value="\$330.00"/>	/sample	
f. <i>Total Analysis cost</i>			d x e
g. GW Monitoring unit cost	<input type="text" value="\$23,150.00"/>	/event	
i. <i>Total sampling cost</i>			f + (g x b)
j. Engineering fees & reports	<input type="text" value="\$2,000"/>	/yr	
<b>Yearly Groundwater Monitoring Cost</b>			<b>\$58,860 /yr</b>

**II. Landfill Gas Monitoring, Maintenance, and Control** **No gas**

a. Frequency of LFG compliance monitoring	<input type="text"/>	events/yr	
b. LFG Monitoring unit cost	<input type="text"/>	/event	
c. <i>Total perimeter LFG monitoring cost</i>			a x b
d. Frequency of surface monitoring (air permit)	<input type="text"/>	events/yr	
e. Surface monitoring unit cost	<input type="text"/>	/event	
f. <i>Total surface monitoring cost</i>			d x e
g. Control system operating unit cost	<input type="text"/>	/yr	
h. Frequency of LFG control system inspections	<input type="text"/>	events/yr	
i. Control system inspection cost	<input type="text"/>	/event	
j. <i>Total control system cost</i>			g + (h x i)
<b>Yearly Landfill Gas Monitoring, Maintenance, &amp; Control Cost</b>			<b>\$0 /yr</b>

**III. Leachate Management - Seep**

a. Quantity of leachate generated	<input type="text" value="219,000"/>	gal/yr	
<i>On-site Leachate Management or Pre-Treatment</i>			
b. On-site treatment operating unit cost	<input type="text" value="\$0.00159"/>	/gal	
c. <i>Total on-site management cost</i>			a x b
<i>Leachate Disposal</i>			
d. Private disposal unit cost	<input type="text"/>	/gal	
e. POTW disposal unit cost	<input type="text"/>	/gal	
f. Direct discharge to POTW unit cost	<input type="text"/>	/gal	
g. Pump & Haul unit cost	<input type="text"/>	/gal	
h. Subtotal leachate disposal unit cost			d + e + f + g
i. <i>Total leachate disposal cost</i>			a x h
j. Leachate sampling & analysis unit cost	<input type="text"/>	/sample	
k. Frequency of leachate sampling & analysis	<input type="text"/>	sample/yr	
l. <i>Total leachate sampling &amp; analysis cost</i>			j x k
<b>Yearly Leachate Management Cost</b>			<b>\$348 /yr</b>

**IV. Cap Maintenance & Repair**

a. Closed Landfill Area	<input type="text" value="26"/>	acres	
<i>Mowing &amp; Fertilization</i>			
b. Mowing frequency	<input type="text" value="2"/>	visits/yr	
c. Mowing unit cost	<input type="text" value="\$226.00"/>	/acre/visit	
d. <i>Total mowing cost</i>			a x b x c
e. Fertilizer frequency	<input type="text"/>	visits/yr	
f. Fertilizer unit cost	<input type="text"/>	/acre/visit	
			<b>Fertilizer not routinely applied at Landfill #223</b>

g. Total fertilizer cost		a x e x f	\$0 /yr
<i>Cap Erosion &amp; Repair</i>			
h. Area to reseed/year		33% x a	8.7 acres
i. Reseeding unit cost	<input type="text" value="\$2,904.00"/>	/acre	
j. Total reseeding cost		h x i	\$25,168.00 /yr
k. Area of cap erosion/year		10% x a	2.6 acres
l. Cap erosion repair unit cost	<input type="text" value="\$11,293.33"/>	/acre	
m. Mobilization/Demobilization	<input type="text" value="\$1,000.00"/>	/yr	
n. Total cap erosion repair cost		(k x l) + m	\$30,363 /yr
<b>Yearly Cap Maintenance &amp; Repair cost</b>		d + g + j + n	<b>\$67,283 /yr</b>

**V. Sediment Basin Maintenance & Repair Reclaim Pond**

a. Sediment basin cleanout frequency, 1 per	<input type="text" value="5"/>	years	1 / a	0.20 event/yr
b. Sediment basin cleanout unit cost	<input type="text" value="\$200,000"/>	/event		
c. Mobilization/Demobilization	<input type="text"/>	/event		
d. Total sediment basin maintenance cost			a x (b + c)	\$40,000 /yr
e. Total number of stormwater sampling locations	<input type="text" value="2"/>	locations	<b>Visual Inspection</b>	
f. Stormwater sampling frequency	<input type="text" value="4"/>	events/yr		
g. Total number of stormwater samples			e x f	8 samples/yr
h. Analysis unit cost (VPDES permit parameters)	<input type="text"/>	/sample		
i. Total Analysis cost			g x h	\$0 /yr
j. Mobilization unit cost	<input type="text"/>	/event		
k. Technician field unit cost	<input type="text"/>	/event		
l. Total sampling cost			f x (j + k)	\$0.00 /yr
m. Engineering fees & reports	<input type="text"/>	/yr		
n. Total Stormwater Sampling & Analysis cost			i + l + m	\$0 /yr
<b>Yearly Sediment Basin Maintenance &amp; Repair</b>			d + n	<b>\$40,000 /yr</b>

**VI. Vector & Rodent Control**

a. Vector and rodent control unit cost	<input type="text" value="\$1,000"/>	/yr		
<b>Yearly Vector and Rodent Control Cost</b>			a	<b>\$1,000 /yr</b>

**VII. Post-Closure Care General Inspections**

a. General Inspection unit cost	<input type="text" value="\$250"/>	/inspection		
b. Number of inspections per year	<input type="text" value="4"/>			
<b>Yearly Post-Closure Care General Inspection Cost</b>			a x b	<b>\$1,000 /yr</b>

**Annual Post-Closure Care Cost (APCC)** I + ... + VII \$168,491 /yr

**Length of post-closure care (LPCC)**  years

**Post-Closure Care Cost** APCC x LPCC \$5,054,726

**Engineering & Documentation** Engineering Sum \$10,000

Post-Closure Care Evaluation   
 Post-Closure Care Certification   
 Cost for survey and deed notation   
 (if not completed at time of landfill closure) **Performed at time of closure**

**FA Mechanism Maintenance Cost**  /yr FA maintenance x LPCC \$0

**Total Post-Closure Care Cost** **Financial Test by AEP Legal**  
 Post-Closure Cost + Engineering + FA Maintenance **\$5,064,726**

**Appendix D**

**CCR Post-Closure Care Plan (40 CFR 104)**

# POST CLOSURE PLAN

**CFR 257.104(d)**

Pond 1

Clinch Power Plant  
Russell County, West Virginia

November 2016

Prepared for: Appalachian Power Company

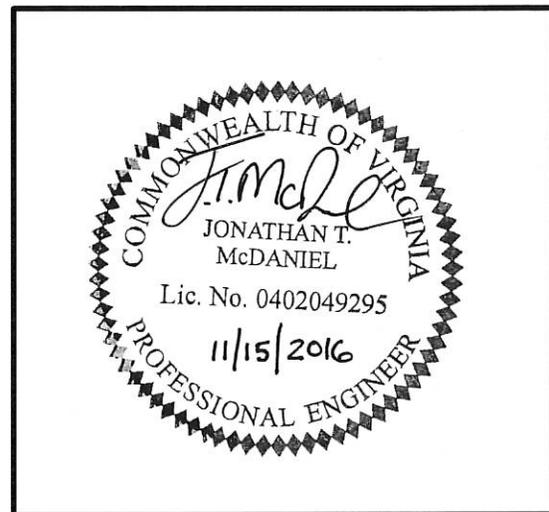
Prepared by: Amec Foster Wheeler Environment & Infrastructure, Inc.

1070 West Main Street, Suite 5

Abingdon, VA 24210



POST CLOSURE PLAN  
CFR 257.104(d)  
CLINCH POWER PLANT  
POND 1



I certify to the best of my knowledge, information, and belief that the information contained in this post closure plan meets the requirements of 40 CFR § 257.104

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## **1.0 OBJECTIVE**

This report was prepared by Amec Foster Wheeler Environment & Infrastructure, Inc. to fulfill requirements of CCR 257.104(d) for Post Closure Plans of CCR units.

## **2.0 DESCRIPTION OF THE CCR IMPOUNDMENT**

The Clinch River Plant is located in Russell County, Virginia near the community of Carbo, to the south of the intersection of Route 616 and Route 665, as shown in Figure 1, Site Location Map. Ash Pond 1 is approximately located to the northeast of the Clinch River Plant and north of the confluence of Dumps Creek and the Clinch River.

Pond 1 is considered a side-hill impoundment built around an existing hillside. Pond 1 was constructed by engineered earthen embankments approximately 65 feet (ft.) high on the west, south, and east sides and existing natural side slope topography along the north side. These embankments have been reconstructed and raised three times between 1955 and 1971 to provide additional storage volume. The pond was used for sluicing and settling of ash byproducts. Pond 1 is approximately 22.8 acres in size and consists of Pond 1A and Pond 1B that is separated by a splitter dike.

## **3.0 DESCRIPTION OF POST CLOSURE PLAN 257.104(d)(1)(i)**

*[A description of the monitoring and maintenance activities required in paragraph (b) of this section for the CCR unit, and the frequency at which these activities will be performed.]*

### **3.1 SECTION 257.104(b)(1)**

*[Maintaining the integrity and effectiveness of the final cover system including making repairs to the final cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover.]*

Inspections are performed for the items noted below. The inspection frequencies are scheduled to properly detect any issues so that repairs can be performed before significant harm occurs.

- Security Control Devices: The serviceability of the roadway barricades will be inspected during regular inspections.
- Embankment: The entire waste embankment, including top surface and side-slopes, will be inspected for slides, settlement, subsidence, displacement, and cover condition (see below).
- Soil Dike: The soil dike will be inspected for slides, displacement, seepage, and erosion.
- Cover: The final cover will be inspected for erosion and for the condition of the vegetated cover, i.e., gaps in vegetation or presence of undesirable trees or brush. The integrity of the cover drainage system will also be inspected.
- Final Cover Surface: The Final Cover surface will be inspected for any ponding of water or flat areas. Due to the design contours required to achieve the final cap grade, special attention will be focused to ensure that no settlement, subsidence, erosion, depressions or flat areas exist and that no water is allowed to pond above the cap system.
- Surface Drainage System: The surface drainage system, including channels, culverts, slope drains, etc., will be inspected for erosion, integrity of channel lining, ponding, and accumulated sediment.

- Interceptor Toe Drain and Reclaim Pond: Currently, the interceptor toe drains along the southwestern toe of Pond 1 gravity flow directly into the Reclaim Pond located directly south of the Pond 1 dam structure, at the intersection of County Road 616 and County Road 665. Additionally, the interceptor toe drains along the southeastern toe of Pond 1 gravity flow to a central collection sump where the water is then pumped directly to the Reclaim Pond. The discharge pipes of the Leachate Collection System at the Leachate Collection Pond (Reclaim Pond) will be inspected for clogging or damage. Other exposed portions of the Leachate Collection System including cleanouts will be inspected for damage. Similarly, the Leachate Collection Pond (Reclaim Pond) will be inspected for general damage to the pond and perimeter berms, and for accumulation of sediment in the pond.
- Groundwater Monitoring System: The groundwater monitoring system will be inspected for the general integrity of the wells, well casings, and protective casings.
- Benchmark: The benchmarks will be inspected for general damage.

Maintenance during the post-closure care period will be performed as discussed below, based upon the facility inspections described above.

- Security Control Devices: Any portions of the roadway barricades which might be damaged will be repaired or replaced as necessary.
- Erosion Damage Repair: Any areas exhibiting erosion will be repaired by replacing and compacting the material in-kind to design grade/specifications, and reseeding the area to the specifications. Applications of additional fertilizer, selective herbicides, rodent control measures, etc. will be implemented as necessary. In the selection of fertilizers and herbicides, ensure their use will not impact the groundwater negatively. Follow-up monitoring of the repaired area will be conducted to ascertain the integrity of the repair.
- Settlement, Subsidence, Displacement: Any areas at the closed site exhibiting evidence of settlement, subsidence, or displacement will be examined to determine the cause of the movement. If backfilling or placing additional fill material is needed to maintain the integrity of the closed structure, it will be performed in accordance with the site/closure specifications, including seeding. If the condition reoccurs or persists, or if the severity of the condition initially is judged to warrant it, a detailed investigation of the cause will be performed and remedial action will be performed. Similarly, any areas of the soil dike exhibiting sliding, displacement, or seepage will be investigated. Repairs will be made as necessary. Follow-up monitoring of the area will be performed to ascertain that the problem has been corrected.
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- Surface Water Drainage System: The channel linings are designed to withstand the design velocities. Maintenance of the surface water drainage system will consist of removing sediment and/or undesirable vegetation from the surface water runoff control system (channels and culverts) as required. Eroded areas will be repaired by back-filling and reseeding according to

the specifications. Damage to culverts will be repaired; structure replacement will be performed if needed.

- Interceptor Toe Drain and Reclaim Pond: Maintenance of the leachate collection system, collection sump, Reclaim Pond, and leachate pumps will consist of repairing and/or replacing in-kind any damaged or eroded portions of the system and pond, cleaning pipes, and removing leachate and sediment from the collection sump and the Leachate Collection Pond (Reclaim Pond), as needed.
- Groundwater Monitoring Wells: Any damaged portions of the monitoring wells and/or their protective casings will be replaced in-kind. The protective casings are steel casings with locking covers to minimize tampering or damage due to vandalism.

### **3.1 SECTION 257.104(b)(3)**

*[Maintaining the groundwater monitoring system and monitoring the groundwater in accordance with the requirements of §§257.90 through 257.98. Alternative Time Frames will be adhered to for Inactive Surface Impoundments in accordance with §§257.100(e)(5)]*

The groundwater monitoring system will be inspected for the general integrity of the wells, well casings and well protective casings. Any damaged portions of the monitoring wells and/or their protective casings will be replaced in-kind.

Monitoring the groundwater will be in accordance with the groundwater monitoring plan for this facility and in accordance with the requirements of §§257.90 through 257.98.

### **4.0 POST-CLOSURE CONTACT 257.104 (d)(1)(ii)**

*[The name, address, telephone number and email address of the person or office to contact about the facility during the post-closure care period.]*

Contact Name: Mr. Thomas E. Webb, P.E.  
Director, Land Environment and Remediation Services  
1 Riverside Plaza, 22<sup>nd</sup> floor  
Columbus, Ohio 43215  
Telephone: (614) 716-1266  
Email: [TEWebb@AEP.com](mailto:TEWebb@AEP.com)

### **5.0 POST-CLOSURE PLANNED USE 257.104 (d)(1)(iii)**

*[A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other component of the containment system, or the function of the monitoring systems unless necessary to comply with the requirements in this subpart...]*

The post-closure use of the property will be undisturbed vacant land space. The only activities occurring on the closed CCR unit will be those related to Post-Closure care. All other activities will be prohibited.