

**Date:** February 11, 1999

**From:** Thomas Leahy, Virginia Beach Department of Public Utilities

**To:** Distribution

**Subject:** Lake Gaston Water Supply Project Storage Report For 1999  
(FERC Project # 2009-003)

Enclosed please find a copy of a draft annual report on the use of the City of Virginia Beach's storage in Kerr Reservoir for 1999. By FERC order dated October 24, 1997, the City is required to file an annual report every year, regardless of whether its storage was used. A draft of the report is filed by February 15 and a final is filed by May 1. No releases from Virginia Beach's storage in Kerr Reservoir were made in 1999.

This report is being sent as an attachment via e-mail in Word Perfect format (\*.wpd) and Microsoft Word format (\*.doc), or via regular mail. If you have any questions, or wish to make any comments upon the draft report, you may respond by e-mail to [tleahy@city.virginia-beach.va.us](mailto:tleahy@city.virginia-beach.va.us), by fax at 757-427-3183, by mail at Department of Public Utilities, 2405 Court House Drive, Virginia Beach, VA 23456, or by phone at 757-427-8654.

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FERC Secretary (by regular mail, final report only)

**FEBRUARY 11, 2000**

**CITY OF VIRGINIA BEACH, VIRGINIA  
LAKE GASTON WATER SUPPLY PROJECT  
DRAFT REPORT ON USE OF KERR STORAGE IN 1999**

**I. BACKGROUND**

By FERC order dated October 24, 1997 regarding the City of Virginia Beach's Lake Gaston Water Supply Project, the City is required to report annually on the use of its storage in Kerr Reservoir (regardless of whether the storage was actually used). The City must file a draft report on the previous year's use by February 15 with Virginia Power, the US Army Corps of Engineers Wilmington District, and the North Carolina Wildlife Resources Commission. The City must file a final report with FERC by May 1, including documentation of the consultation process on the draft report. A copy of the FERC order is attached.

**II. SUMMARY OF USE OF STORAGE IN KERR RESERVOIR IN 1998**

Withdrawals in 1999 totaled 6,200 million gallons (MG) and averaged 17.0 million gallons per day (mgd). The maximum monthly withdrawal of 1,302 MG (43.4 mgd) occurred in June and the minimum monthly withdrawal of 18 MG (0.6 mgd) occurred in October.

Until Hurricane Floyd struck in September, 1999 was dry and both lake levels and flows at Kerr Reservoir were below normal. However, releases from Kerr Reservoir were still much greater than FERC minimum releases mandated at Roanoke Rapids, downstream. As a result, no condition occurred in 1999 which would have required the use of the City's storage, and no releases from Kerr storage on behalf of the City's project were made in 1999.

**III. CONSULTATION**

A draft of this report is being filed by e-mail with Virginia Power, the US Army Corps of Engineers Wilmington District, the North Carolina Wildlife Resources Commission, the North Carolina Division of Water Resources, and FERC staff. Comments are requested by April 1, 2000.

UNITED STATES OF AMERICA 81 FERC ¶ 62,086  
FEDERAL ENERGY REGULATORY COMMISSION

Virginia Electric and Power     )  
Company                             )     Project No. 2009-014

ORDER MODIFYING AND APPROVING PLAN TO  
RELEASE STORAGE IN KERR RESERVOIR  
(Issued October 24, 1997)

On July 7, 1997, Virginia Electric and Power Company (licensee) filed a plan to release storage in Kerr Reservoir as required by article 46 of the license for the Gaston and Roanoke Rapids Project No. 2009 (Project). 1/ The hydroelectric project is located in Mecklenburg and Brunswick counties, Virginia and Warren, Northhampton, and Halifax counties, North Carolina.

BACKGROUND

A. Project Description

The Gaston and Roanoke Rapids Hydroelectric Project, located on the Roanoke River, consists of two facilities. The Gaston facility has a mass concrete dam approximately 2840 feet in length with an average height of 40 feet at the spillway crest. Lake Gaston is 34 miles long with a 350-mile shoreline. The Gaston powerhouse, containing four generators, has a generating capacity of 177.9 MW. The licensee operates the Gaston development in coordination with the peaking flow releases from the upstream Kerr dam. The Roanoke Rapids facility is located 8 miles below the Gaston facility. The Roanoke Rapids reservoir is 8 miles long with a 47-mile shoreline. The powerhouse contains four generators and has a generating capacity of 100.0 MW. Operation of the Gaston and Roanoke Rapids Hydroelectric Project is closely coordinated with the upstream Kerr Project.

By orders dated July 26 and September 22, 1995, the Commission approved a water supply withdrawal from Lake Gaston by the City of Virginia Beach. The release of water from storage in Kerr Reservoir is part of the measures approved by the Commission in the above orders.

1/ License issued January 26, 1951.  
Project No. 2009-014                     2

## B. License Requirement

Article 46 requires a plan detailing how the 10,200 acre-feet of storage volume in Kerr Reservoir is to be used to augment flows in the Roanoke River below the project dams during the striped bass spawning period and during low flow conditions. In the preparation of the plan, the licensee is required to consult with the U.S. Army Corps of Engineers (Corps), the City of Virginia Beach (Virginia Beach), and the North Carolina Wildlife Resources Commission (NCWRC). In addition to the above, the plan is to include measures to coordinate releases from Kerr storage with the licensee, the Corps, and Virginia Beach and a schedule for filing annual reports of releases made from Kerr storage to the resource agencies and the Commission.

## C. Proposed Plan

Virginia Beach has the rights to 10,200 acre-feet of storage in Kerr Reservoir. Kerr Dam is operated by the Corps and any release from storage at Kerr Reservoir is made by the Corps. Virginia Beach's proposed plan for use of storage in Kerr Reservoir is a coordinated effort among Virginia Beach, the Corps and the licensee. Virginia Beach proposes the following for release of storage during striped bass spawning and non-spawning periods.

### Striped Bass Spawning Period (April 1 through June 15)

Virginia Beach proposes to authorize the Corps to use storage to recover any lost augmentation flow days caused by Virginia Beach's water withdrawal project and to make releases from Kerr storage, so long as it is available, to replace any Virginia Beach water withdrawals when river flows approach the lower limit of the flow regime.

### Non-Spawning Periods (June 16 through March 31)

Virginia Beach proposes to authorize the Corps to make releases from Kerr storage, so long as it is available, to replace its water supply withdrawals when, during severe drought, flows from other sources approach the lower limit of the flow regime required by the Commission.

### Coordination

Whenever the Corps indicates Virginia Beach's storage may be necessary to meet downstream flow obligations, the Corps would notify Virginia Beach, Virginia Power, and NCWRC. The City would provide withdrawal schedules to the Corps so the Corps can match releases from Kerr storage with Virginia Beach's water supply withdrawals from Lake Gaston. The schedule of releases would be consistent with the Corps' weekly power declaration at Kerr Dam.

## Reporting

Virginia Beach proposes to prepare a draft report by February 15 to be circulated along with a request for comments to the Corps, the licensee, and NCWRC. The report, including any comments from the consulted entities, would be filed with the Corps, the licensee, NCWRC, and the Commission by May 1 describing the use of storage following any year storage is used.

### D. Consultation

The licensee consulted with the Corps, the Virginia Beach and NCWRC and incorporated comments in the proposed plan and adequately responded to questions.

## DISCUSSION

The plan filed by the licensee adequately describes how storage in Kerr Reservoir would be used during the striped bass spawning period and during low flow conditions and describes the coordination among Virginia Beach, the Corps, and the licensee. The proposed reporting would occur only in years following use of storage. In order to keep the Commission adequately informed, reports to the Commission should occur yearly regardless of whether releases from storage are made.

The Director orders:

(A) The plan to monitor, coordinate, and report use of Kerr Reservoir storage filed on July 7, 1997 is approved as modified by paragraph B.

(B) A report shall be filed with the Commission by May 1 of each year describing any use of Kerr Reservoir storage during the previous calendar year.

(C) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 CFR § 385.713.

Kevin P. Madden  
Acting Director  
Office of Hydropower Licensing