Virginia Department of Environmental Quality
Individual Permit Issuance Fact Sheet

SUBJECT: Proposed Virginia Water Protection Individual Permit Number 07-2334; Dominion Virginia Power – Virginia City Hybrid Energy Center Project; Wise County

DATE: April 16, 2008

DEQ has reviewed the application for issuance under the Virginia Water Protection (VWP) JPA Number 07-2334 and has determined that the project requires an individual permit under 9 VAC 25-210. Based on the information provided in the application, and in compliance with § 401 of the Clean Water Act as amended (33 USC 1341) and the State Water Control Law and regulations, DEQ has determined that there is a reasonable assurance that the proposed activity subject to this permit will protect instream beneficial uses; will not violate applicable water quality standards; and will not cause or contribute to significant impairment of state waters or fish and wildlife resources, provided the permittee complies with all permit conditions.

Surface water impacts have been avoided and minimized to the maximum extent practicable, however, the installation of the facility will have an impact upon 0.42 acres of wetlands and 3,880 linear feet of perennial and intermittent streams. The proposed permit addresses no net loss of wetland acreage and function through compensatory mitigation and adequately assesses compensation implementation via success monitoring and reporting.

The following details the application review process and summarizes relevant information for developing the Part I - Special Conditions.

1. Contact Information:

DEQ Contact Name and Address:
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Owner Name and Address:
Dominion Virginia Power
5000 Dominion Boulevard
Glen Allen, VA 23060
Phone: (804) 273-3511

Facility Name and Location:
Virginia City Hybrid Energy Center Project
Solid Waste Management Facility
Curley Hollow, near St. Paul, VA

Agent Name and Address:
Kimberly Q. Lanterman
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Glen Allen, VA 23060

2. Processing Dates:

Received Application:	October 19, 2007
Application Fee Deposited:	March 26, 2008
Application Complete:	March 26, 2008
Processing Deadline:	July 24, 2008
Letters sent to Local Government:	November 2, 2007
Letters sent to Commissioner of Revenue:	January 29, 2007
Letters sent to VDH, VDGIF, VDCR:	November 2, 2007
Letters sent to Riparian Land Owners:	NA
Draft Permit Package Mailed:	April 3, 2008
Public Notice sent to DEQ CO:	April 3, 2008
Public Notice sent to Local Government:	April 3, 2008
Public Notice Published:	April 17, 2008
Received Verification of Publication:	*pending*
End of Public Comment Period:	June 13, 2008
Public Hearing:	May 29, 2008

3. Project Location:

City/County:	Wise County, Virginia
Waterbody:	VAS-P09R Clinch River/ Little Stony Creek
Basin:	Tennessee – Big Sandy
Subbasin:	Clinch River
HUC:	06010205
Section:	2
Class:	IV
Special Standards:	none

The project is located in the community of Virginia City, approximately 1.7 miles west of St. Paul, in eastern Wise County.

Latitude: 36° 55’ 44” Longitude: 82° 20’ 29”

4. Project Description:

Virginia Electric and Power Company, doing business as Dominion Virginia Power, is proposing to design, construct, operate and maintain a proposed 585-megawatt coal-fired electric generation facility and an associated Solid Waste Management Facility (SWMF) in Southwest

Virginia. Together these facilities are identified as the Virginia City Hybrid Energy Center Project.

The operation is anticipated to produce approximately two million tons of coal combustion by-product (CCB) annually. The CCB materials produced will be in the form of ash from burning coal, coal waste and wood waste. The applicant proposes to dispose of these CCB materials by land-filling them in the SWMF. The company intends to pursue beneficial reuse of the CCB materials as an alternative to disposal; however the long term disposal needs necessitate the construction of a large landfill disposal area to serve the facility throughout its anticipated 25 to 30 year life.

The landfill (SWMF) site is located in Curley Hollow, adjacent to the proposed power plant location. The SWMF site is approximately 378 acres, which is part of a larger collection of land, about 1,700 acres in size, currently owned or under option by Dominion. The SWMF is designed for the exclusive disposal of coal and wood combustion by-products (CCB) associated with power generation from the proposed power plant.

The landfill will utilize the entire area of Curley Hollow, ridge-to-ridge, once final development is complete. The final grade of the peak of the disposal area will be approximate elevation 2,350 feet, a maximum of 500 feet above the lowest existing elevation of Curley Hollow. The SWMF will use a liner system which will be constructed in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-90-10) to contain the waste and collect leachate that may accumulate, while protecting the surface and ground water resources down gradient of the site.

5. Project Impacts:

No jurisdictional wetlands or waters will be affected by the power plant construction because all potential impacts to jurisdictional waters in this area have been avoided, and all existing wetlands within the power plant area were determined to be isolated wetlands of minimal ecological value in accordance with 9 VAC25-210-220.A. However, the construction of the Curley Hollow SWMF will require the filling of three small jurisdictional wetlands (approximately 0.42 acres) and will require the placement of fill material upon 3880 linear feet of existing jurisdictional stream channel.

The 0.42 acres of wetlands within the Curley hollow impact area are identified in the application material as W-12, W-17 and W-20. The three emergent wetland areas are not natural features in the landscape, but are principally remnants of prior coal mining activity. W-12 is approximately 0.18 acres in size and appears to be formed by an old breached in-stream pond which was likely created to support mining activity in the hollow. Wetland W-17 is a small wetland (0.11 acres) which has formed along an abandoned mine access road which leads to an un-reclaimed mine bench. The wetland hydrology for W-17 is likely supplied by a seep from the adjacent coal seam. Similarly W-20 (0.13 acres) has formed on an old surface mine bench where surface water and groundwater from the mine seam has impounded against an un-reclaimed high wall on the eastern side of Curley Hollow. The soils in wetlands W-17 and W-20 were formed from old mine spoil which have been inundated with water seeping from the exposed coal seam.

The stream within Curley Hollow is an unnamed tributary to Meade Creek and is identified in the application materials as UT-2. The stream originates in the head of Curley Hollow and flows for a distance of approximately 4100 feet before entering Meade Creek. Much of the hollow and stream have been disturbed by past mining activities, and the principal component of the flow within the stream has consisted of mine water from a pumped mine discharge which was directed into the main stem of the stream at the head of the hollow. When Dominion acquired the property in Curley Hollow in 2007, the mine water discharge was directed into an adjacent hollow (unnamed tributary of Russell Creek) and the flow in the stream was greatly diminished.

As part of the supporting documentation for the permit application, Dominion submitted results of a biological assessment of the integrity of Curley Hollow. The assessment investigated the status of benthic macroinvertebrates, fish species, and habitat conditions of the stream and concluded that the in-stream habitat of UT-2, (Curley Hollow) was rated marginal to poor and classified as not supporting biotic integrity. Low benthic macroinvertebrate and fish assemblages were observed on-site. The study concluded that low stream flow (except where the mine discharge is present), poor water quality, and marginal to poor habitat contributed to the results.

The results of this assessment were confirmed by DEQ staff during a site inspection conducted on November 29, 2007. During this field reconnaissance, DEQ staff observed that the stream flow in Curley Hollow was extremely low, and that the aquatic and benthic communities were suppressed. Much of the stream bed was covered with an orange precipitant which effectively blanketed the entire wetted area of the stream. The substrate of the stream was heavily imbedded with the precipitant which effectively filled in the interstices of the stream bottom and severely degraded the habitat for potential benthic communities. The precipitant was likely formed by the oxidation and precipitation of minerals dissolved in the underground mine water. As the mine water is brought to the surface and physically aerated by the action of the flow along the steep stream bed, the dissolved minerals are oxidized to an insoluble form.

The applicant proposes to place the CCBs (ash) generated at the power plant in a single fill area which should serve the facility for 20 to 30 years. The construction of the CCB disposal fill will require placement of material over the existing stream bed and cover approximately 3880 linear feet of the jurisdictional length of the stream. However, the fill area, or SWMF will isolate the CCB's from the surrounding environment by using a multi layer liner system that is designed to effectively prevent contamination of the surface and groundwater systems.

Construction of the foundation of the SWMF will require the installation of a network of underdrains to intercept the groundwater discharges under the proposed fill. The proposed underdrains will be a network of pipes and aggregate filled trenches which will carry the groundwater flow beneath the fill and discharge it to the stream below the toe. A layer of compacted sub-base material will be placed over the underdrains in order to provide a stable smooth base for a geotextile liner. The sub-base will consist of compacted clean fill material and will have a smooth surface of compacted soil material that is free of large rocks, debris, organic matter, and any other deleterious material. The sub-base provides a clean, smooth surface for the placement of the geosynthetic liner system. The smooth sub-base reduces the possibility of liner system punctures from objects or material beneath.

A 30-mil polyvinyl chloride geomembrane liner will be placed above the sub-base layer. The polyvinyl chloride liner is an impermeable flexible geomembrane placed directly on the prepared sub-base. Panels of the material are heat-welded together to create a single impermeable layer between the waste and the ground beneath. A non-woven geotextile layer will be placed above the polyvinyl chloride liner to function as a cushion between the PVC system and the overlying leachate collection system.

The leachate collection system is placed within a 12-inch thick layer of coarse material above the polyvinyl chloride liner and geotextile. The coarse material may be in the form of sand, aggregate, or bottom ash to provide a drainage medium for leachate to be collected. The leachate collection system is comprised of a network or perforated pipes within the 12-inch collection layer. Lateral pipes are spaced across the base of the liner system to minimize the leachate head on the liner system. Lateral pipes drain to header pipes to convey the leachate out of the disposl area to leachate ponds for treatment or reuse.

This multilayered design is intended to hydrologically isolate the ash from the surface water and ground water resources and prevent any off-site impacts from the surface disposal of the CCB. The underdrain system will also serve to maintain groundwater flow from the existing seeps and springs in the watershed to preserve the base flow of the stream downstream of the fill. Water quality impacts are expected to be temporary and minimal during the construction of this system provided the permittee abides by the conditions of the permit. Strict erosion and sedimentation control practices will be required for all aspects of construction. A loss of state waters will occur; however, the impacts have been avoided and minimized to the greatest extent practicable.

6. Avoidance and Minimization Efforts:

In choosing this site for utilization as a location to construct a power generation facility, Dominion evaluated several other locations in Southwest Virginia, including sites in Lee, Tazewell and Russell Counties. An analysis of the alternatives was submitted with the application materials as Attachment 3.1. The Virginia City site was selected as the most desirable for construction of the plant, and the Curley Hollow Site was selected as the preferred alternative for a disposal area.

The Curley Hollow site was chosen due to its close proximity to the power plant, thereby minimizing the construction of haulage ways, and of the sites available for disposal, provided the least amount of total impacts. The proposed construction at the plant site was designed to avoid impacts to jurisdictional wetlands and waterways, and the proposed impacts are limited to the construction and maintenance of the disposal area.

The disposal area was designed as single hollow fill which was placed up-gradient as much as practical to minimize the length of stream impacts while still maintaining a capacity to serve the facility for 25 to 30 years. A single center hollow was chosen because alternative designs which would avoid impact to the center of the valley would require a significant reduction in the storage life of the SWMF or would require Dominion to utilize additional valleys in the area. Since this would result in additional land cover impacts and potentially more impacts to wetlands and water bodies, a single valley fill is the least objectionable alternative. Although a loss of

water resources will occur, the impacts have been minimized as much as practicable, and the applicant has provided a mitigation and compensation plan which will offset the loss of state waters and resources.

7. Compensation for Unavoidable Impacts:

The proposed disposal area will have unavoidable impacts to 3880 linear feet of stream bed and 0.42 acres of emergent wetlands. In order to provide compensation for those losses, the applicant has proposed to:

1) Enhance and preserve at least 2.0 acres of emergent wetland in the floodplain area adjacent to Meade Creek;
2) Restore and preserve approximately 1,580 linear feet of Meade Creek using a design that mimics natural stream channel pattern and profile, and;
3) Preserve the entire watershed along 6,100 feet of intermittent stream channel in Maize Hollow.

This combination of creation, restoration and preservation provide sufficient mitigation credits under current DEQ guidelines to provide adequate compensation for the unavoidable losses, and the implementation of the mitigation plan will result in no net loss of wetland or stream function.

The Department has established a stream assessment and compensation crediting methodology which is used to assess stream impacts and mitigation in Virginia. This protocol which is called the Unified Stream Methodology (USM) was used to determine if the proposed stream reconstruction located in Meade Creek and the preservation of Maize Hollow fully mitigated for the proposed impacts.

The USM model is comprised of two main components; the Compensation Requirement for proposed impacts, and the Compensation Credit for proposed mitigation measures. The Compensation Requirement (CR) was calculated using a representative Aquatic Biological Station (ABS-3) from Curley Hollow, and the assessments were made of the channel condition, riparian buffers, instream habitat, and channel alteration status. This analysis resulted in a Reach Condition Index (RCI) of 1.02. The RCI multiplied by the total impact length of approximately 3,880 linear feet results in a compensation requirement of 3,958 USM compensation units.

Compensation Crediting (CC) for proposed mitigation is the second major component of the USM methodology. Varying degrees of credit are given for various restoration methods that address problems with the dimension, pattern, and profile of the restoration reach, as well as activities that enhance or protect instream habitat or riparian buffers.

Field observations were made to determine the appropriate restoration measures for the proposed mitigation sites. Meade Creek along the proposed restoration length exhibited numerous signs of serious channel instability, such as vertical raw and eroding banks, extensive mass wasting, and significant entrenchment. The area adjacent to the stream has been heavily grazed by cattle which have uncontrolled access to the stream banks. The cattle access aggravates the instability of the banks, which promotes additional wasting of material to the stream. The cattle also

disturb the stream bottom and provide an organic load to the stream which is detrimental to the aquatic and benthic communities.

The entrenchment has also provided a physical disconnection from a functional floodplain and has diminished the stream's ability to pass flood volumes in a stable manner. The current location of Meade Creek along the proposed restoration reach has been straightened and relocated to the side of its original valley along the toe of spoil bank created from previous land disturbing activity.

These stream deficiencies were present throughout the proposed restoration reach and indicated that full restoration, including measures taken to address the dimension, pattern, and profile of the stream are necessary to establish a stable natural channel. The mitigation plan included in the application proposes to reestablish a sinuous channel in its approximate original location along the center of the hollow.

The newly created channel will be designed in accordance with the fluvial geomorphological principles contained in Rosgen, 1996. Cross-sectional area and discharge were determined using existing stream cross-sections, and a design bankfull discharge was back-calculated from this cross-section and referenced to a regional curve. Key design parameters were obtained by using both dimensionless ratios from a reference reach located on a similar valley type and from published data.

The stream dimension will be corrected by the establishment of a channel of the proper cross-sectional area and width/depth ratio that has access to the floodplain. The pattern of the stream will be corrected by creating a sinuous channel that meanders across the valley with proper meander geometry for the existing valley slope. The profile deficiencies of the stream will be addressed by creating riffles, runs, pools, and glides which are currently absent. Cross Vanes, J-hooks, and meanders will be utilized to aid in energy dissipation, as well as provide grade control and habitat.

Vegetated buffer zones with appropriate riparian, wetland and upland vegetation will be established on both sides of the restored channel. A success monitoring and maintenance plan will be implemented for a period of five years or until the project has been demonstrated as functionally mature and self-sustaining. In addition, the company will establish a deed restriction on the property which will create a permanent legal protection to prevent future re-disturbance of the site. Cattle and other domestic grazing animals will be permanently excluded from the site.

The USM model assigns a 1 CC per foot of full restoration activities, in addition to credit gained through riparian activities necessitated by the extensive cattle impacts. Since livestock will be permanently excluded from the entire restoration reach; an additional 0.3 CC per foot of restoration is credited for the restoration. The USM model assigned 2,561 CC's for this restoration activity.

However, the restoration of Meade Creek alone is not sufficient to offset the losses of Curley Hollow. Therefore, in addition to the stream restoration activities, the entire watershed of Maize Hollow will be preserved into perpetuity. UT-4 in Maize Hollow is approximately 6,300 linear

feet, but approximately 200 linear feet of the stream has been covered by spoil from a pre-reclamation law mining activity. Although the spoil was not contributing sediment to the stream, the original channel was covered under a large bolder pile which was shoved into the hollow by prior mining activity. The mining activity occurred prior to the promulgation of reclamation regulations, and was never reclaimed. (Restoration of the channel is not proposed in this section due to the steepness of the terrain and its existing stable nature.) The placement of the spoil resulted in subsurface flow in a small portion of the stream, and therefore the length was subtracted from the preservation total.

The preservation will require that deed restrictions be placed upon the entire watershed of Maize Hollow in order to prevent additional future surface disturbances. The USM model assigned 2,074 CC's for this preservation activity. The deed restriction will contain language to disallow logging operations, mechanized clearing, grazing, or residential or industrial development on the areas to which it applies. The deed restriction for the preservation area will also disallow any activity which would increase runoff rates in the watershed. It will be the responsibility of the landowner, to monitor and enforce the deed restrictions.

As an overall total, the stream mitigation proposed would provide compensation credits of 4,635 compensation units. Given that the USM compensation requirement s for the losses in Curley Hollow are 3,733 units, it is apparent that the proposed stream mitigation fully compensates for the proposed impacts.

The mitigation plan submitted with the application proposes to offset the 0.42 acres of impacts by enhancing at least 2.0 acres of wetlands which is integrated with the proposed Meade Creek restoration. Currently, the existing wetland is located in a depression in the valley that is separated from the surface hydrologic connection to Meade Creek by historic re-grading operations. Previous land disturbing activity moved the stream to the eastern edge of the valley. Over time, the existing wetland developed in a low area in this unnatural topographic setting. No hydrologic inputs from Meade Creek into the wetland currently exist, except perhaps during exceptional precipitation events.

The proposed Meade Creek restoration will involve relocating the stream to a sinuous alignment and more natural profile, allowing the stream to access the floodplain. This relocation will also reconnect the existing wetland to the stream's hydrology. As a result, the currently disjointed resources will be able to function as a stream-wetland complex, enhancing the functionality and value of both resources. Hydrologic inputs to the wetland will vary with stream flow and groundwater levels, but the very low slope of the valley and the low entrenchment ratio of the proposed stream channel should be very conducive to wetland vegetation and to the formation of wetland soil conditions. In addition, the applicant proposes to create slight (approximately 0.5 foot deep) depressions (i.e. micro-topography) within the flood-prone area of the stream as it is relocated to run through the wetland. These depressions will serve as small vernal pools, retaining water from floods and precipitation, further enhancing the diversity of habitat with in the wetland.

8. Site Inspection:

DEQ staff conducted a site visit on November 29, 2007 in order to verify the existing conditions at the site including the conditions observed to develop the USM scores. During the visit, DEQ staff inspected the entire jurisdictional length of Curley Hollow, Maize Hollow and the entire length of the proposed restoration site. Staff observations confirmed the conditions as described in the application. The DEQ staff confers with the assertions contained in the application regarding the existing site conditions and agrees that the mitigation and compensation plan is appropriate and satisfies the regulatory requirements of 9VAC 25-210-115.

9. Riparian Landowner Notification:

All property adjacent to and within one-half mile downstream of the impact area is owned by Virginia Electric and Power Company, 701 East Cary Street, Richmond, VA 23219. The ownership was confirmed by correspondence from the Wise County Commissioner of Revenue on Friday February 29, 2008. Since all downstream property is owned by the applicant, no downstream landowner notification is necessary.

10. Relevant Regulatory Agency Comments:

As part of the application review process, DEQ contacted the appropriate state resource agencies and coordinated with the United States Army Corps of Engineers. The following summarizes the responses from the agencies:

VA Dept of Game and Inland Fisheries - According the state database of threatened and endangerd species, several federal and state listed aquatic species (i.e. birdwing pearlymussel, fine-rayed pigtoe, shiny pigtoe, slender chub, yellowfin madtom, deertoe, elephantear, spiny riversnail, black sandshell, fragile papershell, fluted kidneyshell, ashy darter) and numerous other species of concern have been documented near the project area. Due to the presence of these and other listed species, the Clinch River has been designated a Threatened and Endangered Species Water and demands special scrutiny to ensure that the proposed project does not have an adverse affect upon the aquatic life.

Therefore, the VA Dept of Game and Inland Fisheries (VDGIF) submitted comments and recommendations regarding the proposal which address their concerns regarding potential impacts to aquatic life. A summary of their relevant comments (in italics), and the DEQ response and recommendations are arranged by topic below:

1. *The agency expressed concern that about the potential impacts to existing mussel populations and recommend that mussels surveys be performed in segments of these and/or downstream waters. They also recommended coordination with USFWS regarding possible impacts upon federally listed species.*

As part of their VWP application materials, the applicant submitted an endangered species assessment for the aquatic species and the results of an endangered bat survey. The endangered species assessment included site specific surveys for rare mussels species. The surveys utilized both visual and tactile methods by qualified professional personel to survey for mussels within the reaches of the stream likely to be affected by the facility. No mussel species were found during the survey effort. The introduced Asian clam (*Corbicula fluminea*) was common in Russell Creek below the confluence with Meade Creek, and numerous relict shells of the Asian clam, along with a few live individuals were present in this reach. The Asian clam was absent from Meade Creek upstream of the Russell Creek confluence and was not observed in any of the tributaries evaluated in the study. The study concluded that the streams in the project area have been subject to alterations to physical habitat and hydrology from mining and other land disturbing activities. These activities have likely had significant negative effects on the aquatic fauna within the subject streams.

The study also concluded that while Meade Creek and Russell Creek below the site are potentially suitable habitat for the Tennessee heelsplitter, it was not located during the survey efforts. Therefore, direct impacts from project construction are "**Not Likely to Adversely Affect**" the Tennessee heelsplitter within the Russell Creek watershed as there are no known occurrences of this species within the project area. However, the potential impact to downstream occurrence of these species will be minimized by the site's strict adherence to the erosion and sedimentation control requirements, and the potential habitat will be improved by the restoration and preservations efforts in Meade Creek which will be implemented by the mitigation plan.

Similarly, studies to determine the presence of endangered species of bats were negative. A review of the habitat scheduled for removal was determined to be of low value to Indiana bats, particularly for the needs of maternity colonies. Mist net surveys provided no evidence that endangered bats use the project area during summer months. Searches for unknown mine portals were conducted within the project area. The searches adequately covered all areas possessing characteristics for the potential presence of portals. No portals were found in the project area. Therefore, the study concluded that the project will have no negative impact upon populations of endangered species of bats.

2. *VDGIF recommends that assurances be made to prevent flyash components from leaching into groundwater or over land into sensitive waterways.*

   The application material included a detailed description of the multilayered liner system proposed for the CCB landfill. The liner as described in Section 5 above provides a reliable barrier to prevent off site impacts to the surface and ground water resources in the area. The system also provides mechanisms to monitor the effectiveness and success of the system, and should adequately hydrologically isolate the waste material.

3. *The agency expressed concerns regarding the overall and cumulative impacts of the new power plant, including secondary impacts such as additional mining activity and additional water use from existing water sources.*

Secondary impacts from mining or additional water extraction from existing sources are beyond the scope of this permit action. As long as the withdrawal at the existing intakes are below the thresholds of the original 401 certifications issued to the water treatment plants, DEQ will not require permits for the additional water consumption.

4. *Because process water including landfill leachate will be treated at the St. Paul Wastewater Treatment Facility, the agency expressed concern about the ability of the treatment facility to effectively treat the effluents in the discharge. DGIF further recommended that assurances be provided that the treatment facility has the capability to effectively treat the discharge water.*

   Although it is not a component of this permit action, the Town of St. Paul must obtain an appropriate permit modification and upgrade and expand their existing treatment capacity prior to accepting any wastewater from the proposed operation. The town is currently working in conjunction with Dominion and DEQ to address the wastewater treatment needs. All permit actions with respect to the discharge of treated wastewater from the operation will comply with State Water Control Law and Federal Clean Water Act guidelines.

5. *VDGIF recommends conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures.*

   Appropriate provisions are incorporated in to the Part I special conditions of the proposed permit which address these comments. The construction of the restored stream channel will be performed in the dry, while the flow continues in the existing channel. Once construction of the channel is complete, and the banks stabilized, the flow will be directed into the new channel. Once redirected, the existing channel will be filled and the area reclaimed.

6. *The agency recommends maintaining undisturbed wooded buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams.*

   The buffer zone requirements for the restored and preserved mitigation sites will incorporate buffers which exceed these recommendations.

The Virginia Department of Game and Inland Fisheries also reviewed the proposed mitigation and compensation plan. Correspondence received on March 3, 2008 indicated that the agency had no additional comments or concerns regarding the plan.

Department of Conservation & Recreation - DCR also submitted comments and recommendations regarding the proposal which address their concerns regarding potential

impacts to aquatic natural heritage resources and the T&E species A summary of their relevant comments (in italics), and the DEQ response and recommendations follows:

1. *DCR expressed concern that the placement of CCB associated with the power generation into Curley Hollow could potentially have short and long term impacts on fish and mussel populations downstream of the disposal site.*

   The application material included a detailed description of the multilayered liner system proposed for the CCB landfill. The liner as described in Section 5 above provides a reliable barrier to prevent off site impacts to the surface and ground water resources in the area. The system also provides mechanisms to monitor the effectiveness and success of the system, and should adequately hydrologically isolate the waste material from the downstream waters.

   Any water which contacts the waste material will be handled as contaminated wastewater (i.e. or leachate), and be treated prior to discharge in order to achieve strict compliance with the state water quality standards. Also, during the construction phase of the project the facility will strictly adhere to the erosion and sedimentation control measures in order to minimize off site impacts.

2. *DCR recommended that a long term monitoring plan be developed and implemented for the life span of the project.*

   The permit will require monitoring of the success of the restoration and compensation activities for a period of five years in order to determine that the goals of the plan are met, and the resulting restoration and enhancement activity produce stable results.

   Although groundwater and surface water monitoring of potential impacts of the fill placement is beyond the scope of the Virginia Water Protection permit, other DEQ programs will address the disposal of solid waste and the discharge of wastewater. The waste disposal permit will require monitoring of groundwater, and potentially surface waters in the vicinity to evaluate the integrity of the liner system. DEQ permit under the VPDES program will effluent limits and monitoring requirements for potential discharges into surface waters.

Relevant agency comments are addressed in the VWP individual permit Part I - Special Conditions. Therefore, the staff anticipates no adverse effect on water quality and fish and wildlife resources provided the applicant adheres to the permit conditions.

U.S. Army Corps of Engineers – The placement of fill within the jurisdictional wetlands and waterways will require also a permit from the USACE under Section 404 of the Clean Water Act. The application for the permit is currently being processed by the Clinch Valley Field Office of the USACE Norfolk District Regulatory Office P.O. Box 338 Abingdon, Virginia 24212.

11. Public Notice and Comments:

A notice which describes the proposed permit action will be published in a newspaper of general circulation in Wise County, and the agency will accept public comment for a period of 30 days after the initial publication of the notice. During this period, individuals may submit written comments. Comments must include the name, address, and phone number or email address of the person submitting the comments. The comments must also include a concise explanation of the water quality issues of concern.

After the close of the comment period, the Department will consider all comments received that are within the scope of the Virginia Water Protection law and regulations. If requests for a public hearing have been received, the Department will hold a public hearing if there is significant public interest in the permit **and** there are disputed issues relevant to the permit issuance. If a public hearing is to be held, notice of the public hearing will be given and a decision on the permit will be made by the State Water Control Board after the public hearing process has been completed.

12. Special Conditions:

The following special conditions were developed to protect instream beneficial uses, to ensure compliance with applicable water quality standards, to prevent significant impairment of state waters or fish and wildlife resources, and to provide for no net loss of wetland acreage and function through compensatory mitigation and success monitoring and reporting.

Part A Authorized Activities

Nos. 1 and 2 address the activities authorized by this permit, including impact types and limits.

Part B Permit Term

This section stipulates the permit term and re-issuance process to ensure that all permit conditions are completed. This section assigns a permit term of 15 years.

Part C Standard Project Conditions

This section includes standard permit conditions which apply to the proposed operation:

No. 1 addresses the requirement for the minimization of adverse impacts to instream beneficial uses.
No. 2 ensures that the project will be executed in a manner that limits the disruption of the movement of aquatic life.
No. 3 ensures that downstream flows will be maintained to protect both instream and off-stream beneficial uses.
No. 4 ensures the passage of high flows.

No. 5 requires maintenance of continuous flow of perennial springs for the protection of instream beneficial use.
No. 6 ensures that dredging and filling operations will minimizes stream bottom disturbances and turbidity.
No. 7 requires instream activities to be conducted during low-flow conditions to protect instream beneficial uses.
Nos. 8 through 11 provide requirements and limitations on the entry of various materials (including concrete, fill, construction and waste material, fuels, lubricants, and untreated stormwater runoff) into state waters.
Nos. 12 and 13 limit the use of machinery and equipment in surface waters to protect beneficial uses.
Nos. 14 through 18 require temporary disturbances to surface waters during construction to be avoided and minimized to the maximum extent practicable and the restoration of such temporary disturbances.
No. 19 prohibits the violation of Water Quality Standards in surface waters as a result of project activities.
Nos. 20, 21 ensures that project, compensation, and restoration methods follow current law and accepted practices.
No. 22 requires the identification of all non-impacted surface waters in the vicinity of the proposed activity to prevent unpermitted impacts.
Nos. 23 through 28 set forth all reporting requirements concerning construction, monitoring, compensation, and restoration as required by current law and regulations.

Part D Stream Modifications

This section establishes conditions which apply to the activities in and adjacent to the waterways.

No. 1 requires bank stabilization to minimize sedimentation of surface waters.
No. 2 prohibits the use of stream substrate for erosion control to avoid additional impacts to state waters.
No. 3 requires upland disposal of material removed from stream substrate to avoid unpermitted impacts to surface waters.
No. 4 ensures riprap placement conforms to current law and regulation.
Nos. 5, 6 direct the placement and contents of materials for the construction of submerged structures, and on-bank storage and staging of materials, to protect water quality and fish and wildlife resources.
No. 7 addresses the requirements for stream channelization or relocation to avoid additional impacts to state waters.

Part E Project Construction Monitoring and Submittals (Impact Site)

This section establishes special monitoring conditions which apply to the Curley Hollow Impact site.

No. 1 requires photographs of pre-construction activities to track the progress of the project and monitor permit compliance.
No. 2 requires that final construction plans be submitted at least 30 days prior to construction

No.3 requires that the activity conform to the approved construction plans.
No. 4 requires the permittee to notify DEQ at least 10 days prior to construction.
No. 5, 6, 7 and 8 requires photographic documentation of the construction in the impact areas.
No. 9 requires annual construction reports for the duration of the activity within the impact zone.
No. 10 requires photographs of the completed construction areas to track the progress of the project and monitor permit compliance.
Nos. 11 and 12 specify reporting requirements at the completion of project construction activities to ensure compliance with approved project plans.

Part F On/Off Site Creation, Restoration, and/or Preservation Compensatory Mitigation

Nos. 1 through 3 summarizes all compensation requirements of the activity.

Part G On/Off Site Creation, Restoration, and/or Preservation Standard Conditions

This section lists the requirements to ensure the success of the compensation site to provide appropriate compensation for unavoidable surface water impacts.

No. 1 states that permittee is responsible for all aspects of the compensation and such responsibility can only be transferred with the permit.
No. 2 requires a final compensation plan that becomes an enforceable part of the permit.
No. 3 requires a site stabilization plan for compensation sites that involve land disturbance.
No. 4 requires that compensation site construction must start within 180 days of impact site construction.
Nos. 5 through 7 provides guidance on vegetation planting, removal, and control criteria.
No. 8 prohibits the entry of point sources of untreated stormwater runoff into the mitigation site.
No. 9 requires identification and protection of non-impacted surface waters and associated buffer areas.
Nos. 10 through 12 specify reporting requirements and provide DEQ contact information.

Part H Wetland & Stream Compensation Site Construction Tasks, Monitoring, and Submittals

This section establishes the monitoring and reporting requirements for the wetland and stream compensation sites.

No.1 requires photographic documentation of the preconstruction conditions at the compensation site.
No. 2 requires that the applicant notify the DEQ at least 10 days prior to commencement of construction activity at the compensation site.
No.3 and 4 require the permittee to submit a final stream and wetland compensation plan, and establishes the minimum contents for the plan.

No. 5 , 6 and 7 require photographic documentation of the construction phase of the operations.
No. 8 requires water quality monitoring of the water flow through the new channel.
No.9 and 10 establish requirements for construction monitoring reports.
No. 11 though 20 establish success monitoring requirements.
No. 21 and 22 establish requirements for reporting of success monitoring.

13. General Standard:

This project may result in minimal, temporary impacts to beneficial uses related to the propagation and growth of aquatic life as defined in the General Standard. Provided the permittee abides by the conditions of the permit, no substances shall enter state waters in concentrations, amounts or combinations that would contravene established standards or interfere with beneficial uses or are inimical or harmful to human, animal, plant, or aquatic life.

14. Staff Recommendations:

Based on the review of the permit application, the staff provides the following recommendations.

- The proposed activity is consistent with the provisions of the Clean Water Act and State Water Control Law and will protect instream beneficial uses.
- The proposed permit addresses avoidance and minimization of surface water impacts to the maximum extent practicable.
- The effect of the impact, together with other existing or proposed impacts to surface waters, will not cause or contribute to significant impairment of state waters or fish and wildlife resources.
- The proposed permit conditions address no net loss of wetland acreage and function through compensatory mitigation and adequately assess compensation implementation via success monitoring and reporting.
- This permit is proposed to prevent unpermitted impacts.

The staff recommends that the Director:

(1) Find the above recommendations to be appropriate.
(2) Approve the attached VWP individual permit and conditions.
(3) Direct the staff to issue VWP Individual Permit Number 07-2334.