COMMONWEALTH of VIRGINIA

Molly Joseph Ward
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Blue Ridge Regional Office
3019 Peters Creek Road, Roanoke, Virginia 24019
(540) 562-6700; Fax (540) 562-6725
www.deq.virginia.gov

David K. Paylor
Director

Robert J. Weld
Regional Director

SOLID WASTE FACILITY PERMIT
SWP 622

Facility Name: Clover Power Station Sludge Sedimentation Basins

Facility Type: CCR Surface Impoundments **Latitude:** 36° 52' 12" N

Site Location: Halifax County, Virginia **Longitude:** 78° 42' 6" W

Location Description: The Clover Power Station is located on property owned by Virginia Electric and Power Company and Old Dominion Electric Cooperative at 4091 Clover Road (State Rd 92) in Clover, Virginia in Halifax County, VA. The Clover Power Station is adjacent to the Staunton River.

Background: The facility has two Sludge Sedimentation Basins (North and South Basins) located on the eastern side of the Power Station, covering a total area of 3.8 acres. The combined storage capacity of the basins is approximately 38,000 cubic yards. These basins manage station wastewaters, including flue gas desulfurization (FGD) sludge. The basins typically operate where one basin is actively receiving wastewaters and sludge while the other is offline. Water stored in the basins is reused in the Station scrubbers and is not discharged. As a basin becomes full of solids, the basin is taken offline, dewatered into the adjacent basin, and the solids are removed and transported to the Clover Power Station industrial landfill (SWP 556).

These basins are Coal Combustion Residual (CCR) surface impoundments subject to the EPA's final rule "Standards for the Disposal of CCR from Electric Utilities" 80 Fed. Reg. 21302 (April 17, 2015) (as amended) (EPA CCR Rule) because the basins receive FGD sludge, a type of CCR. Further, the basins are considered *existing* CCR surface impoundments under the EPA CCR Rule because they received CCR before October 19, 2015, and continue to receive CCR, and will do so for the foreseeable future. The prior operation of the basins has been addressed as part of this facility's VPDES Permit No. VA0083097.

The basins are currently lined with a 30-mil thick Polyvinyl Chloride (PVC) geomembrane liner on top of compacted clay. The geomembrane liner is protected by geotextile, a one-foot thick sand layer, and concrete on the floor and riprap on the sideslopes. However, this design was not determined to meet the requirements of the EPA CCR Rule per the Professional Engineer design certification required of 40 CFR 257.71(b) dated October 3, 2016. Therefore, this application proposes a retrofit of the existing basins.

The retrofit will occur over two construction seasons. Water from the basin being retrofitted will be pumped to the other basin, sludges will be excavated and trucked to the landfill, and existing liner components will be removed. Each basin will then be lined with a composite liner system consisting of a high-density polyethylene (HDPE) geomembrane overlying a 24-inch thick layer of compacted clay. The liner system will be protected from operational dredging and cleaning by a layer of concrete placed over the pond liner on the bottom and interior slopes. This new liner meets the requirements of the EPA CCR Rule and will be installed in accordance with the requirements for retrofitting a CCR Surface Impoundment under the EPA CCR Rule. Upon completion of the retrofit, these CCR Surface Impoundments will no longer be considered an "unlined CCR Surface Impoundment". The retrofit also includes improvements to basin appurtenances located on the berm separating the North and South basins, such as a flow splitter box and a concrete pump structure with their associated electrical feed, controls, and piping.

The basins will be closed by removal once they are taken out of service in accordance with the requirements of the EPA CCR Rule and the Virginia Solid Waste Management Regulations (VSWMR).

THIS IS TO CERTIFY THAT:

Virginia Electric and Power Company (d/b/a Dominion Virginia Power)
5000 Dominion Boulevard
Glen Allen, Virginia 23060 and

Old Dominion Electric Cooperative
4201 Dominion Boulevard
Glen Allen, VA 23060

is hereby granted a permit to retrofit, continue to operate, and maintain the basins at the Clover Power Station as described in the attached Permit Modules I, V, XI, XII, 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 be modified, constructed, installed, operated, used, maintained, and closed 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.

APPROVED: _____

Robert J. Weld
Regional Director

DATE: July 11, 2017

PERMIT MODULES
REFERENCE LIST

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. To the extent any of these documents conflict with the Permit, VSWMR, or the EPA CCR Rule, the Permit, VSWMR, or the EPA CCR Rule shall prevail.

1. *Retrofit Plan,* prepared by TRC Environmental Corporation, dated November 2016.

2. *Retrofit – Sludge Sedimentation Basins Final Design Report*, prepared by TRC Environmental Corporation, dated March 2017.

3. *Technical Specifications and Construction Quality Assurance Plan*, prepared by TRC. Environmental Corporation, dated November 2016.

4. *Groundwater Monitoring Program (GWMP)*, prepared by TRC Environmental Corporation, last revised October 2017.

5. *Closure Plan,* prepared by TRC Environmental Corporation, dated November 2016.

6. *Post-Closure Care Plan,* prepared by TRC Environmental Corporation, dated November 2016.

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 the requirements of the applicable provisions of RCRA Subtitle D. 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 and 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.

I.B.10. 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.11. 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.12. 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, 9 VAC 25-840.

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 clean closure or 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.1. Detailed, written estimate, in current dollars, of the cost of closing the facility, post-closure care and corrective action measures, as applicable.

I.C.2. All other documents/records required and applicable from the following:

I.C.2.a. Monitoring records from groundwater monitoring.

I.C.2.b. Inspection records as required from construction/installation, closure, and post-closure inspection requirements including records of weekly and annual inspections required by 40 CFR 257.83(a) and (b).

I.C.2.c. Construction quality assurance reports, record drawings and engineers certifications for all final cover construction.

I.C.3. All records required by 40 CFR 257.105. These records shall be maintained in the operating record for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, record or study unless another timeframe is prescribed in 40 CFR 257.105.

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. In accordance with 9VAC20-81-490.A., certification from a design engineer, who must be a professional engineer licensed to practice in the Commonwealth, that the retrofit construction of each basin has been completed in accordance with the permit, approved plans and specifications and is ready to begin operation. A certification will be required for each retrofit completion.

I.D.2. Certification (separate from I.D.1, above) from the Construction Quality Assurance (CQA) officer that the approved CQA plan has been successfully carried out and that the retrofitted basin meets all requirements of the permitted CQA plan, in accordance with 9VAC20-81-130.Q. A certification will be required for each retrofit completion. The CQA officer must be a professional engineer licensed to practice in Virginia.

I.D.3. The as-built plans of all new groundwater 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.D.4. The facility shall submit all notifications required by 40 CFR 257.106 to the DEQ Director before the close of business on the day the notification is required to be completed.

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
Blue Ridge Regional Office
3019 Peters Creek Road
Roanoke, Virginia 24019

If the report, notification, or other submission is required by 40 CFR 257.106, such report, notification, or other submission shall be sent or given to the contact above in addition to the DEQ Director.

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. Groundwater monitoring at this facility shall commence under the Modified Assessment Groundwater Monitoring Program as detailed in Module XI of this permit.

I.F.2. The facility shall maintain a publically accessible Internet site (CCR Web site), titled "CCR Rule Compliance Data and Information" as required by 40 CFR 257.107. The applicable information must be posted to the CCR Web site within 30 days of placing the pertinent information required by 40 CFR 257.105 in the operating record. The information must remain on the CCR Web site for at least five years following the date on which the information was first posted or as specified in 40 CFR 257.107.

I.F.3. The basins are CCR surface impoundments and are subject to the U.S. Environmental Protection Agency's EPA's final rule "Standards for the Disposal of CCR from Electric Utilities" (EPA CCR Rule) (as amended) and as incorporated into the VSWMR. The permittee shall comply with these provisions. To the extent a conflict may exist or arise between the requirements of the EPA CCR Rule, other provisions of the VSWMR, or this permit, the facility shall comply with the more stringent of the requirements.

I.F.4. In accordance with Condition I.F.3., the permittee shall comply with the applicable requirements and deadlines for an "Existing CCR Surface Impoundment" for the basins.

I.F.5. In accordance with Condition I.F.3 and I.F.4, for the basins, the permittee shall:

I.F.5.a. No later than October 17, 2018, complete the location restrictions demonstrations required by 40 CFR 257.60 - 64.

I.F.5.b. Update, amend, or revised, as necessary or required, all design criteria, operating, closure and post-closure documents.

I.F.5.c. Maintain an inspection program to meet the requirements of 40 CFR 257.83.

I.F.6. If at any time required by 40 CFR 257.101, the owner or operator shall cease placement of CCR and non-CCR waste streams into the basins within six months and commence closure as outlined in 40 CFR 257.101.

I.F.7. Only Clover Power Station wastewater, process water, and other station solids including FGD as authorized by VPDES Permit VA0083097 or approved by Director in accordance with the VSWMR may be managed in the basins. Management of CCR and non-CCR waste streams in the basins shall be in accordance with the requirements of VPDES Permit VA0083097, the VSWMR, and the EPA CCR Rule as applicable.

Permit Attachment I-1

PERMIT RELATED APPROVAL LETTERS

COMMONWEALTH of VIRGINIA

Matthew J. Strickler
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Blue Ridge Regional Office
3019 Peters Creek Road, Roanoke, Virginia 24019
(540) 562-6700; Fax (540) 562-6725
www.deq.virginia.gov

David K. Paylor
Director

Robert J. Weld
Regional Director

January 16, 2018

Via electronic mail

Mr. Dennis Slade
Supervisor – Corporate Waste and Remediation
Dominion Energy Services, Inc.
5000 Dominion Blvd
Glen Allen, VA 23060
Dennis.a.slade@dominionenergy.com

Re: Dominion Clover – Sludge Sedimentation Basins, SWP622
Groundwater Monitoring Plan Revision – Acceptance

Dear Mr. Slade:

The Department of Environmental Quality (DEQ) Blue Ridge Regional Office (BRRO) received the updated Groundwater Monitoring Program for the sludge sedimentation basins at the Dominion Clover Power Station. Minor updates were made to the plan to clarify and incorporate conditions in the solid waste permit, SWP622, which was issued on July 11, 2017.

In accordance with 9 VAC 20-81-600.F.2.c. of the Virginia Solid Waste Management Regulations (VSWMR, 9 VAC 20-81 *et seq.*), incorporation of this revised plan into Permit No. 622 is a minor modification requiring director approval. In order to document this modification, please incorporate, as described at the end of this letter, a copy of this letter, the attached Permit Document list, and the revised Groundwater Monitoring Program into each copy of Permit No. 622.

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

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.

In accordance with 9 VAC 20-81-600.F.2.d, the permittee is required to notify the local governing body of this modification within 90 days of this letter. Mr. James Halasz is copied on this letter to satisfy this requirement.

Please note that it is the responsibility of permittee to obtain any other permits or authorizations that may be necessary. If you have any questions, please contact Jenny Poland, Solid Waste Permit Writer, at (540) 562-6890 or via email at jenny.poland@deq.virginia.gov.

Sincerely,

Robert Weld
Regional Director

Att: Permit Reference List (replace existing Permit Reference List in Permit Introduction)
Permit Documents List (replace existing Permit Documents List in Permit Introduction)
Permit Attachment I-1 Cover Page (insert after Module I and insert copy of this approval letter after the cover page.
Groundwater Monitoring Program (replace existing Groundwater Monitoring Program in facility operating record.)

Cc: Tim Hamlet, Dominion Energy (tim.hamlet@dominionenergy.com)
James Halasz, Halifax County (jmh@co.halifax.va.us)
Priscilla Fisher, DEQ-CO (Priscilla.fisher@deq.virginia.gov)
Elizabeth Lohman, DEQ-BRRO (elizabeth.lohman@deq.virginia.gov)
Doug Gilmer, DEQ-BRRO (douglas.gilmer@deq.virginia.gov)
Doug Foran, DEQ-BRRO (douglas.foran@deq.virginia.gov)

COMMONWEALTH of VIRGINIA

Molly Joseph Ward
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Blue Ridge Regional Office
3019 Peters Creek Road, Roanoke, Virginia 24019
(540) 562-6700; Fax (540) 562-6725
www.deq.virginia.gov

David K. Paylor
Director

Robert J. Weld
Regional Director

July 11, 2017

Ms. Cathy Taylor
Senior Environmental and Sustainability Advisor
Virginia Electric and Power Company (Dominion)
5000 Dominion Boulevard
Glen Allen, VA 23060

Re: Clover Power Station Sludge Sedimentation Basins – CCR Surface Impoundments
Permit Issuance, SWP622
Halifax County, Virginia

Dear Ms. Taylor:

Enclosed is solid waste permit SWP622 for the Clover Power Station Sludge Sedimentation Basins. The public participation period ended on Friday, June 23, 2017. No comments requiring changes to the draft permit were received; therefore, only incidental editing of the draft permit occurred. Changes made include adding a table to clearly define the groundwater compliance monitoring network in Module XI, and additional details on the liner construction materials in Module V. These changes were discussed with facility representatives on Thursday, June 8, 2017, during the public hearing. Correspondence from the Department of Conservation and Recreation (DCR), the Virginia Department of Health (VDH), and Department of Historic Resources (DHR) were received regarding this permit modification and have been attached for your reference. Please make note of the information contained in these correspondence.

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

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 Jenny Poland, Solid Waste Permit Writer, at (540) 562-6890 or jenny.poland@deq.virginia.gov.

Sincerely,

Robert J. Weld
Regional Director

Attachments: SWP622 (Permit Introduction and Modules I, V, XI, and XII)
DHR Letter
VDH Email
DCR Letter

Cc: Dennis Slade, Dominion (dennis.a.slade@dom.com)
Elizabeth Lohman, DEQ (elizabeth.lohman@deq.virginia.gov)
Douglas Gilmer, DEQ (douglas.gilmer@deq.virginia.gov)
Douglas Foran, DEQ (douglas.foran@deq.virginia.gov)
Jenny Poland, DEQ (jenny.poland@deq.virginia.gov)

COMMONWEALTH of VIRGINIA

Molly Joseph Ward
Secretary of Natural Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
www.dhr.virginia.gov

June 2, 2017

Ms. Jenny Poland
DEQ – Blue Ridge Regional Office
3019 Peters Creek Road
Roanoke, VA 24019

Re: Clover Power Station Sludge Sedimentation Basins - SWP #622
Halifax County, VA
DHR File No. 2017-0513

Dear Ms. Poland:

We have received your request for comments on the project referenced above. The proposed permit would allow the retrofit, continued operation, and maintenance of two sludge sedimentation basins at Clover Power Station. We have reviewed the submitted materials and provide the following comments.

Our Archives show several recorded historic resources within the facility boundary. Given the scope of the proposed permit, impacts to significant, intact archaeological resources are unlikely. Accordingly, it is our opinion that this action will result in *no historic properties affected*. No additional study is warranted at this time. Should unexpected archaeological resources be encountered during activities carried out under this modification, all work in the immediate area should cease and our office contacted to provide guidance on the treatment of the discovery.

If you have any questions about our review process or these comments, please do not hesitate to contact me at roger.kirchen@dhr.virginia.gov.

Sincerely,

Roger W. Kirchen, Director
Review and Compliance Division

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033

Eastern Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Poland, Jenny (DEQ)

From: Warren, Arlene (VDH)
Sent: Friday, June 23, 2017 3:22 PM
To: Poland, Jenny (DEQ)
Subject: RE: Notification of Draft Permit SWP622 for Clover Power Station - Sludge Sedimentation Basins in Halifax County, Virginia

Project Name: SWP622 for Clover Power Station - Sludge Sedimentation Basins
Project #: N/A
UPC #: N/A
Location: **Halifax Co.**

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems **must be verified by the local utility.**

The following public groundwater wells are located within a 1 mile radius of the project site (wells within a 1,000 foot radius are formatted in **bold**):

PWS ID Number	City/County	System Name	Facility Name
5083628	**HALIFAX**	**ODEC / VIRGINIA POWER PLANT**	**WELL NO. 2**
5083628	**HALIFAX**	**ODEC / VIRGINIA POWER PLANT**	**WELL NO. 1**
5083534	**HALIFAX**	**STAUNTON RIVER BATTLEFIELD STATE PARK**	**WELL NO. 1**
5037823	**CHARLOTTE**	**STAUNTON RIVER BATTLEFIELD STATE PARK**	**WELL NO. 1**

There are no surface water intakes located within a 5 mile radius of the project site.

The project is within the watershed of the following public surface water sources:

PWS ID Number	System Name	Facility Name
5117310	CLARKSVILLE, TOWN OF	KERR RESERVOIR INTAKE
5117707	ROANOKE RIVER SERVICE AUTHORITY	LAKE GASTON INTAKE

- ***Comments from Radiological Health, Mr. Steven Harrison, Director "The Office of Radiological Health does not have any questions or comments relating to this permit."***
- ***OEHS Onsite Sewage & Water Services, No comments were received.***

Best Regards,

Arlene Fields Warren
GIS Program Support Technician
Office of Drinking Water
Virginia Department of Health
109 Governor Street
Richmond, VA 23220
(804) 864-7781

From: Poland, Jenny (DEQ)
Sent: Friday, May 05, 2017 10:26 AM
To: Harrington, Rusty N. (DOAV); Rhur, Robbie (DCR); Susan_Lingenfelser@fws.gov; Kirchen, Roger (DHR); Tignor, Keith (VDACS); odwreview (VDH); Heller, Matthew (DMME); Fernald, Ray (DGIF); rmcclintock@yesvirginia.org; james.halasz@co.halifax.va.us; Clark, Russell B.; administration@campbellcountyva.gov; wayne.carter@mechklenburgva.com; david.smitherman@pittgov.org; traab@southbostonva.us; hyork@personcounty.net; bmiller@caswellcountync.gov; michael.felts@granvillecounty.org; kjohnson@halifaxvirginia.com
Cc: Williams, Justin (DEQ); Lohman, Elizabeth (DEQ)
Subject: Notification of Draft Permit SWP622 for Clover Power Station - Sludge Sedimentation Basins in Halifax County, Virginia

Dear State Agency and Local Government Contact:

This notification is to inform you of the draft permit for the Clover Power Station located at 4091 Clover Road (State Rd 92) in Clover, Virginia in Halifax County. The solid waste permit is for the retrofit, continued operation, and maintenance of two sludge sedimentation basins, approximately 4 acres in size, that manage flue gas desulfurization (FGD) sludge. This proposed permit was prepared in accordance with and includes requirements of the EPA Final Rule on the Disposal of Coal Combustion Residual (EPA CCR Rule) and the Virginia Solid Waste Management Regulations (VSWMR), which incorporate the EPA CCR Rule. These basins are lined but will be retrofitted in accordance with the EPA CCR Rule and continue to receive wastewaters and solids. These basins are no-discharge basins and water from the basins is reused at the Station. Solids are removed and disposed of in the on-site landfill. This proposed permit includes the requirements for retrofitting the basins, the EPA CCR Rule, groundwater monitoring, and clean closure by removal of the basins at the of end-of-service.

This email transmits a copy of the advertisement for public comment with facility's maps for your review.

Should your agency have any comments or objections regarding this permitting action, or if you would like to request a copy of the Draft Permit or permit application, please contact me at: (540) 562-6890, Jenny.Poland@deq.virginia.gov, or at the following address:

Blue Ridge Regional Office,
3019 Peters Creek Road,
Roanoke, VA 24019

Please be advised that the comment period for the draft permit ends June 23, 2017. If no response is received by the end of the public comment period, it will be assumed that your agency has no objections to the proposed permit.

Sincerely,
Jenny

Jenny Poland
Solid Waste Permit Writer
DEQ- BRRO Blue Ridge Regional Office

Attachments: Public Notice
Facility Site Maps (2)
List of State Agencies and Local Government Contacts Notified

Jenny L. Poland
Solid Waste Permit Writer

DEQ Blue Ridge Regional Office (Roanoke) 3019 Peters Creek Road Roanoke, VA 24019 PH 540.562.6890

Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
Deputy Director of Administration and Finance

David C. Dowling
Deputy Director of Soil and Water Conservation and Dam Safety

Thomas L. Smith
Deputy Director of Operations

MEMORANDUM

DATE: June 19, 2017

TO: Jenny Poland, DEQ

FROM: Roberta Rhur, Environmental Impact Review Coordinator

SUBJECT: DEQ-SWP 622, Clover Power Station Sludge Sedimentation Basins Draft Permit

Division of Planning and Recreation Resources

The Department of Conservation and Recreation (DCR), Division of Planning and Recreational Resources (PRR), develops the *Virginia Outdoors Plan* and coordinates a broad range of recreational and environmental programs throughout Virginia. These include the Virginia Scenic Rivers program; Trails, Greenways, and Blueways; Virginia State Park Master Planning and State Park Design and Construction.

The project is adjacent to the Staunton River. This section of the Staunton qualifies for scenic designation and is an established water trail. For these reasons, we recommend that alterations to the sediment basins for done in a manner that protects the water quality of the Staunton River, thereby protecting those who recreate on the river.

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

Biotics documents the presence of natural heritage resources within two miles of the project area. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

New and updated information is continually added to Biotics. Please re-submit project information and map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dgif.virginia.gov. According to the information currently in our files, Roanoke Creek, which has been designated by the VDGIF as a "Threatened and Endangered Species Water" for the Carolina darter is within 2 miles of the project area. Therefore, DCR recommends coordination with Virginia's regulatory authority for the management and protection of this species, the VDGIF, to ensure compliance the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

The remaining DCR divisions have no comments regarding the scope of this project. Thank you for the opportunity to comment.

CC: Ernie Aschenbach, VDGIF

PERMIT MODULE V
CCR SURFACE IMPOUNDMENT RETROFIT DESIGN

V.A. RETROFIT GENERAL REQUIREMENTS

The retrofit of each basin shall be done in accordance with 40 CFR 257.102(k) and the facility's approved Retrofit Plan. The Retrofit Plan shall be amended as required in accordance with 40 CFR 257.102(k)(2)(iii).

The removal of CCR and existing liner, soils, subsoils, or other materials must be done in accordance with 40 CFR 257.102(k)(i). Removed materials must be managed or disposed in accordance with applicable laws and regulations including the VSWMR.

The retrofit of each basin must be completed in the timeframes required in 40 CFR 257.102(k)(3).

The owner or operator must comply with recordkeeping, notification, and publicly accessible internet website requirements in accordance with 40 CFR 257.102(k)(8).

V.B. LINER DESIGN-RETROFIT

Each basin shall be retrofitted with a liner system that consists of the following components from top to bottom:

- Concrete cover,
- 32 oz/sy geotextile cushion,
- 60-mil textured high density polyethylene (HDPE) geomembrane on side slopes (3H:1V), 60-mil smooth or textured HDPE geomembrane on base (less than 10% slope), and
- 24-inch-thick compacted clay layer with a maximum hydraulic conductivity of 1 x 10^{-7} centimeters per second (cm/s).

This liner design meets the definition of a composite liner in accordance with 40 CFR 257.72 (referencing 257.70 (b)).

V.C. RETROFIT LINER CONSTRUCTION & CERTIFICATION

V.C.1. The retrofit liner for each basin shall be constructed in accordance with the approved Retrofit Plan, Design Plans, Technical Specifications, Construction Quality Assurance Plan and the design criteria specified under 40 CFR 257.72 in accordance with 40 CFR 257.102(k).

V.C.2. Following completion of the retrofit and prior to continued operation and use of each basin, the permittee shall:

V.C.2.a. Provide notification within 30 days of completion of the retrofit activities in accordance with 40 CFR 257.102(k)(6) and provide certification from a qualified professional engineer verifying completion of retrofit activities in accordance with 40 CFR 257.102(k)(4).

V.C.2.b. Submit all required certification documents as indicated in Permit Module I Section I.D.1 – 2 as required by 9 VAC 20-81-490.A.

V.C.3. Once the documentation under V.C.2. has been submitted and approved by the Department, and a site inspection of the retrofitted basin has been conducted, a Certificate to Operate (CTO) must be issued by the Regional Office prior to the facility accepting waste in the retrofitted basin.

V.D. LEACHATE MANAGEMENT

Power Station wastewaters discharged to the basins must be reused in the Clover Power Station or otherwise managed in accordance with VPDES Permit VA0083097.

PERMIT MODULE XI
MODIFIED DETECTION/ASSESSMENT MONITORING

The monitoring program described herein is designed to recognize when impacts to the uppermost aquifer have exceeded natural site background and site-specific groundwater protection standards. The Module combines actions otherwise required in the VSWMR, Detection Monitoring (40 CFR 257.94), Assessment Monitoring (40 CFR 257.95) and includes the requirement that groundwater protection standards be established. Any exceedance of a groundwater protection standard would trigger potential groundwater corrective action. This Module also addresses demonstration of compliance with the closure by removal CCR performance standard (40 CFR 257.102(c)).

Monitoring at this facility will take place under the program described herein and the actions undertaken shall be consistent with 9 VAC 20-81-250 of the VSWMR as well as applicable requirements of 40 CFR 257.90-98 and 257.105-107, constituting a "modified" groundwater program. Where a groundwater requirement is defined in both 40 CFR 257.90-98 and/or 257.105-107 as well as within the VSWMR or this Module, the stricter of the referenced requirements shall apply.

XI.A. GROUNDWATER COMPLIANCE POINT

XI.A.1. Uppermost Aquifer

XI.A.1.a. Prior to monitoring well installation, the uppermost aquifer must be characterized by completion of a site specific hydrologic investigation. This hydrologic investigation must be completed in a manner consistent with available EPA Resource Conservation and Recovery Act (RCRA) subtitle C, D and/or CCR technical guidance documents.

XI.A.1.b. Point of compliance monitoring wells must be installed within the identified uppermost aquifer on site and shall be screened at depths appropriate to monitor all preferential contaminant migration pathways identified during XI.A.1.a above.

XI.A.1.c. All monitoring wells on site shall be screened solely within the saturated portion of the aquifer such that at no time during the life of the sampling program, will portions of the well screen be exposed to the unsaturated zone or capillary fringe zone, above the zone of saturation.

XI.A.1.d. The owner/operator may choose, or the Director may determine, that additional monitoring wells are needed to act as sentinel wells to further characterize potential risk to human health or the environment. These wells may be exempted from the location requirements of XI.B.1.b below with Director approval, but must otherwise be installed in a manner consistent with XI.A.1.b and c above.

XI.B. MONITORING NETWORK REQUIREMENTS

XI.B.1. The point of compliance groundwater monitoring well network shall:

XI.B.1.a. contain no fewer than one (1) upgradient, and three (3) downgradient wells;

XI.B.1.b. consist of monitoring wells located at, or as close as practicable to, the CCR unit boundaries;

XI.B.1.c. include as needed, nested well pairs screened at different depths below ground surface to monitor all the potential contaminant migration pathways identified under XI.A.1.a above;

XI.B.1d. not exhibit lateral spacing between downgradient point of compliance wells that exceeds 500 feet unless the owner/operator has successfully demonstrated to the Director that physical or topographic limitations exist on site preventing a closer linear well spacing;

XI.B.1.e. not include monitoring wells located outside of the permitted facility boundary/property boundary; and

XI.B1.f. not include any new monitoring wells screened within or penetrating through CCR.

XI.B.2. Installation, Operations and Maintenance

XI.B.2.a. All wells shall be installed, operated and maintained in a manner which is consistent with existing RCRA guidance and allows them to operate as designed during the life of the groundwater monitoring program.

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

XI.B.2.d. Any wells that require abandonment due to non-performance shall be sealed and abandoned in accordance with existing EPA RCRA guidance as well as any applicable state or local requirements.

XI.B.2.e. 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 solid waste groundwater monitoring network covered by this permit:

Upgradient Well(s)	Downgradient Wells		Piezometers
PW-2	PW-3	PW-12	
	PW-4	PW-13	
	PW-5		

All point of compliance wells shall:

XI.B.3.a. be identified within the Groundwater Monitoring Plan in a manner which clearly identifies the wells and the CCR surface impoundment that they are associated with and

XI.B.3.b. be shown on a site map included in the Plan. The Plan text and any related figures must be updated within 90-days of any changes to the point of compliance wells.

XI.C. AQUIFER DATA

XI.C.1. Data Acquisition - Requirements

XI.C.1.a. Static groundwater elevations 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; and

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 shall be determined each time groundwater is sampled for Detection and Assessment monitoring constituents on site via a method accepted for use in EPA RCRA groundwater programs.

XI.C.2. Data Acquisition - Response

The Permittee shall evaluate the upgradient or downgradient 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 performance requirements of the VSWMR, the Permittee shall follow the requirements of XI.B.2 above.

XI.D. SAMPLING and ANALYTICAL ACTIONS

The Permittee shall:

XI.D.1. utilize a groundwater monitoring program and sampling actions that meet the requirements of the VSWMR, 40 CFR 257.90-95 and this Module;

XI.D.2. collect and analyze unfiltered samples of groundwater from each monitoring well sampled consistent with 40 CFR 257.93(h)(2)(i);

XI.D.3. utilize EPA SW-846 analytical methods (as amended) conducted at a VELAP accredited laboratory;

XI.D.4, provide the Department final laboratory results as total metals (parts per billion) for all metals constituents; and

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

XI.E. SAMPLING FREQUENCY

The Permittee shall, during the operating, closure, and post-closure care periods, if applicable, sample and analyze groundwater from all point of compliance monitoring wells on at least 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. To satisfy requirements of Detection Monitoring, all 40 CFR 257 Appendix III constituents.

XI.F.2. To satisfy requirements of Assessment Monitoring, all 40 CFR 257 Appendix IV constituents and any VSWMR Table 3.1 metal not included in 40 CFR 257 Appendix III or IV.

XI.F.3. Any constituent or parameter included in groundwater sampling actions conducted pursuant to VPDES Permit No. VA0083097 that is otherwise not included in XI.F.1 or 2 above.

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 Consistent with requirements of Detection monitoring, the Permittee shall establish site-specific background values for the constituents of XI.F.1-2 in a manner consistent with EPA requirements within 40 CFR 257.93(d) and 94(b).

XI.G.2 Consistent with requirements of Assessment monitoring, the Permittee shall establish site-specific Groundwater Protection Standards (GPS) using the process EPA defined within 40 CFR 257.95(h) for constituents contained under XI.F.2 and Boron.

XI.G.3. Background shall also be developed for constituents in XI.F.4.above.

XI.G.4. Groundwater Protection Standards shall be updated:

XI.G.4.a. immediately upon promulgation of a new or revised Federal MCL;

XI.G.4.b. every two years for background-based GPS such that the eight most recent background well sampling results shall replace the oldest eight background well sampling results.

XI.G.5 Use of risk-based GPS shall not be allowed.

XI.G.6. For the purposes of this permit for determining an exceedance, upon permit issuance, the MCL shall be immediately effective as the GPS for those constituents with a Federal MCL. The MCL shall remain the GPS until such time as the Department approves a site-specific background value for the constituent which is higher than the MCL consistent with XI.G.2.

XI.G.7. A table of GPS shall be included in the facility's operating record and shall be updated as required by the Director.

XI.H. STATISTICAL PROCEDURES

When evaluating the groundwater sampling event results at point of compliance wells, the Permittee shall:

XI.H.1 Have a qualified professional engineer certify the selected statistical method used by the Permittee is appropriate for evaluating the groundwater monitoring data consistent with 40 CFR 257.93(f)(6). The certification must include a narrative description of the statistical method selected to evaluate the groundwater monitoring data.

XI.H.2 Within 30 days of completion of the laboratory analysis for each semiannual

sampling event, determine whether or not there is a statistically significant increase over site background for Detection monitoring constituents and GPS for Assessment monitoring constituents using a statistical method consistent with 40 CFR 257.93(f) and (g).

XI.H.3 For the purpose of this Permit, laboratory analysis is considered complete upon issuance of the final analytical report under laboratory signature.

XI.H.4 If there is a statistically significant increase (SSI) over Facility-specific Background for any Detection monitoring constituent, or GPS for any Assessment monitoring constituent listed in XI.F, the Permittee will:

XI.H.4.a. notify the DEQ of the SSI over background and/or GPS within 44 days of issuance of the laboratory report identifying the metal(s) which exceed background and/or GPS and noting whether the facility intends to identify an Alternate Source for the SSI as described under XI.M below, or

XI.H.4.b. begin the initial steps toward groundwater Corrective Action if the SSI is associated with a GPS exceedance.

XI.I. RECORD-KEEPING REQUIREMENTS

XI.I.1. The Permittee shall comply with the applicable record-keeping and public accessible internet site requirements of 40 CFR 257.105-107.

XI.I.2. The Permittee shall retain all records identified under 9 VAC 20-81-250.E.1 as well as 530.B.1 and B.2 throughout the closure and post-closure care periods, if applicable. The records shall be retained within the operating record at the facility or at an alternate location approved by the Director.

XI.J. REPORTING REQUIREMENTS

The Permittee shall meet all the reporting and notification requirements of 40 CFR 257-105-107 and 9 VAC 20-81-250.E.1 as well as 530.B.1 and B.2 throughout the operating, closure, and post-closure care periods, if applicable. The Regional Office shall be copied on any groundwater report, notification, request, demonstration, certification or documentation submitted pursuant to 40 CFR 257.

XI.J.1. *Groundwater Monitoring Reports*

XI.J.1.a. The Annual Groundwater Monitoring Report shall be due no later than 120 days from the completion of sampling and analysis conducted for the second semi-annual event or no later than January 31 of the following calendar year. The Annual Report shall include at a minimum the content found under 9 VAC 20-81-250.E.2.a and 40 CFR 257.90(e)(1-5) and shall be submitted in a format consistent with

existing DEQ Submission Instructions.

XI.J.1.b. A Semi-annual Report shall be due no later than 120 days from the completion of sampling and analysis conducted for the 1st semi-annual groundwater sampling event. The Semi-annual Report shall include at a minimum the content found under 9 VAC 20-81-250.E.2.b and shall be submitted in a format consistent with existing DEQ Submission Instructions.

XI.J.2. *Facility Background Determination Report*

XI.J.2.a Within 30 days of initially establishing background, 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*.

XI.J.2.b The background determination results shall be submitted in the timeframe defined under 9 VAC 20-81-250.C.3.b.(2).

XI.J.3. *Well Installation Report*

Within 44 days of well completion, the Permittee shall supply the Director a *Well Installation Report* containing the well number, surveyed elevation, boring log, casing length, total depth, and a completion diagram for each monitoring well, along with a certification from a qualified professional engineer that the monitoring wells have been installed in accordance with the submitted plans.

XI.J.4. *Well Abandonment Report*

XI.J.4.a. Consistent with XI.B.2.e above, the Director shall be notified and approval received prior to any monitoring well abandonment.

XI.J.4.b. 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 professional engineer verifying the well abandonment activities met all applicable requirements.

XI.K. NOTIFICATION REQUIREMENTS

XI.K.1 *GPS SSI Notifications* shall be submitted to the Director within 44 days of issuance of the laboratory report and shall indicate which groundwater constituent has shown an SSI over Facility-specific GPS.

XI.K.2 *Well Non-Performance Notifications* shall be submitted to the Director within 30 days of recognizing the non-performance issue.

XI.K.3 *Off-site Plume Notifications* shall be submitted to the affected landowner and copied to the Director within 15 days of identifying constituents which exceed their GPS.

XI.L. MISCELLANEOUS ALLOWANCES

XI.L.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 in VSWMR and 40 CFR 257 and is certified by a qualified professional engineer. Until such time as Director approval is obtained, background shall be determined by sampling wells which are upgradient of the disposal unit.

XI.L.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 9 VAC 20-81-250.D.2 and 40 CFR 257.93(g). Until such time as Director approval is obtained, the statistical test(s) applied to site groundwater data shall be compliant with 9 VAC 20-81-250.D.1 and 40 CFR 257.93(f)(1-5). Whichever method is approved for use at the site, the method should be listed in the *Groundwater Monitoring Plan*.

XI.L.3. Verification Sampling. The Permittee, at any time within 30 days of receipt of the laboratory report for a semi-annual sampling event, may obtain verification samples. Undertaking verification sampling shall not alter the timeframes associated with determining or reporting a statistically significant increase.

XI.L.4. Data Validation. The owner or operator may at any time within the 30 day statistical determination period 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.

XI.M. MISCELLANEOUS DEMONSTRATIONS

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 professional engineer for review and approval by the Director, within 90 days of providing the initial Detection or Assessment monitoring SSI notification.

XI.M.1. 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.M.2. 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 9 VAC 20-81-260 and 40 CFR 257 within the required timeframes.

XI.N. PERMIT RELATED GROUNDWATER MONITORING PLAN

The Permittee must have a plan that includes detailed instructions concerning groundwater monitoring. These instructions must at a minimum cover the items listed under 40 CFR 257.90-95; 9 VAC 20-81-250.A.4.a and other applicable information under 9 VAC 20-81-250. 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, which may include actions otherwise defined under 9 VAC 20-81-600.A – F, if changes to the monitoring program have taken place since original plan development.

XI.O. LIMITATIONS/AUTHORITIES

XI.O.1 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.

XI.O.2 Should information contained in a *Groundwater Monitoring Plan* conflict with any requirement or condition of this Module, the VSWMR, or the EPA CCR Rule, this Module and/or regulatory condition shall prevail over the language in the *Groundwater Monitoring Plan*.

XI.O.3 When the Permittee recognizes a failure to submit any relevant facts or has submitted incorrect information in any groundwater monitoring report to the Director, he shall, within 7 days, submit such omitted facts or the correct information with a full explanation.

PERMIT MODULE XII
CLOSURE

XII.A. CLOSURE PLAN AND CLOSURE PLAN MODIFICATION

XII.A.1. The owner or operator shall maintain a written closure plan in accordance with 9 VAC 20-81-160.B.1. and 40 CFR 257.102(b).

XII.A.2. The closure plan shall be amended as required by 40 CFR 257.102(b)(3). All amended closure plans shall contain a written certification by a professional engineer that the plan amendment meets the requirements of 40 CFR 257.102(b)(4).

XII.B. TIMEFRAMES ASSOCIATED WITH CLOSURE

XII.B.1. The facility shall submit a notification of intent to close to the Department at least 180 days prior to beginning closure of the basins. Additionally, the notification must include a certification by a professional engineer and be placed in the facility's operating record in accordance with 40 CFR 257.102(g).

XII.B.2. The owner or operator shall complete closure in accordance with the timeframes in 40 CFR 257.102.

XII.C. CLOSURE BY REMOVAL CERTIFICATION AND APPROVAL

XII.C.1. The owner or operator shall submit notification to the Director of completion of basin excavation including liner and subsoils within 30-days of completing the action for the Department to conduct an inspection to confirm removal.

XII.C.2. The owner or operator shall monitor groundwater using approved groundwater wells at the former boundary of the excavated basins to demonstrate completion of closure by removal in accordance with 40 CFR 257.102(c). Sampling of the demonstration wells located at the former boundary of the basins shall continue until data collected shows no Statistically Significant Increase (SSI) over established Groundwater Protection Standards (GPS) for any of the sampled constituents for ten independent sampling events. These wells shall be monitored and managed in accordance with Module XI.

XII.C.3. Upon completion of all groundwater monitoring demonstration requirements in XII.C.2., the owner or operator shall submit a certified report entitled *Termination of Groundwater Monitoring for Closure by Removal Demonstration* for review by the Department. The report shall include sufficient groundwater monitoring data and statistical analysis to demonstrate that the closure by removal standard has been met.

XII.C.4. Upon Department approval of the submission defined under XII.C.3. above, the owner or operator may submit the information required to satisfy closure results of 40 CFR 257.102(f)(3) including at a minimum, the notification and certification, signed by a registered professional engineer, verifying that closure by removal has been completed in accordance with the permit, approved plans and specifications, and 40 CFR 257.102.