

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Cook Industries, Inc.

Project No. 7987-010  
North Carolina

ORDER AMENDING EXEMPTION

(Issued April 27, 1995)

On August 4, 1994, and supplemented on September 9 and September 21, 1994, Cook Industries, Inc., exemptee for the High Falls Project, FERC No. 7987, filed an application to amend its exemption<sup>1</sup> to widen the trashrack system and install a self cleaning trashrack. This modification will reduce the approach flow velocity through the trashrack and minimize maintenance.

Background

Article 2 of the exemption requires compliance with any terms and conditions that federal or state fish and wildlife agencies have determined are appropriate to prevent loss of, or damage to, fish and wildlife resources. In an August 2, 1984, letter, the North Carolina Wildlife Resources Commission's (NCWRC) recommended that the headgate structure should be screened with a trashrack with spacing no greater than 1 inch, and the flow velocity of no greater than 0.5 foot per second (fps). In a November 3, 1987, letter, the Commission authorized the exemptee to widen the intake canal and add a new gate to increase the headgate intake structure's capacity for the project. During a September 16, 1992 operation inspection, staff of the Commission's Atlanta Regional Office (ARO) observed that the exemptee had removed a portion of the existing trashrack and there was no trashrack installed at the new headgate. The screening request of the NCWRC were not implemented.

On October 25, 1993, the exemptee requested the NCWRC's requirements for trashrack intake velocity and bar spacing be amended. The exemptee stated that NCWRC changed the flow velocity requirement from 0.5 to 1.5 fps, and maximum bar spacing from 1 to 2.5 inches. The exemptee also requested that the Commission authorize the trashrack to be installed at the powerhouse instead of at the headgate structure.

On April 21, 1994, the FWS filed comments regarding the amendment request and recommended that the Commission defer action on any proposed change until such time that an evaluation of the impacts of the project to the endangered Cape Fear Shiner had been completed. The FWS indicated that the evaluation of the Cape Fear Shiner was required in accordance with Section 7(a)(2)

<sup>1</sup> 28 FERC ¶ 62,352 (issued September 12, 1984).

of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act). Based on the FWS's response, on April 19, 1994, the Commission informed the exemptee that the NCWRC's 1984 terms and conditions for the trashrack, under article 2 of the exemption, would remain in effect until amended by Commission order. Accordingly, the exemptee was advised to install a trashrack at the project's headgate structure in accordance with the NCWRC's August 2, 1984 recommendation.

A velocity study at the existing powerhouse trashrack for the High Falls Project was previously conducted.<sup>2</sup> The results of the study demonstrate that fish entrainment and impingement are not significant at the project. On May 25, 1994, the Commission informed the exemptee that, a trashrack with 2.5-inch clear bar spacing and 1.5 fps approach velocity is acceptable.

Filing

The exemptee indicated that the proposed trashrack will be approximately 32 feet wide and located 35 feet to 50 feet upstream from the powerhouse's existing trashrack. The new trashrack has a bar spacing that varies from 2 inches to 2-3/8 inches, and will be placed at an angle with a skew similar to the existing trashrack. The construction of the trashrack will include an extension of the powerhouse's floor to the new trashrack, construction of a bypass pipe with two gates, and removal of the existing trashrack.

In the filing, the exemptee included drawings showing the proposed trashrack modifications. The drawings have not been drawn to scale as required by section 4.32(b)(2) of the Commission's regulations and contain insufficient details. Section 4.32(b)(2) requires the exemptee to file drawings which "... must be of sufficient size, scale, and quality to permit each reading and understanding. ...". This order will require the exemptee to file exhibit G drawings that show plan views and sections of the proposed construction.

Review

Fish entrainment and velocity studies at the High Falls Project were completed in November 1989. The results demonstrate that fish entrainment and impingement are not significant at the

<sup>2</sup> An Investigation to Evaluate the Effect of Intake Velocity on Entrainment and Impingement of Fish at a Low Head Hydroelectric Plant, November 1989. Tennessee Valley Authority, Water Resources, Aquatic Biology Department. This work was conducted under contract for the FWS.

project, and gives detailed velocity measurements at the powerhouse trashrack. The FWS has not taken action based on the results of the study.

In a December 14, 1994, letter, the Director, Division of Project Compliance and Administration (Director), informed FWS that the exemptee's proposal to modify the trashrack width and location would assure the maintenance of minimum flow into the Deep River downstream from the High Falls Project. With the minimum flow maintained, the preferred habitat for the Cape Fear shiner<sup>3</sup> in the vicinity of the High Falls Project would be unaffected by the trashrack modifications.

On February 22, 1995, the ARO required the exemptee to submit additional information and outstanding plans of the construction 60 days prior to the start of the construction, or no later than June 1, 1995, for approval. This order will require the exemptee to submit the information and plans to the ARO.

Conclusion

The proposed trashrack modifications at the High Falls Project will not affect the Cape Fear shiner and its habitat in the Deep River. The proposed trashrack for the High Falls Project meets the requirements of the NCWRC, and will decrease approach velocities through the project's trashrack, an environmental benefit.

This order will amend the exemption to authorize construction of the proposed trashrack, replacing the existing trashrack at the powerhouse. Prior to commencing construction of the proposed trashrack and its related works, the exemptee must receive authorization from the Commission's Atlanta Regional Office.

The Director orders:

(A) The exemption for the High Falls Project, FERC No. 7987, is amended by this order, effective the first day of the month in which this order is issued.

<sup>3</sup> Endangered and Threatened Wildlife and Plants; Determination of Endangered Species Status and Designation of Critical Habitat for Cape Fear Shiner. 52 Fed. Reg. 36034, September 25, 1987.

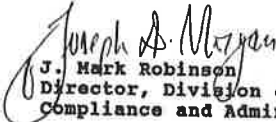
(B) Appendix A, item j(5) of the exemption is revised to read:

a powerhouse having an extension to include a 32-foot-wide trashrack, housing three generator units with a total installed capacity of 600 kW;

(C) The exemptee shall file, within 60 days from the date of issuance of this order, for the Commission's approval exhibit G drawings showing plan views and sections of the proposed trashrack modifications. The drawings must be of sufficient size, scale, and quality to permit each reading and understanding.

(D) The exemptee shall submit the quality control inspection program and construction plans for buried trash culvert to the ARO 60 days prior to commencing construction, or no later than June 1, 1995. The exemptee must receive authorization from the ARO before starting construction of the proposed trashrack and its related works.

(D) 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 C.F.R. §385.713.

  
J. Mark Robinson  
Director, Division of Project  
Compliance and Administration