



COMMONWEALTH of VIRGINIA

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August 6, 2010

Mr. Leon Szeptycki
University of Virginia, Environmental Law and Conservation Clinic
580 Massie Road
Charlottesville, VA 22903-1738

RE: Gathright Hydroelectric Project, VWP Permit No. 09-0855

Dear Mr. Szeptycki:

The Department of Environmental Quality (DEQ) has reviewed the public comments received on the draft Virginia Water Protection permit noted above and has prepared a comment summary and response document (attached). Major changes made to the permit as a result of public comment are as follows:

1. The cover page and Part I.A were revised to clarify that authorized activities do not include utility line installation in uplands.
2. The cover page was revised to make the effective date of the VWP permit coincide with the effective date of the FERC license, should one be issued.

DEQ anticipates issuing the final VWP permit within the next two weeks. If you wish to receive a copy of the final permit, please email at brenda.winn@deq.virginia.gov.

Thank you for your participation in the VWP permitting process.

Sincerely,

A handwritten signature in black ink that reads 'Brenda Winn'.

Brenda K. Winn
VWP Water Withdrawal Project Manager

cc: Jeanne Richardson, USACE-Norfolk District
Owen Reece, USACE-Norfolk District
Dr. James Price, Jordan Hydroelectric Limited Partnership

Attachment

**Jordan Hydroelectric Limited Partnership
Gathright Hydroelectric Project, Alleghany and Bath Counties, Virginia**

**Summary of Public Comments and DEQ Response
Draft Virginia Water Protection Permit No. 09-0855**

August 6, 2010

Background:

The draft Virginia Water Protection Permit No. 09-0855 authorizes the diversion of surface waters for the purposes of hydroelectric power generation. The proposed project utilizes an existing U.S. Army Corps of Engineers (Corps) facility on the Jackson River, Gathright Dam and Lake Moomaw, and is a unique approach to hydroelectric power generation in Virginia.

The applicant is currently seeking a license from the Federal Energy Regulatory Commission (FERC) that requires the applicant to seek state Section 401 Water Quality Certification, and thus, an application was submitted to DEQ for consideration. The proposed project has not been previously permitted under the Virginia Water Protection Permit Program. The draft VWP permit was developed to protect beneficial uses as a result of the proposed hydroelectric generation project, not as a result of the existing Corps project.

The Corps and DEQ have recently agreed to conduct a Section 216 Feasibility Study for Lake Moomaw and an approximate 46-mile section of the Jackson River (from dam to confluence with Cowpasture River), under provisions of Section 216 of the River and Harbor and Flood Control Act of 1970 (Public Law 91-611), to determine the feasibility of modifying the Corps' operation of Gathright Dam and Lake Moomaw for low flow augmentation to improve and restore environmental resources downstream along the Jackson and James Rivers. The study utilizes an April 2010 Total Daily Maximum Load (TMDL) study recently completed by DEQ for benthic species in an impaired section of the Jackson River, downstream of the proposed project, to identify sources of pollution causing low dissolved oxygen levels and biological impairment in the Jackson River watershed (Covington to confluence with Cowpasture River).

The Department of Environmental Quality (DEQ) received four comments and no requests for a public hearing during the public comment period for development of the draft permit. The comments received focused on impacts to instream flows; impacts to water quality; impacts to aquatic species; impacts to riparian land owners; DEQ's ability to enforce permit conditions; and water quality monitoring and reporting.

Summary of Comments and DEQ Response:

Tredegar Corporation and Jackson River Mountain Properties:

1. ...Tredegar objects to the issuance of the permit as drafted because it approves impacts to property owned by Tredegar. Tredegar has not consented to these impacts...

2. Tredegar...noted that [JPA] was signed by BARC as “owner of an easement for a utility line crossing the Jackson River”. ... the BARC easement does not extend to all of the river bottom and property referenced in the draft permit.
3. ...Tredegar has a crown grant that grants it title to the river bottom in this area...owns property adjacent to the river...Neither BARC nor [the applicant] own, control, or have any other rights over the entirety of the property impacted by the draft permit.
4. ...Although DEQ is requiring monitoring of dissolved oxygen and temperature, Tredegar believes that turbidity and flow levels should also be monitored. ... the monitoring should also ensure the current high quality conditions are not changed – see 9VAC25-260-30. A baseline for the monitoring should be established for this purpose. Finally, while the permit requires development of a contingency plan to address adverse impacts to downstream fisheries or water quality, the permit does not identify the actions that must be taken should the identified parameters be exceeded or changed. Will such plan be available for public comment?
5. ...The VWP permit indicates that the transmission lines will be buried. Is this true for that portion of the line that crosses the river? ...
6. The VWP permit does not discuss whether any evaluation of wetland impacts has been completed. ... Tredegar also notes that [the applicant] has never provided any alternatives analysis for the transmission line. Tredegar believes that such an analysis should be provided as part of the VWP permitting process.

DEQ Response:

Based on the information provided by the applicant, VWP staff understands that no wetland or stream impacts were identified for activities related to the utility line installation or construction, and that these activities are to occur in uplands over which DEQ has no regulatory authority. Therefore, we feel that the property ownership along the utility corridor is irrelevant to the permit. We understand that the applicant intends to install overhead electrical transmission lines across the Jackson River within an existing easement reportedly held by BARC. We further understand that no fill material or excavation, including footers, will occur in the Jackson River. If unauthorized impacts to surface waters actually occur from any portion of the project construction, DEQ may pursue enforcement action against the applicant/permittee. However, to remove any confusion regarding the draft permit language as it relates to the utility line, the cover page and Part I.A have been revised to remove the appearance of authorizing the electrical transmission line in uplands.

DEQ’s water quality program is partnering with the U.S. Army Corps of Engineers to begin conducting a Section 216 Feasibility Study for Lake Moomaw and an approximate 46-mile section of the Jackson River (from dam to confluence with Cowpasture River), under the provisions of Section 216 of the River and Harbor and Flood Control Act of 1970 (Public Law 91-611). The purpose of the study is to determine the feasibility of modifying the

Corps' operation of Gathright Dam and Lake Moomaw for low flow augmentation to improve and restore environmental resources downstream along the Jackson and James Rivers. A key element of the 216 study is to analyze the available water quality data to identify the baseline conditions in Lake Moomaw and the main stem of the Jackson River. Baseline conditions will be developed using key historical data including temperature, water levels, and dissolved oxygen. The overall objective is to assess the potential impact of the flow pulses on the temperature and dissolved oxygen in the Jackson River below the Gathright Dam as well as in the lower Jackson. The 216 study team will be evaluating how additional flow release from the hypolimnion (DO deprived water) could lead to low instream dissolved oxygen levels that may adversely affect macroinvertebrates and fish, and how flow pulses from the Gathright Dam may lead to higher levels of manganese (Mn) and iron (Fe) caused by the blend of bottom water from the lake.

DEQ is requiring monitoring by the applicant for potential changes to water quality based on the proposed hydroelectric operations rather than the existing operations or any future operations conducted by the Corps. Requiring monitoring of flow was considered. However, a United States Geologic Survey (USGS) gaging station exists just below the dam and captures flow at that point in the river. This gaging station also monitors temperature, specific conductance, dissolved oxygen, and pH. VWP staff could not determine what additional useful information could be had from requiring additional monitoring of flow, as the proposed project is limited by its design (a minimum hydraulic capacity of 100 cfs, and a maximum hydraulic capacity of 350 cfs). Provided that the applicant's project performs as directed by the Corps for its own purposes, we did not see how monitoring flow through the generation module would help us determine if any change was occurring, and if so, what the significance of that change would be. Flow data can be obtained from the USGS station via the USGS web page <http://waterdata.usgs.gov/nwis/rt>.

DEQ understands that the Corps has maintained a monitoring program at Gathright Dam from at least 1982 to 2001. According to the Corps, dissolved oxygen, pH, and, specific conductance were continuously measured, basically from a year before filling began through September 2001 when it was discontinued, as part of the USGS-USACE Cooperative Streamgaging Program. As part of the Corps' Water Quality Monitoring Program, these parameters are measured at approximately the same location (Tailwater Gage) each time a monitoring/sampling is conducted. The general schedule for this is: First Part of April; First Part of May; Every Two Weeks after that until usually late November/early December. The bi-weekly monitoring/sampling events are designed primarily to determine the characteristics of the inflow, release, and Lake Moomaw itself. Items monitored include dissolved oxygen, temperature, pH, and specific conductance every 5 feet in the lake. Sampling is done for metals (iron and manganese, top and bottom of the reservoir) every time and for bacteria and nutrients (top) every other time. There is no scheduled expiration date on the Corps Water Quality Program.

In addition to the Corps' monitoring, DEQ conducts monitoring downstream of the dam through its water quality monitoring and assessment programs, and it is our understanding that the MeadWestvaco Packaging Resource Group has collected substantial ambient water

quality data on the river. Therefore, VWP staff could not see any benefit from additional monitoring of water quality parameters by the applicant.

MeadWestvaco Corporation:

1. ...supports the use of the Gathright Dam for generation of electricity as long as it can be done without impacting the existing operation of the Gathright Dam and the exceptional water quality that the dam releases into the Jackson River. However, we have reservations concerning the proposed project due to the fact that it is only a concept at this time and is continuously evolving. The permit cover page states that the project "will not cause or contribute to a significant impairment to state waters or fish and wildlife resources." We do not believe DEQ can make that statement at this time due to the fact that the project as proposed is only a concept without any significant detail, no engineering plans or studies, no implementation plans, etc. If DEQ issues a permit at this time, it needs to be an interim permit subject to DEQ's continued review of this project as it evolves.
2. Part I.C.5 - This condition cannot be assured at this time since the project will block one of the lower water quality gates routinely used by the Corps of Engineers (Corps) for controlling water quality of releases from the dam as well as one of the two flood gates.
3. Part I.D - ...In addition, any changes made by the permittee must also be [made] with the approval of DEQ with input from the Department of Game and Inland Fisheries (DGIF) and possibly other stakeholders.
4. Part I.E - The permit is not clear as to what water quality conditions must be met/maintained. Virginia's antidegradation regulations require the maintenance of existing water quality criteria in exceptional waters. The permit needs to specify that existing water quality parameters must be maintained.
5. Part I.E.1.a and b. - Monitoring should be required for the entire length of the permit and any extensions unless the effort is duplicative to monitoring conducted by other agencies.
6. Part I.E.1.c - the contingency plan should also be approved by DGIF and the Corps.
7. Part I.E.d - Monitoring results should be reported to DEQ quarterly in addition to the annual report.
8. Part I.E.8 - The permittee should notify DEQ of all project modifications and changes to facility operations, not just those which permittee determines have the potential to result in surface water impacts.

DEQ Response:

The draft permit developed by DEQ is the only permitting option that the agency has at this time under current law and regulation. The Virginia Water Protection Permit Program does

not have the authority to issue provisional permits. We also must act on the permit application within a given time period, or the Federal Energy Regulatory Commission (FERC) will assume the Commonwealth has waived its permit, or that no permit was required. Should any change in water quality occur that is deemed to be an impact to beneficial uses on the Jackson River, the agency may pursue enforcement action against the applicant/permittee.

Per DEQ's Water Quality Standards (9VAC25-260), the tailwater below Gathright Dam is classified as a wild natural trout stream (Class ii). As such, the stream contains a good wild trout population or the potential for one but is lacking in aesthetic quality, productivity, and/or in some structural characteristic; maintains good water quality and temperature, maintains at least a fair summer flow, and adjacent land is not extensively developed; and would be considered a good wild trout stream and would represent a major portion of Virginia's wild trout waters. The Jackson River in the vicinity of the proposed project is not designated as Exceptional State Waters (ESW), and therefore, the protection provided under the Commonwealth's water quality standards is to maintain existing instream water uses and the level of water quality necessary to protect the existing uses. Because historic levels of many water quality parameters has remained above the established water quality standards through the Corps' water quality program and operations, DEQ believes this condition will continue unless the proposed hydropower project fails to meet the operational requirements of the Corps. Therefore, by requiring adherence to the Corps operations, we feel that the proposed project will not cause or contribute to a significant impairment to state waters or fish and wildlife resources. DEQ is unclear how it would be physically possible to separate the flow of water between the hydropower generation unit and the Corps' existing tower structure in such a way as to measure any water quality parameters before the flow exits the existing Corps infrastructure.

The duration of monitoring required by the applicant/permittee was considered in conjunction with existing, ongoing, and future monitoring by the DEQ, Corps, USGS, and MeadWestVaco itself. The applicant requested that he be relieved of monitoring requirements after a reasonable period of time due to the other monitoring efforts in place and those that are being planned and implemented as part of the Section 216 study mentioned previously in this summary and response document. DEQ concurred with the request.

As DEQ is the permitting authority for the proposed project, we feel that the plans required by the permit should first be approved by our agency. As a matter of policy and practice, we regularly coordinate with other state and federal resource agencies as the need arises, and due to the pending FERC license, many government and private stakeholders will be involved in future developments of the permitted project, as well due to the pending studies for the Corps' existing project. We do not feel it necessary to revise the permit conditions to reflect these typical coordination processes.

Roanoke Chapter of Trout Unlimited and Virginia Council of Trout Unlimited (TU):

1. TU believes that the current draft does not include crucial details needed to protect the Jackson River's very high water quality and robust, self-sustaining wild trout fishery.

...draft does not include sufficient detail to ensure compliance with Virginia water quality standards. ... We ask DEQ to add the details specified in this letter...

2. ...It is essential that the VWP permit contain conditions adequate to ensure that the project not harm this [trout] important beneficial use...The tailwater below Gathright Dam is classified as a natural trout water under Virginia water quality standards, which require an instantaneous minimum of 6 milligrams per Liter of dissolved oxygen and a maximum temperature of 21 degrees Celsius. The present operation of the dam provides levels of these parameters that greatly exceed standards. ... For the trout fishery to continue to thrive, these exceptionally high levels must be maintained throughout the length of the tailwater. ... the permit does not contain enough detail to ensure the project will meet standards.
3. ...DEQ and the Board should require in this permit that Jordan be able to replicate the Corps' current mixing capabilities and regime. ... the Corps of Engineers is in the best position to confirm whether the project design and operations plan will allow [the Corps] to continue to release the same water quality and temperature mix that is has historically. The Corps has not yet confirmed that the project design will allow it to do so. ... we think DEQ must make two changes to Part I.B.2: 1) the permit is not effective unless the Corps confirms the project is consistent with its current operations; 2) add language that the Corps must confirm that the project will not affect their ability to mix lake water in releases...The only way to make sure that current uses are protected in advance of project operations is for the Corps to confirm up front that the project design will be consistent with their current water quality infrastructure and operations.
4. ...This language [Part I.C.1] is inconsistent with the relevant provision in statute...the language in the permit should be changed to match the statute.
5. ...The draft does not specify what water quality standards apply to the project, or set parameters for temperature, dissolved oxygen, or other criteria to ensure compliance. ...
6. The VWP permit should include numerical limits for water quality parameters and should include stricter requirements than these bare minimums...The goal of the permit should be to maintain existing levels of water quality.
7. ...the permit should make clear that the project itself should not cause any degradation of historical water quality in the discharges from the dam. ...If monitoring shows any meaningful changes in temperature, DO, turbidity, or heavy metals, Jordan should be required to immediately cease running water through its turbines and to turn over operation of the dam to the Corps, and then coordinate with the Corps, DEQ and DGIF to assess the situation. ...
8. TU suggests several changes to the monitoring provisions of the permit...1) extend monitoring through the length of the permit. ... three years is not enough time to confirm Jordan's ability to not affect conditions over time; 2) share the data more widely and frequently (weekly or monthly or posting on Corps' website); ...3) should include

monitoring during construction...should require Jordan to monitor turbidity changes during construction.

DEQ Response:

As drafted, the draft permit is protective of downstream beneficial uses with regards to the monitoring and reporting conditions that were developed. The applicant has apparently coordinated several design changes with the Virginia Department of Game and Inland Fisheries (DGIF) staff to address concerns about fish resources. Provided the applicant/permittee abides by the Corps-mandated operations, as required by the draft permit, we feel there is adequate protection. Provisions for addressing unforeseen changes in water quality and aquatic resources have been incorporated into the draft permit conditions through development of a contingency plan to be approved by DEQ. Relief from monitoring dissolved oxygen and temperature will only occur after DEQ's evaluation of data compiled through the first three years of the permit and then only if the data is satisfactory to support the applicant/permittee's premise that the project will have no effect on water quality. With the implementation of the Section 216 feasibility study noted previously in this document, there is a potential for permit modification subsequent to its issuance should the study result in operational changes at the Corps facility.

Turbidity monitoring was not included in the draft permit because the applicant's signed and certified information submitted to date does not include in-water construction at the dam or Corps intake tower. Underwater welding may occur. Assembly of the generation module is reported to be taking place in the dry. Should in-water construction methods be revised to include turbidity-producing activities, DEQ has the authority to require the potential impacts be addressed, either through monitoring or other protective means.

We have incorporated the Corps concerns and comments, received in a May 13, 2010 email, into the draft permit. It is our understanding that the Corps is still evaluating the proposed project, but since DEQ has a federal time line to act on the application information submitted to date, we cannot wait for the Corps' conclusion. DEQ cannot force the Corps to allow the project to be constructed on its facility. Should the Corps determine that the project is not acceptable, DEQ has the option to terminate the permit, if issued. Therefore, we do not feel changes are necessary to the draft permit regarding concurrence from the Corps.

To assist with establishing consistency between the VWP permit cycle and the pending FERC license cycle, the VWP permit cover page has been revised to reflect an effective date that coincides with the FERC license issuance date. A minor modification of the permit will be required to change the VWP effective date when and if a FERC license is issued.

Bath County:

...the Bath County Board of Supervisors determined by resolution and unanimous affirmative vote to send its approval of the permit as outlined in the public notice. ... it supports the project.

DEQ Response:

Thank you for the County's comments.