A. *Authorized Activities*

This permit authorizes the following impacts as indicated in the application dated March 25, 2008, received by DEQ on March 27, 2008, and deemed complete by DEQ on May 2, 2008. The permit authorization and conditions are also based on additional submittals approved by DEQ.

1. The discharge of water from Leesville Lake to the Staunton River for the production of hydroelectricity**.**

2. The discharge of water from Smith Mountain Lake to Leesville Lake for the production of hydroelectricity.

3. The discharge of pumped water from Leesville Lake to Smith Mountain Lake for the purpose of storing the potential energy of the pumped water.

B. *Permit Term*

This permit is valid for 15 years from the effective date.

C. *Standard Project Conditions*

1. The activities authorized by this permit shall be executed in such a manner that any impacts to stream beneficial uses are minimized. As defined in § 62.1-10(b) of the Code, "beneficial use" means both instream and offstream uses. Instream beneficial uses include, but are not limited to, the protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, and cultural and aesthetic values. Offstream beneficial uses include, but are not limited to, domestic (including public water supply), agricultural, electric power generation, commercial, and industrial uses. Public water supply uses for human consumption shall be considered the highest priority.

2. Flows downstream of the project area shall be maintained to protect all uses.

3. Measures shall be employed at all times to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters.

4. Virginia Water Quality Standards shall not be violated in any surface waters as a result of the project activities.

5. All required notifications and submittals shall be submitted to the DEQ office stated below, to the attention of the VWP permit manager, unless directed in writing by DEQ subsequent to the issuance of this permit:

Department of Environmental Quality
Office of Wetlands and Water Protection
P. O. Box 1105
Richmond, VA 23218

6. All reports required by this permit and other information requested by DEQ shall be signed by the permittee or a person acting in the permittee's behalf, with the authority to bind the permittee. A person is a duly authorized representative only if *both* criteria below are met. If a representative authorization is no longer valid because of a change in responsibility for the overall operation of the facility, a new authorization shall be immediately submitted to DEQ.

   a. The authorization is made in writing by the permittee.

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

7. All submittals shall contain the following signed certification statement:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

8. Any fish kills or spills of fuels or oils into Smith Mountain Lake by the permittee shall be reported to DEQ immediately upon discovery to the West Central Regional Office Pollution Response Program at (540) 562-6723. Any fish kills or spills of fuels or oils by the permittee into Leesville Lake or the Staunton River shall be reported to DEQ immediately upon discovery to the South Central Regional Office Pollution Response Program at (434) 582-6236. If DEQ cannot be reached, the spill shall be reported to the Virginia Department of Emergency Management (DEM) at 1-800-468-8892 or the National Response Center (NRC) at 1-800-424-8802

9. The permittee shall notify DEQ of any additional impacts to surface waters, including wetlands; of any modifications to the discharge works; and of any change to the type of surface water impacts associated with this project. Any additional impacts, modifications, or changes shall be subject to individual permit review and/or modification of this permit.

D. *Instream Flow Conditions*

1. The following instream flow conditions become effective upon issuance of a new Federal Energy Regulatory Commission License to Appalachian Power Company for FERC project P-2210.

2. The minimum release from Leesville Lake shall not be less than 375 cubic feet per second in terms of average hourly flow from November 1st through February 29th and 400 cfs in terms of average hourly flow from March 1st through October 31st.

3. The permittee shall conduct a study to determine the relative impact of providing streamflows through hourly auto-cycling compared to continuous releases. The study plan shall be developed in consultation with the Department of Game and Inland Fisheries, the Department of Environmental Quality, the Citizens for the Preservation of the River, and the Tri-County Re-licensing Committee. This study plan shall be submitted to the Board no later than March 1, 2009 for approval. The study shall be conducted in the reach of the Staunton River beginning at the base of the Leesville Dam and extending to the confluence with Goose Creek. The study shall be conducted for no less than one year with the final study schedule to be approved by the Board. The study plan shall designed to investigate the potential effects of hourly auto-cycling releases on bank erosion, water quality, and fishery and benthic habitat, recreation, public safety, or other factors determined by the Board. The results of this study shall be submitted to the Board for making a final determination on the method of downstream releases. Should the determination of the Board, after it reviews the study, be that the permittee shall implement continuous flow releases, that will be deemed as mitigation. Should the determination of the Board, after it reviews the study, be that hourly auto-cycling continue by the permittee, the Board may require the permittee to implement other forms of mitigation, including stream restoration for those portions of the reach studied. If any of these mitigation actions are required, such actions shall be implemented by the permittee in accordance with a schedule approved by the Board.

4. Until the initiation of, and during, the study called for in D.3 above, a generating unit at Leesville Lake shall be operated on a one hour auto-cycling basis to provide the required flows. In case the generating units are out of service, the release may be made by spillway gate or other alternative methods available to the permittee.

5. The permittee shall run a forecast based simulation model at least once every three days and evaluate the probability of being at a certain elevation in the future. Trigger 1 will activate when there is a 20% chance of dropping below 790.5' (adjusted) in 16 weeks. Trigger 2 will activate when there is a 2% chance of dropping below 790' (adjusted) in 10 weeks. Trigger 3 will activate if Trigger 2 is in effect and the reservoir is less than 795' (adjusted) between December 1 and March 31, or anytime the adjusted elevation drops below 791.0' after September 30. All triggers are lifted if the elevation has reached 795'(adjusted) and there is less than a 2% chance of dropping below 790.5' (adjusted) sixteen weeks from that time.

6. To the extent that inflows allow, the permittee shall store additional water in Leesville Lake so that the adjusted storage shall be equal to 795.3 feet adjusted by April 15th of each year. The extra 0.3 feet of storage is intended to be used to ensure the success of the striped bass spawning run and need not be retained past the end of that run unless the permittee chooses to do so, while still complying with minimum instream flowby requirements.

7. The permittee shall release water at Leesville in an attempt to meet the target flows listed in the table below. Target flows are measured at the Brookneal gage, USGS number 02062500 and expressed in units of cubic feet per second. The permittee shall estimate tributary flows between Leesville and Brookneal when running the forecasting model and use such estimates in determining releases from Leesville when attempting to meet the target flows at Brookneal. The permittee will work with the Department of Game and Inland Fisheries to study the effect of the maximum releases identified in notes 5, 6, and 7 on the health of the fishery and provide a report to DEQ as part of the adaptive management condition E.2.

	Normal	Trigger 1	Trigger 2	Trigger 3
January	1100	990	990	770
February	1100	990	990	770
March	1100	935	825	770
April	1500	1275	1200	1050
May	1500[4]	1275	1200	1050
June	900 [1,5]	765 [2,6]	765 [3,6]	630[3]
July	700 [1]	595 [2,7]	560 [3,7]	490[3]
August	See note 1	570 [2,7]	570 [3,7]	420[3]
September	550	550[7]	550[7]	385
October	600	570[7]	570[7]	420
November	700	595[7]	560[7]	490
December	800	720	720	560

Notes:

1. Minimum release at Leesville of 650 cfs, in terms of an average hourly flow.
2. The minimum release of 650 cfs at Leesville will be made on Saturdays and Sundays and on Memorial Day, July 4th and on Labor Day for recreation. Appalachian shall time the release in an attempt to make it arrive at Long Island at 8 AM on Saturday and to subside at Brookneal at 8 PM on Sunday
3. A minimum release of 650 cfs will be made at Leesville for 12 hours timed to arrive at approximately sunrise at Long Island on Saturdays and on Memorial Day, July 4th and on Labor Day.
4. Upon notification by the Department of Game and Inland Fisheries that striped bass spawning is complete, the permittee may reduce releases and only be required to make release for the June normal target flow of 900 cfs
5. The maximum release that the permittee is required to release in attempting to hit the target flow at Brookneal is 700 cfs.
6. The maximum release that the permittee is required to release in attempting to hit the target flow at Brookneal is 650 cfs
7. The maximum release that the permittee is required to release in attempting to hit the target flow at Brookneal is 480 cfs

E. *Adaptive Management*

1 If required by operating emergencies beyond the control of the permittee, or when Trigger 3 events occur during drought or low inflow conditions, flows can be temporarily modified from those described in Section D upon mutual agreement between the licensee and DEQ, in consultation with the Virginia Department of Game and Inland Fisheries, following appropriate public input as determined by DEQ.

2. Within five years after the date that the instream flow conditions become effective, the permittee shall hold a public meeting in the vicinity of the project and accept comments on the performance of the project in maintaining lake levels and in providing flows necessary to protect instream beneficial uses. The permittee shall summarize the comments and provide them to DEQ along with any recommendations that the permittee might have. DEQ may, at its discretion, and depending on the comments, elect to exercise its right to reopen the permit pursuant to State Law and Regulation.

F. *Dissolved Oxygen Conditions, Monitoring and Reporting*

1. The permittee shall operate the turbines at Smith Mountain Dam from July1st through September 30th in a fashion that will minimize or eliminate violations of water quality standards for dissolved oxygen in the tail waters below Smith Mountain Dam.

During this time period, the permittee will dispatch the turbines with intakes that are highest in the water column first and take those turbines off line last when generating.

2. Within 120 days of the effective date of the permit, the permit shall provide for DEQ approval a monitoring plan designed to determine the timing and extent of potential contraventions of the water quality standards for dissolved oxygen in Leesville Lake caused by late summer and fall hydroelectric generation from discharges from Smith Mountain Lake. The monitoring plan shall include but not be limited to the location of monitoring stations and the frequency of monitoring.

3. Within five years of the effective date of this permit, the permittee shall provide DEQ a report on Summer and Fall Dissolved Oxygen Monitoring in Leesville Lake during Generation at Smith Mountain Dam. The report shall summarize the effects of power generation on Leesville lake dissolved oxygen levels.

4. If the first on, last off generation practices required by condition F.1, are not successful in eliminating dissolved oxygen contraventions of water quality standards caused by turbine discharge, the permittee shall submit a feasibility study and plan for physical or mechanical alterations of water release procedures that will eliminate violations of water quality standards for dissolved oxygen caused by turbine discharge from Smith Mountain Lake. The feasibility study will be due by December 31, 2015 unless the operational changes alone are sufficient to eliminate contraventions of the dissolved oxygen standard.

G. *Instream Flow Monitoring and Reporting Conditions*

1. The permittee shall monitor on a daily basis, adjusted storage levels in the project lakes, inflow to the project, downstream side flows between Leesville Dam and Brookneal and releases from the project to the Staunton River.

2. The permittee shall file an annual report with DEQ that tabulates by date, the status of the project in terms of the trigger condition in effect, the adjusted elevation, the mean daily release at Leesville and the target flow required by the table in condition D.5. The report shall be submitted by January 31st for the previous calendar year.