



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

SOUTHWEST REGIONAL OFFICE

355-A Deadmore Street, Abingdon, Virginia 24210

Phone (276) 676-4800 Fax (276) 676-4899

www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural Resources

David K. Paylor
Director

Jeffrey Hurst
Regional Director

September 19, 2018

Mr. Daniel Mains
Appalachian Power
1 Riverside Plaza
Columbus, OH 43215

RE: Clinch River CCR Surface Impoundment Pond 2
Russell County, Virginia
Issuance of Permit #624

Dear Mr. Mains:

Enclosed is Permit #624 for the Clinch River CCR Surface Impoundment Pond 2. The public participation period ended on August 15, 2018. No comments requiring changes to the draft permit were received; therefore, only incidental editing of the draft permit occurred. All persons who commented during the public participation period have been sent a response to their comments.

In order to document this modification, please incorporate a copy of this letter, its attachments, and the following documents into each copy of Permit #624.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date of service of this decision to initiate an appeal of this decision, by filing notice with:

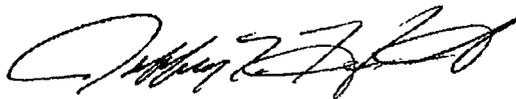
David K. Paylor, Director
Virginia Department of Environmental Quality
ATTN: Division of Land Protection & Revitalization
P.O. Box 1105
Richmond, Virginia 23218

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In the event that this decision is served to you by mail, three days are added to that period. Please refer to Part Two of the rules of the Supreme Court of Virginia, which describes the required content of the Notice of Appeal, including specification of the Circuit Court to which an appeal is taken, and additional requirements governing appeals from decisions of administrative agencies.

Please note that it is the responsibility of applicant to obtain any other permits or authorizations that may be necessary. If there are any questions, please contact Daniel P. Scott, PE, Solid Waste Permits, at (276) 676-4866 or email at daniel.scott@deq.virginia.gov.

Sincerely,



Jeffrey L. Hurst
Regional Director
Southwest Regional Office

Modules I, XI, XIII and XVIII

- c: Daniel Manweiler - Land Protection Manager, DEQ (letter only)
Justin Williams - Land Protection and Revitalization Director, DEQ (letter only)
Kathryn Perszyk - Solid Waste Permit Coordinator, DEQ (letter only)
Geoff Christe - Groundwater Permit Coordinator, DEQ (letter only)
Daniel Scott, Permit Writer, DEQ (letter only)
John Surber, Permit Writer, DEQ (letter only)



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SOLID WASTE FACILITY PERMIT PERMIT NUMBER 624

Facility Name: Clinch River Power Plant Facility – Ash Pond 2

Facility Type: Ash Impoundment

Latitude: 36° 56' 21"N

Site Location: Russell County, Virginia

Longitude: 82° 11' 22"W

Location Description: The Clinch River Power Plant is located on property owned by Appalachian Power Company, adjacent to the Clinch River, near Carbo, Virginia in Russell County, Virginia. The facility is accessed by State Route 616.

Background: The facility consists of a privately owned/formerly operated surface impoundment (Ash Pond 2) that managed sluiced (or wet) coal combustion residuals (CCR) from the Clinch River Power Plant Facility. The facility and the ash ponds were constructed in the early 1960's. The facility ceased burning coal in 2015 and still generates power from 2 gas fired steam turbines.

Ash Pond 2 is approximately 30 acres. Ash Pond 2 was approved for closure June 1, 2012, under the VPDES Permit, and notification of completed cap and closure was provided on February 11, 2014. Ash Pond 2 is not subject to the EPA CCR Rule.

The final cover constructed for Ash Pond 2, profile from top to bottom is as follows:

- 6 inches vegetative cover soil;
- 18 inches compacted soil;
- Geocomposite Drainage Net (GDN) consisting of a HDPE geonet with nonwoven geotextile on either side; and
- 30-mil PVC Geomembrane Liner

The facility continues to be subject to Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0001015.

Permit Modification:

All previous permit modifications are outlined in detail in Module I, Section I.G.

Permit Variance:

THIS IS TO CERTIFY THAT:

Appalachian Power Company d/b/a American Electric Power (AEP)
3464 Power Plant Road
Cleveland, Virginia 24225

Principal Office:
1 Riverside Plaza
Columbus, OH 43215

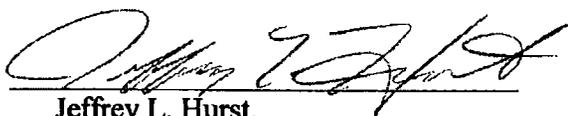
is hereby granted a permit to maintain the closed ash impoundment at the Clinch River Power Plant in post-closure care as described in the attached Permit Modules I, XI, XIII, XVIII and permit documents incorporated by reference. These Permit Modules and Permit Documents are as referenced hereinafter and are incorporated into and become a part of this permit.

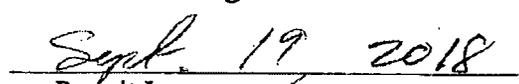
The herein described activity is to provide post-closure care in accordance with the terms and conditions of this permit and the plans, specifications, and reports submitted and cited in the permit. The facility shall comply with all regulations of the Virginia Waste Management Board. The permit contains such conditions and requirements as are deemed necessary to comply with the requirements of the Virginia Code, the regulations of the Board, and to prevent substantial or present danger to human health or the environment.

Failure to comply with the terms and conditions of this permit shall constitute grounds for the initiation of necessary enforcement actions.

The permit is issued in accordance with the provisions of § 10.1-1408.1 A, Chapter 14, Title 10.1, Code of Virginia (1950) as amended.

Issued:
Modification(s):

APPROVED: 
Jeffrey L. Hurst,
Southwest Regional Director

DATE: 
Permit Issuance

PERMIT MODULES

PERMIT MODULE I – GENERAL PERMIT CONDITIONS

PERMIT MODULE XI – PHASE 2 GROUNDWATER MONITORING REQUIREMENTS

PERMIT MODULE XIII – POST CLOSURE CARE

PERMIT MODULE XVIII – SURFACE WATER MONITORING REQUIREMENTS

PERMIT DOCUMENTS

The documents listed below are hereby incorporated into this permit and the permittee is subject to all conditions contained therein. It is the responsibility of the permittee to properly maintain and update these documents. Any version with a revision date other than as listed below is not considered to be the official approved version and is subject to Department review and approval prior to being recognized as the “permitted” version.

1. Part B Application:
 - a. *Post-Closure Plan*, prepared by AEP and Appalachian Power Company (APCO), dated August 2017, last revised March 2018 (Attachment V).
 - b. *Groundwater Monitoring Plan*, prepared by AEP, dated August 31, 2017, revised March 13, 2018 (Attachment X).
 - c. *Surface Water Monitoring Plan*, prepared by AEP, dated (to be submitted)

The following documents have been submitted to satisfy permit or regulatory requirements; however, they are considered reference documents and are not incorporated into Permit No. 624. This list may not be all-inclusive.

2. *Closure Under VPDES*
 - a. *Design Plans – Clinch River Pond 2 Closure* prepared by AEP and S&ME, PE stamp dated April 27, 2012
 - b. *Closure Plan – Ash Pond 2 – Clinch River Plant*, prepared by AEP and APCO, dated March 2012.
 - c. *Post Closure Care Plan – Ash Pond 2 – Clinch River Plant*, prepared by AEP and APCO, dated May 2012. Revised and submitted above for permit under the Virginia Solid Waste Management Regulations (VSWMR).
 - d. *Quality Assurance\Quality Control Plan - Ash Pond 2 – Clinch River Plant*, prepared by AEP and APCO, dated March 2012.

PERMIT MODULE I GENERAL PERMIT CONDITIONS

I.A. EFFECT OF PERMIT

Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Sections 10.1-1402(18), 10.1-1402(19), or 10.1-1402(21) of the Virginia Waste Management Act (Chapter 14, Title 10.1, Code of Virginia (1950), as amended); or any other law or regulation for protection of public health or the environment. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby. For purposes of this permit, terms used herein shall have the same meaning as those in the Virginia Waste Management Act, and Part I and other pertinent parts of the Virginia Solid Waste Management Regulations (VSWMR, 9VAC20-81), unless this permit specifically provides otherwise; where terms are not defined in the regulations or the permit, the meaning associated with such terms shall be defined by the generally accepted scientific or industrial meaning of the term or a standard dictionary reference. "Director" means the Director of the Department of Environmental Quality, or his designated or authorized representative.

I.B. DUTIES AND REQUIREMENTS

The permittee shall comply with all conditions of this permit and 9VAC20-81. The effect of this permit is detailed in 9VAC20-81-490, and it shall be the duty of the permittee to ensure the applicable requirements are met. Additionally, the permittee is subject to the recording and reporting requirements detailed in 9VAC20-81-530. In addition to these requirements, the following additional conditions are invoked per 9VAC20-81-430, and shall be complied with:

I.B.1. Noncompliance may be authorized by a schedule of compliance [9VAC20-81-490.D. and 9VAC20-81-490.H.]. Any other permit noncompliance constitutes a violation of Virginia Waste Management Act and is grounds for enforcement action, or for permit revocation, revocation and reissuance, or modification [9VAC20-81-570 and 9VAC20-81-600].

I.B.2. The permittee shall comply with the requirements of this permit and any provisions of RCRA Subtitle D (Title 40, Code of Federal Regulations, Section 258) requirements as they become applicable upon their effective date. This permit may not act as a shield against compliance with any part of RCRA or any other applicable federal regulation, state regulation or state law.

- I.B.3. In an enforcement action, it shall not be a defense for the permittee that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- I.B.4. In the event of noncompliance with this permit, the permittee shall take all reasonable steps to minimize releases of solid wastes or waste constituents to the environment and shall carry out measures to prevent substantial adverse impacts on human health or the environment.
- I.B.5. The permittee shall at all times properly maintain all units (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper maintenance includes effective performance, adequate funding, adequate staffing, and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary equipment only when necessary to achieve compliance with the conditions of this permit.
- I.B.6. The permittee shall furnish to the Director, within a reasonable time, any relevant information that the Director may request to determine compliance with this permit, regulations or the Act. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit by the date specified in the request.
- I.B.7. The permittee shall allow the Director, or an authorized representative, at a reasonable time, upon the presentation of appropriate credentials, to:
- I.B.7.a. Enter the permitted facility where a regulated unit or activity is located or conducted, or where records must be kept under the conditions of this permit;
 - I.B.7.b. Have access to and copy any records that must be kept under the conditions of this permit;
 - I.B.7.c. Inspect any unit, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,
 - I.B.7.d. Sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by Virginia Waste Management Act, any substances or parameters at any location within his control.
- I.B.8. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a

representative sample to be analyzed must be the appropriate method from the latest edition of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, if available.

Laboratory samples shall be analyzed in accordance with 1 VAC 30-45, Certification for Noncommercial Environmental Laboratories, or 1 VAC 30-46, Accreditation for Commercial Environmental Laboratories.

- I.B.9. This permit is not transferable to any person, unless approved by the Director. The Director may require modification or revocation and reissuance of the permit pursuant to 9VAC20-81-490.G. Before transferring ownership or operation of the facility during its operational life, the permittee shall notify the new owner or operator in writing of the requirements of Parts III and V, of the Virginia Solid Waste Management Regulations, the Financial Assurance Regulations, 9VAC20-70, and this permit.
- I.B.10. Specifications for all drainage media should specify that the material shall contain no greater than 15% calcium carbonate equivalent. Department literature regarding research on leachate collection media indicates that weight loss greater than 15% results in an unacceptable loss of performance. If a greater percentage is specified or allowed, a demonstration that performance is not adversely affected must be provided to the Department for review and approval.
- I.B.11. The closure cost estimate must reflect the maximum cost of closure at all times. The owner has the responsibility to maintain the closure and post closure cost estimate and associated financial assurance funding as conditions change.
- I.B.12. Land-clearing, excavation, and construction activities that involve the disturbance of wetlands or streams shall not commence without authorization from the Virginia Water Protection (VWP) Program and/or Army Corps of Engineers.
- I.B.13. Blasting operations shall be conducted to avoid changes in the hydrogeologic character of the remaining underlying formations, and to avoid creation of instabilities or irregularities in these that might potentially lead to damage to the impermeable membrane to be installed. It shall be ensured that adjacent landfill facilities not be damaged, which includes the geosynthetic landfill liner and gas and groundwater compliance monitoring locations
- I.B.14. The facility shall maintain and follow an approved Erosion & Sediment Control Plan for all land-disturbing activities in accordance with the Erosion and Sediment Control Regulations.

I.C. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The permittee shall maintain a complete copy of the Solid Waste Permit and incorporated Permit Documents at the facility, or another location approved by the director, until post-closure is complete and certified by a professional engineer, and shall maintain amendments, revisions, and modification to these documents. In addition, the facility shall maintain the following additional documents:

I.C.2. Detailed, written estimate, in current dollars, of the cost of closing the facility, post-closure care and corrective action measures

I.C.3. All other documents/records required and applicable from the following:

I.C.3.a. Monitoring records from groundwater and surface water monitoring.

I.C.3.b. Inspection records as required from construction/installation, operational, closure, post-closure inspection requirements.

I.C.3.c. Personnel training records

I.C.3.d. Construction quality assurance reports, record drawings and engineers certifications for all new liner and/or final cover construction

I.D. DOCUMENTS TO BE SUBMITTED

In addition to the documents/records/reports to be submitted per the requirements of this permit or 9VAC20-81, the permittee shall also submit the following documents to the Director according to indicated schedules:

I.D.1. The as-built plans of all new groundwater monitoring wells shall be submitted as these wells are installed. Information to be included on the as-built plans shall include, but is not limited to, the total depth of the well, the surveyed elevations of the top of casing and ground surface (or apron), and the length and location of the screened interval and annular space seal. All dimensions are to be shown on well construction schematics.

I.E. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE DIRECTOR

All reports, notifications, or other submissions which are required by this permit to be sent or given to the Director should be sent to:

Virginia Department of Environmental Quality
Division of Land Protection & Revitalization
Southwest Regional Office
355-A Deadmore Street
Abingdon, Virginia 24210

I.F. SITE SPECIFIC CONDITIONS

The provisions of this section are in addition to the permit conditions and regulatory requirements and are specifically developed for this facility. The permittee shall comply with all conditions of this section, as follows:

I.F.1. The final permit is based on permit application submittals (drawings and reports) that may contain the word “proposed” and similarly tentative language. The documents that are incorporated into Permit No. 624 have been evaluated for administrative and technical adequacy and have been approved as proposed. Therefore, any references to a design, construction, operation, monitoring or closure criteria are considered to be approved as proposed.

I.G. PERMIT MODIFICATIONS

None to date

PERMIT MODULE XI

PHASE 2 GROUNDWATER MONITORING REQUIREMENTS

The Phase II monitoring program is designed to recognize when waste unit impacts to the uppermost aquifer have exceeded groundwater protection standards and thus trigger potential groundwater remediation actions. Actions undertaken shall be consistent with the requirements of 9 VAC 20-81-250 of the VSWMR and this Permit Module.

XI.A. GROUNDWATER COMPLIANCE POINT

XI.A.1. Uppermost Aquifer

The groundwater monitoring compliance point is the uppermost aquifer [250.A.2.a] which encompasses the entire thickness between the first encounter with groundwater (not to include any perched water) and the first encounter with a confining unit forming the lower boundary of the uppermost aquifer [A.3.f.(1).(b/c)].

XI.A.2. Monitoring Well Locations

XI.A.2.a All wells in the monitoring network must be located at, or as close as practicable to, the CCR unit boundary and be screened within the zone of saturation of the aquifer. Use of nested well pairs screened at different depths below ground surface may be required to monitor all potential contaminant migration pathways

XI.A.2.b Monitoring wells must be installed within the uppermost aquifer on site and shall be screened at depths appropriate to monitor all preferential contaminant migration pathways.

XI.A.2.c Monitoring wells shall be screened solely within the saturated portion of the aquifer such that at no time during the life of the sampling program, are portions of the well screen exposed to the unsaturated zone or capillary fringe zone; above the zone of saturation.

XI.A.3. Location Restrictions

XI.A.3.a. No groundwater point of compliance monitoring well can be located at a distance more than 500 feet away from the disposal unit boundary.

XI.A.3.b. No groundwater point of compliance monitoring well can be located outside of the permitted facility boundary.

XI.A.3.c Newly installed monitoring wells and replacement wells shall not be screened within CCR material.

IX.B. MONITORING NETWORK REQUIREMENTS

XI.B.1. The network shall contain no fewer than one upgradient, and three downgradient wells, and shall meet the network requirements of 250.A.2.a and A.3.a, b, f.

XI.B.2. Installation, Operations and Maintenance

All wells shall be installed, operated and maintained in a manner which allows them to operate as designed during the life of the monitoring program in accordance with requirements of 250.A.3.c-e.

XI.B.2.a Wells requiring replacement due to non-performance shall be reported to the Department within 30 days of recognizing the non-performance. The notification shall include a site plan depicting the proposed location for the replacement well(s) for Department review.

XI.B.2.b Wells that require replacement must be replaced prior to the next regularly scheduled groundwater sampling event unless the Director has granted an extension.

XI.B.2.c Any wells that require abandonment shall be sealed and abandoned in accordance with existing EPA Resource Conservation and Recovery Act (RCRA) guidance as well as any applicable state or local requirements.

XI.B.2.d No well onsite shall be abandoned without prior approval from the Director.

XI.B.3. Well Designations

The following wells shall be included in the groundwater monitoring network. Number designations including (d) and (s) shall be used when nested pairs are screened as deep (d) or shallow (s) sampling horizons.

Upgradient Well(s)	Downgradient Wells	
MW-1707	MW-1701	MW-1702
MW-1708	MW-1703	MW-1704
MW-1709	MW-1705	MW-1706
MW-1710		
MW-1711		
MW-1712		

XI.C. AQUIFER INFORMATION

XI.C.1. Aquifer Data Acquisition - Requirements

XI.C.1.a. Static groundwater elevations [250.A.4.c] shall be:

XI.C.1.a.(1). measured in all monitoring wells prior to purging.

XI.C.1.a.(2). measured to an accuracy of 0.01 foot.

XI.C.1.a.(3). measured each time groundwater is sampled on site.

XI.C.1.a.(4) obtained from all wells in the network within a single 24 hour period to avoid temporal variations/fluctuations in the groundwater table.

XI.C.1.b Groundwater flow rate and direction [250.A.4.c] shall be:

XI.C.1.b.(1). determined each time groundwater is sampled on site,

XI.C.1.b.(2). calculated using technical methods accepted for use in EPA RCRA groundwater programs.

XI.C.2. Aquifer Data Acquisition - Response

XI.C.2.a. The Permittee shall evaluate the function of each monitoring network well each time groundwater is sampled. If the evaluation shows that one or more of the well(s) no longer functions in a manner that meets the requirements of 250.A.3.e, the Permittee shall:

XI.C.2.a.(1). Within 30 days of recognizing the non-performance, notify the Department of the need to modify the number, location, or depth of the monitoring wells, and provide for Department review, proposed locations for new (replacement) monitoring wells keyed to a site plan.

XI.C.2.a.(2). Complete additions or modifications to the network, prior to the next regularly scheduled groundwater sampling event, unless an extension has been granted by the Director for meeting the monitoring system compliance requirements under 250.A.3.a.

XI.D. SAMPLING ACTIONS

The Permittee shall:

XI.D.1. Meet the field sampling and laboratory procedures of 250.A.4.a.

XI.D.2. Use the analytical methods of EPA SW-846 as amended [250.A.4.b] conducted at a VELAP accredited laboratory.

XI.D.3. Not filter groundwater samples prior to analysis [250.A.4.b].

XI.D.4. Provide the Department final laboratory results as total metals (parts per billion) for all metals constituents listed.

XI.D.5. Provide final results showing total Chromium and (speciation of) total hexavalent Chromium.

XI.E. SAMPLING FREQUENCY

The Permittee shall, during the active life and post-closure care periods, sample and analyze groundwater from all monitoring wells on a semi-annual basis, which shall be an interval corresponding to approximately 180 days. For the purposes of scheduling monitoring activities, sampling within 30 days of the 180-day interval will be considered 'semiannual'.

XI.F. SAMPLING LIST

XI.F.1. All 40 CFR 257 Appendix III constituents.

XI.F.2. All 40 CFR 257 Appendix IV constituents.

XI.F.3 VSWMR Table 3.1 constituents Copper, Cyanide, Nickel, Silver, Sulfide, Tin, Vanadium, and Zinc.

XI.F.4. Speciation of Chromium (Total Chromium and Hexavalent Chromium).

XI.F.5. The sampling list shall be included in the site Groundwater Monitoring Plan and shall be updated by the owner or operator as directed by the Director.

XI.G. DETERMINATION OF BACKGROUND & GPS

XI.G.1. The Permittee shall establish site-specific background values [250.A.4.d – f] for the constituents of XI.F within 18 months of the initial Phase 2 sampling event. Background will be established based on no fewer than eight (8) independent samples.

XI.G.2. Groundwater Protection Standards (GPS) shall be established using the process defined under 250.A.6.b.(1-3) for constituents contained under XI.F.2, XI.F.3 and Boron. GPS shall be proposed within the timelines of C.3.c.

XI.G.3. Groundwater Protection Standards shall be updated as follows:

XI.G.3.a. Federal Maximum Contaminant Level-based GPS, -immediately upon promulgation of a new or revised Federal MCL.

XI.G.3.b. Background-based GPS, every two years such that the eight most recent background well sampling results shall replace the oldest eight background well sampling results.

XI.G.4. Use of risk-based GPS shall not be allowed.

XI.G.5. A table of GPS shall be included in the site Groundwater Monitoring Plan and shall be updated as directed by the Director.

XI.H. STATISTICAL PROCEDURES

When evaluating the groundwater sampling event results, the Permittee shall:

XI.H.1. within 30 days of completion of the laboratory analysis for each sampling event [250.A.4.h.(2)], determine whether or not there is a statistically significant increase over site background and GPS for each monitoring constituent using a method meeting the requirements of 250.A.4.h.(1) and A.4.g and D.

XI.H.1.a. For GPS based on Federal Maximum Contaminant Levels, the comparison of analytical results from the downgradient wells shall be based on either a point to point comparison to the GPS, or a statistical comparison using 95% Lower Confidence Limit derived from at a minimum four independent sampling events completed during the compliance period.

XI.H.1.b. For GPS based on statistically calculated site background, the comparison of analytical results from the downgradient wells shall be based on a point to point comparison to the GPS.

XI.H.2. For the purpose of this Permit, laboratory analysis is considered complete upon issuance of the final analytical report under laboratory signature.

XI.I. GPS EXCEEDANCE ACTIONS

If the statistical comparisons required under the monitoring program show no exceedances, the Permittee shall continue monitoring groundwater within the current program.

When a Permittee has determined there has been an SSI exceedance over GPS for one or

more of the constituents contained under XI.F.2, XI.F.3 and/or Boron, the Permittee shall upon the end of the 30-day SSI determination period allowed by 250.A.4.h.(2), notify the Director within the timeframe of 250.C.3.e.(3).(a). The notification must indicate which groundwater monitoring constituents have shown statistically significant increases over GPS and describe whether the Permittee shall:

XI.I.1. initiate Corrective Actions described under 260.C within the timeframes of 260.C.1 including defining the horizontal and lateral extent of the GPS exceeding release [260.C.1.a], as well as the actions described under 260.C.1.b-e. or

XI.I.2. submit an Alternate Source Demonstration meeting the content requirements and timeframes of 250.A.5.a., b. Unless Director approval of the demonstration is obtained, the Permittee shall follow the sampling requirements and timeframes required of Corrective Actions in response to a GPS exceedance.

XI.J. RECORD-KEEPING REQUIREMENTS

The Permittee shall retain all records identified under 250.E.1 as well as 530.B.1 and B.2 throughout the facility active life (including closure) and post-closure care period. The records shall be retained at the facility or another location approved by the Director.

XI.K. REPORTING REQUIREMENTS

XI.K.1. Annual groundwater reports containing, at a minimum, content under 250.E.2.a.(2), shall be submitted to the Director within the timeframes of 250.E.2.a.(1). The Annual Report shall be submitted in a format consistent with existing DEQ Submission Instructions.

XI.K.2. Semi-annual groundwater reports containing at a minimum, groundwater flow rate and direction determinations [250.A.4.c], statistical comparison results [250.C.3] and content defined under 250.E.2.b.(1), shall be submitted to the Department within the timeframes of 250.E.2.b.(1) unless qualifying facilities have received a variance from this requirement. The Semi-Annual Report shall be submitted in a format consistent with existing DEQ Submission Instructions.

XI.K.3. Within 30 days of initially establishing background, or re-establishing background due to the installation of new monitoring wells, or a change in sampling technique, the Permittee shall report the background values and statistical computations forming the basis for those values in a report entitled Facility Background Determination Report. The background determination results shall be submitted in the timeframe defined under 250.C.3.b.(2).

XI.K.4. Within 44 days of well completion, the Permittee shall supply the Director a Well Installation Report containing the well number, surveyed elevation, boring log

[250.A.3.d], casing length, total depth, and a completion diagram [250.E.1.c] for each monitoring well, along with a certification [250.A.3.g] from a qualified groundwater scientist that the monitoring wells have been installed in accordance with the submitted plans.

XI.K.5. Within 44 days of well abandonment, the Permittee shall supply the Director a Well Abandonment Report containing information including field methods utilized, and a certification from a qualified groundwater scientist verifying the well abandonment activities met all applicable requirements [250.E.1.c].

XI.K.6. The Permittee shall place the GPS listing in the operating record [250.A.6.c] and update that record as needed upon any changes in GPS values.

XI.L. NOTIFICATION REQUIREMENTS

XI.K.1. GPS SSI Notifications shall be submitted to the Director within the timeframes noted under 250.C.3.e.(3)(a).

XI.K.2. Well Non-Performance Notifications shall be submitted to the Director within 30 days of recognizing the non-performance issue in order to meet 530:C.1 - 3.

XI.K.3. Off-site Plume Notifications shall be submitted to the affected landowner [260.C.1.b] and copied to the Director within 15 days of identifying the impacts.

XI.M. MISCELLANEOUS ALLOWANCES

XI.M.1. Use of Alternate Site Background. The Permittee may request the Director allow site background to be developed using wells that are not hydrologically upgradient of the disposal unit as long as the request addresses the technical criteria contained under 250.A.4.e and is certified by a qualified groundwater scientist. Until such time as Director approval is obtained, background shall be determined by sampling wells which are upgradient of the disposal unit and meet the requirements of 250.A.3.f.(2).

XI.M.2. Use of Alternate Statistical Method. The Permittee may request the Director allow the use of an Alternate Statistical Method as long as the Permittee can demonstrate the alternate method can meet the technical criteria defined under 250.D.2. Until such time as Director approval is obtained, the statistical test(s) applied to site groundwater data shall be from 250.D.1. Whichever method is approved for use at the site, the method should be listed in the facility Groundwater Monitoring Plan as required under 250.A.4.g.

XI.M.3. Verification Sampling. The Permittee, at any time within the 30 day statistical determination period defined under 250.A.4.h.(2), may obtain verification samples. Undertaking verification sampling shall not alter the timeframes

associated with determining or reporting a statistically significant increase as otherwise defined under 250.A.4.i.

XI.M.4. Data Validation. The owner or operator may at any time within the 30 day statistical determination period defined under 250.A.4.h.(2) undertake third-party data validation of the analytical data received from the laboratory. Undertaking such validation efforts shall not alter the timeframes associated with determining or reporting a statistically significant increase as otherwise defined under 250.A.4.j.

XI.M.5. When the Permittee recognizes a failure to submit any relevant facts or has submitted incorrect information in any groundwater monitoring report to the Director, the Permittee shall, within 7 days, submit such omitted facts or the correct information with a full explanation [530.E].

XI.N. MISCELLANEOUS DEMONSTRATIONS

XI.N.1. To address an exceedance which is the result of something other than a release of CCR constituents, the Permittee may submit a report entitled Alternate Source Demonstration, certified by a qualified groundwater scientist, for review by the Director within 90 days of providing the SSI notification unless the submission and approval timeframe has been extended by the Director for good cause [250.A.5.b].

XI.N.1.a. If a successful demonstration of an alternate source for the noted increase is made by the Permittee and approved by the Director within the 90 day timeframe, the Permittee may continue in the applicable monitoring program as defined in this Permit Module.

XI.N.1.b. If a successful demonstration of an alternate source for the noted increase is not made by the Permittee within the 90 day timeframe, the Permittee shall take actions required under 250.A.5.c.(3) within Regulatory timeframes unless an extension has been granted by the Director.

XI.N.2. The Permittee may submit to the Director a Multi-unit Groundwater Monitoring System Demonstration containing the content defined under A.3.b and certified by a qualified groundwater scientist, when he feels that the implementation of such a monitoring system will be as protective of human health and the environment as individual systems would be.

X.N.2.a. If a successful demonstration is made and approved by the Director, the Permittee may discontinue use of individual monitoring systems and institute the monitoring of a multi-unit system.

X.N.2.b. If a successful demonstration is not made, the Permittee shall initiate

(or continue) to monitor individual networks under the applicable monitoring program.

XI.N.3. The Permittee may request the Director suspend groundwater monitoring requirements by submitting a No-Potential-Migration Demonstration, certified by a qualified groundwater scientist, meeting the technical requirements of 250.A.1.c.

X.N.3.a. If a successful demonstration is made and approved by the Director, the Permittee may suspend groundwater monitoring actions.

X.N.3.b. If a successful demonstration is not made, the Permittee shall continue monitoring as required under C.3.

XI.O. PERMIT DOCUMENTS

As required under 470.A.1, the Permittee must have Design Plans that include detailed instructions concerning groundwater monitoring [470.A.1.g]. These detailed groundwater monitoring instructions must at a minimum cover the items listed under 250.A.4.a and applicable information under 250 and 260. The document containing these instructions, called the Groundwater Monitoring Plan, shall be placed in the operating record.

It shall be the responsibility of the Permittee to update this monitoring plan as needed [250.C.3.d], which may include actions otherwise defined under 600.A – F, if changes to the monitoring program have taken place since original Plan development.

XI.P. LIMITATIONS/AUTHORITIES

XI.P.1. Solid waste shall not be deposited in or permitted to enter any surface waters or groundwater [240.C.10].

XI.P.2. Should information contained in any Permittee authored document referenced in this Module conflict with any requirement or condition of this Module, or requirements found within 9 VAC 20-81-10 et seq., as amended, the Module condition and/or Regulatory requirement shall prevail over the language in the Permittee supplied document [35.D and 490.E] unless it can be demonstrated that a Variance from that regulatory requirement has been granted by the Director following the procedures under 700 et seq.

XI.P.3. The groundwater monitoring and reporting requirements set forth here are minimum requirements. The Director may require, by amending the Permit, any owner or operator to install, operate, and maintain a groundwater monitoring system and program that contains requirements more stringent than those of the Regulations whenever it is determined that such requirements are necessary to prevent significant adverse effects on public health or the environment [250.A.2.c].

PERMIT MODULE XIII POST-CLOSURE CARE

XIII.A. POST-CLOSURE CARE REQUIREMENTS

XIII.A.1. The facility shall conduct post-closure care of the ash impoundment in accordance with its approved Post-Closure Care Plan.

XIII.A.1.a. Leachate shall be managed in accordance with 9 VAC 20-81-210. If a leachate seep(s) occurs, the owner or operator shall repair the seep(s) and follow the procedures outlined in 9 VAC20-81-210.F.

XIII.A.1.b. Groundwater shall be monitored in accordance with 9VAC20-81-250, Module XI and the respective groundwater permit documents as applicable. The groundwater monitoring system shall be inspected at a rate consistent with the system's monitoring frequency.

XIII.A.1.c. Outfall 015 shall be monitored and maintained in accordance with VPDES Permit No. VA0001015.

XIII.A.2. Amended Post-closure Care Plans shall be submitted to the department for review and approval by the director.

XIII.B. POST-CLOSURE PERIOD

XIII.B.1. Post-closure care shall be conducted for 30 years.

XIII.B.2. The length of the post-closure care period may be decreased by the director if the owner or operator demonstrates that the reduced period is equally protective of human health and the environment and the demonstration is approved by the director. This demonstration shall contain:

XIII.B.2.a. Certification, signed by the owner or operator and a professional engineer licensed in the Commonwealth, verifying that decreasing the post-closure care period will be equally protective of human health and the environment; and

XIII.B.2.b. An evaluation prepared by a professional engineer or professional geologist licensed in the Commonwealth, which assesses and evaluates the landfill's potential for harm to human health and the environment in the event that post-closure monitoring and maintenance are discontinued.

- XIII.B.3. The facility shall continue post-closure care and monitoring until such time that the department approves termination or the post-closure care and/or monitoring activity.

XIII.C. CERTIFICATION OF COMPLETION OF POST-CLOSURE CARE

Not less than 180 days prior to the completion of the post-closure monitoring and maintenance period as prescribed by the Board's regulations or by the Director, the owner or operator shall submit to the Director:

- XIII.C.1. Certification, signed by the owner or operator and a professional engineer licensed in the Commonwealth, verifying that post-closure monitoring and maintenance have been completed in accordance with the facility's Post-closure Care Plan; and
- XIII.C.2. An evaluation prepared by a professional engineer or professional geologist licensed in the Commonwealth, which assesses and evaluates the landfill's potential for harm to human health and the environment in the event that post-closure monitoring and maintenance are discontinued.

If the Director determines that continued post-closure monitoring or maintenance is necessary to prevent harm to human health or the environment, he/she shall extend the post-closure period for such additional time as the Director deems necessary to protect human health and the environment and shall direct the owner or operator to submit a revised post-closure plan and to continue post-closure monitoring and maintenance in accordance therewith. Requirements for financial assurance shall apply throughout such extended post-closure period.

PERMIT MODULE XVIII SURFACE WATER MONITORING REQUIREMENTS

This monitoring program is designed to determine if there is an impact to surface water that may be occurring as a result of potential groundwater to surface water exchange.

Surface Water Monitoring at this facility will take place under the program described herein and the actions undertaken shall be consistent with VSWMR, WQS, and VPDES regulations as applicable. The Permittee must maintain a surface water monitoring program that meets the requirements of this module and outline that program in the Surface Water Monitoring Plan.

Nothing in this permit module authorizes the Permittee to have an unauthorized discharge in contravention of State Water Control Law or accompanying regulations.

The Surface Water Monitoring Plan shall be developed in accordance with these requirements and submitted to the Department for approval within 60 days of the permit issuance and shall be implemented within 30 days of approval by the Department.

XVIII.A. SAMPLING LOCATIONS

XVIII.A.1 A minimum of four sample locations shall be identified and approved by the Department which shall include sampling locations in both Dumps Creek and the Clinch River. At a minimum, the locations shall be near-shore of the property where groundwater potentially could intersect with surface water and represent results from all units located at the facility. These locations:

XVIII.A.1.a shall be noted on a site facility map and identified with GPS coordinates.

XVIII.A.1.b may be augmented by additional sampling locations as needed, based on the results of the surface water sampling program, and to ensure potential impacts from groundwater to surface water are identified.

XVIII.A.1.c shall be permanently marked or flagged at the nearest shore to allow easy identification.

XVIII.A.2 Sampling locations which do not contain a sufficient surface water column within which to sample will not be required to be re-sampled during the compliance period. However, sampling locations which have insufficient yield for 2 consecutive monitoring periods shall be evaluated for relocation and a new location proposed for approval by the Department.

XVIII.B. SAMPLING ACTIONS

The Permittee shall:

- XVIII.B.1. Collect samples from the surface water columns at the designated locations identified in XVIII.A. The samples shall be taken at mid-depth of the water column. Tidal samples shall be collected at low-tide if feasible.
- XVIII.B.2. Conduct the surface water column sampling actions in a manner equivalent to the QA/QC procedures specified in the most current version of the Department's Standard Operating Procedures Manual, Water Monitoring and Assessment Program, Section 4.8 - Collection of Trace Elemental Samples (Clean Metals), and others as applicable.
- XVIII.B.3. Analyze surface water column samples in accordance with methods approved by the Department and performed by a VELAP accredited laboratory.
- XVIII.B.4. Provide final results of surface water column samples as dissolved metals.

XVIII.C. SAMPLING FREQUENCY

- XVIII.C.1. The Permittee shall, during the closure and post-closure care periods, sample surface water following a calendar quarterly schedule.
- XVIII.C.2. The length of the quarterly sampling period shall be an interval corresponding to approximately 90 days. For the purposes of scheduling monitoring activities, sampling within 15 days of the 90-day interval will be considered 'quarterly'.
- XVIII.C.3. The Permittee shall sample more frequently when requested by the Department.

XVIII.D. SAMPLING CONSTITUENTS

- XVIII.D.1. The Permittee shall sample for the following constituents: Antimony, Arsenic, Boron, Cadmium, Chromium (total, III, and VI), Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc.
- XVIII.D.2. Additional indicator and field collection data shall be provided including hardness, pH, and temperature.
- XVIII.D.3. Any constituent not listed in XVIII.D.1. that has had an exceedance of a Groundwater Protection Standard established in Permit Module XI within the last three, consecutive years shall be included.

XVIII.D.4. Any additional constituents or parameters when notified in writing by the Department.

XVIII.E. DETERMINATION OF APPLICABLE STANDARDS FOR COMPARISON

Sampling results from surface water column testing of the constituents identified in XVIII.D.1. shall be compared to the lowest of the applicable standards established by 9 VAC 25-260-140. For any constituent not listed in XVIII.D.1. that has an exceedance of a Groundwater Protection Standard established in Permit Module XI, the constituent shall be compared to the Groundwater Protection Standard.

XVIII.F. REPORTING REQUIREMENTS

XVIII.F.1. After each quarterly sampling event, the permittee shall submit a surface water monitoring report under separate cover to the Department no later than 60 days from the completion of sampling and analysis unless as allowed under a director-approved extension. The surface water monitoring report shall include:

XVIII.F.1.a Signature page certifying the results by a facility representative.

XVIII.F.1.b Facility name and permit number.

XVIII.F.1.c Statement noting whether or not all sampling locations were sampled and if so, the reason a sample was not obtained or reported. If the sampling location did not contain sufficient water column for sampling, a statement noting the number of occurrences of lack of sufficient water column and, based upon the number of occurrences, a new proposed sampling location.

XVIII.F.1.d Copy of the full Laboratory Analytical Report including dated signature page from laboratory manager or representative.

XVIII.F.2. The Permittee shall retain all surface water monitoring records throughout the closure and post-closure care period. The records shall be retained, in paper or electronic form, at the facility, or an alternate location approved by the Director, within the facility's operating record and made available to the Department upon request.

XVIII.G. NOTIFICATION REQUIREMENTS

Verified laboratory results indicating surface water column results above a standard

identified in XVIII.E shall be submitted to the Director within 30 days of issuance of the laboratory report results.

XVIII.H. REQUIRED ACTIONS

- XVIII.H.1. Within 60 days of submitting a notification in XVIII.G., the permittee shall submit a Surface Water Investigation Report. The following information shall be assessed in the investigation and discussed in the report:
- XVIII.H.1.a. Any error in the collection of the sample that may be identified.
 - XVIII.H.1.b. Additional conditions and information regarding the surface water at the time of collection.
 - XVIII.H.1.c. Whether the constituent(s) were detected in groundwater monitoring sampling results.
 - XVIII.H.1.d. The identified or potential source(s) of the observed impacts, including any potential facility activities.
 - XVIII.H.1.e. Additional sampling, if any, undertaken by the permittee.
 - XVIII.H.1.f. Mitigation action or other actions, if any, undertaken by the permittee.
- XVIII.H.2. The permittee, depending on the results of this investigation and as directed by the Department, may be required to conduct additional monitoring, additional source investigation, sampling including interstitial sampling or sediment sampling as feasible, or assessment measures including fish tissue sampling.
- XVIII.H.3. The permittee shall submit an action plan for Department review and approval, or take other action in accordance with Permit Module XI when required by the Department in response to the Surface Water Investigation Report.

XVIII.I. PERMIT DOCUMENTS

The Department-approved Surface Water Monitoring Plan shall be placed in the facility's operating record. This Surface Water Monitoring Plan shall include at minimum the measures required for the facility to accomplish the monitoring required by this module.

- XVIII.I.1 It shall be the responsibility of the Permittee to update this monitoring plan as needed, which may include actions otherwise defined if changes to the monitoring program have taken place since original Plan development.
- XVIII.I.2. Should information contained in a Permittee authored Surface Water Monitoring Plan conflict with any requirement or condition of this Module, the Module condition shall prevail over the language in the Permittee supplied document.
- XVIII.I.3 The Permittee shall review and modify the surface water monitoring plan within 30 days of notification of the agency of required/requested modifications.
- XVIII.I.4. When the Permittee recognizes a failure to submit any relevant facts or has submitted incorrect information in any surface water monitoring report to the Director, he shall, within 7 days, submit such omitted facts or the correct information with a full explanation.

XVIII.J. LIMITATIONS/AUTHORITIES

The surface water monitoring and reporting requirements set forth here are minimum requirements. The Director may require, by amending the Permit, any owner or operator to maintain a surface monitoring system and program that contains requirements more stringent than those of the Regulations and in this current permit module whenever it is determined that such requirements are necessary. Nothing in this permit module limits the Director or the Department from requiring additional actions consistent with applicable laws and regulations. Nothing in this permit module limits or alters the requirement to conduct surface water monitoring in accordance with any groundwater corrective action.



Crampton, Sandra <sandra.crampton@deq.virginia.gov>

Clinch River CCR Surface Impoundment Pond 2

1 message

Crampton, Sandra <sandra.crampton@deq.virginia.gov>

Wed, Sep 19, 2018 at 2:43 PM

To: demains@aep.com

Mr. Mains,

Enclosed is Permit #624 for the Clinch River CCR Surface Impoundment Pond 2. Hard copy will follow in the mail. If there are any questions, please contact Daniel P. Scott at (276) 676-4866 or email at daniel.scott@deq.virginia.gov.

 AEP SWP 624.pdf
1446K



Crampton, Sandra <sandra.crampton@deq.virginia.gov>

Clinch River CCR Surface Impoundment Pond 2

1 message

Crampton, Sandra <sandra.crampton@deq.virginia.gov> Wed, Sep 19, 2018 at 3:07 PM
To: Manweiler Daniel mrg75696 <daniel.manweiler@deq.virginia.gov>, Justin Williams <justin.williams@deq.virginia.gov>, Kathryn Perszyk <kathryn.perszyk@deq.virginia.gov>, Geoff Christe <geoff.christe@deq.virginia.gov>, "Scott, Daniel" <daniel.scott@deq.virginia.gov>, John Surber <john.surber@deq.virginia.gov>

Attached is a copy of the letter to Mr. Daniel Mains regarding issuance of SWP 624.

 **SWP 624.pdf**
83K

**FINAL PERMIT ACTION
MEMORANDUM**

TO: Jeffrey L. Hurst
SWRO Regional Director

THROUGH: Justin Williams
Land Protection Revitalization Division Director

FROM: Daniel Manweiler 
SWRO Land Protection Program Manager

DATE: September 14, 2018

SUBJECT: Draft Solid Waste Permit SWP #624 Final Permit Action

Ash Pond 2 was approved for closure June 1, 2012, under AEP Virginia Pollutant Discharge Elimination System (VPDES) Permit VA0001015, pursuant to standards in the Virginia Solid Waste Management Regulations (VSWMR) and notification of completed cap and closure was provided on February 11, 2014. The permit includes post-closure care, groundwater monitoring, and surface water monitoring. This application was submitted pursuant to a permit condition in SWP #620 issued for Ash Pond 1 on June 5, 2017. The permit condition required that “[w]ithin 90 days of permit issuance, the permittee shall submit a post-closure care plan, post-closure care cost estimate, and groundwater monitoring plan for the closed Ash Pond 2.”

As Ash Pond 2 was closed prior to the effective of the EPA Final Rule on the Disposal of Coal Combustion Residuals (EPA CCR Rule), it is not subject to its requirements.

Overview

The facility consists of a privately owned/formerly operated surface impoundment (Ash Pond 2) that managed sluiced (or wet) coal combustion residuals (CCR) from the Clinch River Power Plant Facility. The facility and the ash ponds were constructed in the early 1960’s. The facility ceased burning coal in 2015 and still generates power from 2 gas fired steam turbines.

Ash Pond 2 is approximately 30 acres. Ash Pond 2 was approved for closure June 1, 2012, under the VPDES Permit, and notification of completed cap and closure was provided on February 11, 2014. Although the VPDES permit encompassed the closure, the permit does not contain provisions for groundwater monitoring or post-closure case.

The final cover constructed for Ash Pond 2, profile from top to bottom is as follows:

- 6 inches vegetative cover soil;
- 18 inches compacted soil;
- Geocomposite Drainage Net (GDN) consisting of a HDPE geonet with nonwoven geotextile on either side; and
- 30-mil PVC Geomembrane Liner

The facility continues to be subject to Virginia Pollutant Discharge Elimination System (VPDES) Permit No. VA0001015.

Submission Reviews/Permit Overview

As noted, this solid waste permit addresses the post-closure of Pond 2. This includes the installation of a groundwater monitoring network, surface water monitoring, and post-closure care.

The groundwater monitoring program required is outlined in the submitted Groundwater Monitoring Plan, which was technically reviewed as a part of the application review process and included a review of the proposed network locations, number and depth of wells, groundwater sampling frequency, groundwater constituents which include those required under the VSWMR, and although not applicable, the substantive requirements of the EPA CCR Rule and other necessary elements to ensure an appropriate, compliant groundwater monitoring network and plan meeting the requirements of the VSWMR.

The permit includes a requirement for surface water monitoring including submission of a surface water monitoring plan. This module of the permit includes conditions outlining the requirements for sampling

locations, constituents, and quarterly sampling. The requirement also provides for comparison to established Water Quality Standards (WQS), or in the absence of WQS, groundwater protection standards. The module also requires action in the event of results above the standard. This requirement adds an additional layer beyond groundwater monitoring to ensure an adequate and timely identification of any potential impact to surface water from the groundwater interface with Pond 2. This monitoring will occur concurrent with monitoring of Pond 1.

AEP also submitted cost-estimates for post-closure activities which were reviewed as part of the application review process. Ash Pond 2 will be required to conduct a minimum of 30 years post-closure care. This permit action will resolve and address all CCR units at AEP Clinch River Power Station.

Public Participation

Based on review of the permit application in accordance with the established Department procedures, the application was deemed administrative and technically complete.

Notice of the draft permit was advertised on July 11, 2018. Notice was also provided to the local government, Russell County, as well as all contiguous jurisdictions and appropriate state and federal agencies.

The draft permit and public notice were posted on DEQ's external website the same day. As the permit submission was a requirement of a previously issued permit and addressed an already closed unit, there was not a public hearing planned. The public notice included information on how a public hearing could be requested. No requests were received.

The public comment period ended at midnight on August 15, 2018. Two comments from the Department of Conservation and Recreation were received. Neither of the comments necessitated changes to the draft permit. Responses were provided September 12, 2018.

Final Permit Approval

All comments have been reviewed, evaluated, and considered by staff, and responses subsequently developed.

Therefore, the final permit is attached and presented for your final approval and signature