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west virginia department of environmental protection

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Earl Ray Tomblin, Governor  
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July 30, 2013

Mr. Frank M. Simms  
Appalachian Power Company  
40 Franklin Road  
Roanoke, Virginia 24011

Re: State 401 Water Quality Certification,  
Appalachian Power Company (APC),  
London/Marmet Hydropower Project,  
P-1175-015, on the Kanawha River, in  
Fayette and Kanawha Counties,  
West Virginia: WQC 120017.

Dear Mr. Simms:

The West Virginia Department of Environmental Protection-Division of Water and Waste Management (WVDEP-DWWM), in conjunction with the West Virginia Division of Natural Resources - Wildlife Resources Section (WVDNR-WRS), has completed review of the subject application for the Final License and West Virginia Water Quality Certification for the existing project.

Appalachian Power Company (APC) is pursuing a license for its London/Marmet Hydroelectric Project (29 MW) under the Federal Energy Regulatory Commission's (Commission) Integrated Licensing Process (ILP). Pursuant to the process and schedule requirements of the ILP, as defined in 18 CFR §5.18 (b)(3)(i) and 18 CFR §5.23 (b) a Water Quality Certification pursuant to Section 401 of the Clean Water Act (33 U.S.C. §1341) is required. APC made the request for a Certification on August 6, 2012.

The existing hydropower project consists of two developments located on the Kanawha River. The London Development is located in Fayette County at Kanawha River mile 82.8 and the Marmet Development is located in Kanawha County at Kanawha River mile 67.7.

The London Development consists of a forebay area protected by a log boom, screened intake structure with 3½-inch bar spacing, concrete powerhouse containing 3 turbine-generators with a total capacity of 14.4 MW, a tailrace 420 feet long, and two 0.38 mile-long 46-kilovolt transmission lines.

The Marmet Development consists of a forebay area protected by a log-boom, screened intake structures with 3½-inch bar spacing, a concrete powerhouse containing three turbine-generators with a total installed capacity of 14.4 MW, a tailrace 450 feet long, one 0.82 mile-long 46 kilovolt transmission line, and one 0.98 mile-long 46 kilovolt transmission line.

Section 401 of the Clean Water Act requires a state water quality certification prior to the issuance of a Federal Permit or License. The certification for an existing hydropower facility addresses the impact of the operation on water quality, water quantity and flow alteration, loss or damage to populations of aquatic life, and associated recreation.

While hydropower provides a form of renewable energy, there are potential impacts to water quality and wildlife resources associated with the operation of hydropower facilities. Dissolved oxygen can be reduced downstream of the project, temperature modifications can occur, physical habitat and flow characteristics can be altered and fish entrainment and mortality can occur.

As part of the certification process, we reviewed a desktop fish entrainment study. From the report, the total number of fish estimated to be entrained at the London and Marmet Developments during a dry and wet year was 4,285,646 and 5,937,335 fish, respectively. Estimates have been doubled to reflect entrainment for both Developments. Turbine mortality was estimated for both developments. Turbine mortality ranged from 1.5 percent to 3.5 percent for fish < 8 inches, 3.7 percent to 10.9 percent for fish between 8 and 15 inches, and 8.3 percent to 15.6 percent for fish larger than 15 inches. If the lowest mortality rate of 1.5% is applied to the lowest number of fish (dry year entrainment rate) the estimated annual fish mortality would be 111,299 fish per year. APC is not proposing any changes in the way the London or Marmet Developments are operated, and no adverse effects are expected by APC within the aquatic community in either the pool or the tailrace.

The WRS recommended habitat development in the Marmet and London pools to increase recruitment of fish that will be lost due to entrainment mortality. APC objected to developing the habitat structures and the Commission agreed with them in their NEPA document, even though they approved similar devices at the Jennings Randolph Hydroelectric Project (P-12715).

Issuance of the West Virginia Water Quality Certification for the relicensing of the London/Marmet Hydroelectric Project (P-1175-015) is subject to the inclusion and licensee's adherence to the following conditions. In the event that any fill is to be placed into the "waters of the United States" related to this project, a separate Water Quality Certification will be required for Department of the Army Permit Application.

Special Conditions

1. **Water Quality Monitoring.** The licensee shall monitor water entering the intakes and downstream of the project after mixing. The licensee shall monitor for dissolved oxygen and temperature. Monitoring shall be conducted from May 1 through October 31. The monitoring information shall be made available to resource agencies. A report of the water quality monitoring shall be provided each year of operation to the West Virginia Department of Environmental Protection (WVDEP), 401 Certification Section, and the WRS by March 1 of the following year.
2. A Recreation Assessment and Angler Use Study was performed in 2010. Results indicated that restrooms and trash receptacles were the most suggested improvements at both the Marmet and Winfield angling access sites. Therefore, APC shall install and maintain portable restrooms and trash receptacles at Marmet and London Fishing Access sites to accommodate existing and future use. Parking shall be provided at both sites.
3. The developments shall operate in a “run-of-the-river mode.” No peaking shall be permitted for either development.
4. Violation of any of the conditions listed above shall negate this water quality certification.
5. All permit modifications must be recertified.
6. The subject Water Quality Certification shall be updated to comply with any substantive changes to the Code of State Regulations for Water Quality Certification.
7. The licensee is responsible for compliance with water quality standards as contained in Title 47CSR2 of the West Virginia Code of State Regulations, Requirements Governing Water Quality Standards.

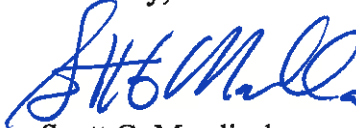
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State 401 Certification, as required by the Clean Water Act, is granted subject to the above special conditions. Certification shall be effective fifteen (15) days after receipt unless appealed under title 47, Series 5A, Section 7 of the Code of State Regulations, State Certification of Activities Requiring a Federal Permit. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It should be directed to: Director, Division of Water and Waste Management, West Virginia Department of Environmental Protection, 601 57<sup>th</sup> Street SE, Charleston, West Virginia 25304: ATTENTION: 401 Certification Program.

Sincerely,



Scott G. Mandirola  
Director

SGM/wir

Cc: U.S. Environmental Protection Agency - Jessica Martinsen  
U.S. Fish and Wildlife Service - Laura Hill  
WVDNR-Wildlife Resources Section, Elkins - Roger Anderson

Document Content(s)

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