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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Wisconsin Public Service Corporation) Project No. 2522-011

ORDER MODIFYING AND APPROVING WATER QUALITY MONITORING PLAN

SEP 14 1998

Wisconsin Public Service Corporation (licensee) filed, on June 19, 1998, its water quality monitoring plan under article 407 of the license for the Johnson Falls Project (FERC No. 2522). The project is located on the Peshtigo River, in Marinette County, Wisconsin.

BACKGROUND

Article 407 requires the licensee to file a plan to monitor dissolved oxygen (DO), water temperature, and pH of the Peshtigo River upstream and downstream of the Johnson Falls dam.

The purpose of the plan is to ensure that flow releases from the project, as measured immediately downstream from the dam, maintain the following standards, except when natural conditions prohibit attainment of the standards: (1) DO concentrations must not be less than 6.0 milligrams per liter (mg/L) at any time and not less than 7.0 mg/L during the spawning season; (2) water temperature must not be altered from natural background to such an extent that trout populations are adversely affected; and (3) the pH must be within the range of 6.0 to 9.0, with no change greater than 0.5 units outside the estimated natural seasonal maximum and minimum.

The plan is to include provisions for: (1) monitoring for at least the first two years of the license, followed by monitoring during one year out of every five; (2) monitoring upstream and downstream of the Johnson Falls dam, with sensor locations and monitoring frequency determined in consultation with the Wisconsin Department of Natural Resources (WDNR) and the U.S. Fish and Wildlife Service (USFWS); and (3) operating procedures, developed in consultation with the WDNR and the FWS, to address actions to be taken if water quality deviates from the above limits.

The plan is to include schedules for: (1) implementation of the monitoring program within 24 months from the date of license issuance; (2) review of the monitoring results with the WDNR and the USFWS; and (3) filing the results, agency comments, and licensee's response to agency comments with the Commission.

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SEP 14 1998

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Project No. 2522-011

-2-

LICENSEE'S PLAN

The monitoring parameters will include pH, DO concentration, and water temperature. The data will be collected at one hour intervals continuously for the months of June, July, August, and September using a Hydrolab Datasonde or equivalent. All instrumentation will be cleaned, downloaded, and calibrated according to manufacturers specifications every 7-10 days during the monitoring period. Calibration information will be recorded in a maintenance log for each piece of equipment.

The monitoring equipment will be located directly in the tailwater. The exact placement will be determined through consultation with the WDNR. Monitoring will begin in 1999 and will again be conducted in 2000. Following the 1999 and 2000 data collection, the monitoring will again be conducted in 2004 and on a 5-year schedule for the remainder of the license term.

When data is downloaded, it will be screened for periods of noncompliance with state standards. If periods of noncompliance are identified, the WDNR will be notified within five working days. The WDNR and USFWS will be provided with the results of monitoring by November 30 of the year in which the monitoring occurred. The monitoring results, agency comments, and responses to agency comments will be provided to the Commission by February 28 of the year following the year in which monitoring occurred.

AGENCY COMMENTS

The USFWS did not comment on the plan. The WDNR, by letter dated June 19, 1998, commented on the licensee's plan and provided recommendations. The WDNR recommends continuous monitoring of DO concentration, water temperature, and pH occur in the tailrace of the project, immediately below the powerhouse. The WDNR will not allow for a mixing zone to meet the water quality standards. The WDNR indicates the data collected in the tailwater of the High Falls Project (FERC No. 2595), assuming that the water quality monitoring at both projects takes place in the same year, could be used instead of an upstream monitoring location.

The WDNR also recommends monitoring commence once the Johnson Falls Project (FERC No. 2522) switches to a peaking mode of operation each summer and terminate on or after November 1. The WDNR explains monitoring at this project needs to continue until November 1, as state water quality standards for DO are 7.0 mg/L during the trout spawning season (which occurs in late September and October). The WDNR recommends that if the initial year of sampling shows that DO levels are well above the 7.0 mg/L standard in October, then future years sampling could be

Project No. 2522-011

-3-

terminated at the end of September. Finally, the WDNR recommends that it be immediately informed of any violations of state water quality standards and if violations are found the project should immediately be switched to run-of-river operation.

DISCUSSION AND CONCLUSIONS

In Commission staff's Peshtigo River Multiple Project Final Environmental Impact Statement, ^{1/} staff indicated water quality at the Johnson Falls Project meets state water quality standards for a warm water fishery in the reservoir and for a coldwater fishery in the tailwater and downstream reach. The WDNR classifies the six miles of free-flowing river between the Johnson Falls Project and the downstream Sandstone Rapids Project (FERC No. 2546) as Class II trout waters. Occasionally during the summer, project releases can fall below the minimum DO standard for trout waters.

The project has a requirement to operate in a run-of-river mode between April 15-30 of each year continuing for 75 days and to release a minimum flow of 200 cubic feet per second. Water quality downstream of the project should improve compared to past years when the project shuts down during peaking operations, except during July, August, September, and possibly October. The licensee's proposed method of monitoring water quality during the months of June through September would not, however, cover the entire trout spawning period.

The licensee should be required to continuously monitor water quality, both upstream and downstream of the project, and record the data on an hourly basis to ensure the standards identified in article 407 are met. As indicated in article 407, the location of the monitoring equipment should be determined in consultation with the WDNR and the USFWS. The WDNR indicates data collected in the tailwater of the High Falls Project (FERC No. 2595), assuming that the water quality monitoring at both projects takes place in the same year, could be used instead of an upstream monitoring location. The licensee indicates in its plan that the monitoring equipment will be installed to begin monitoring during the 1999 season and again in the 2000 season

^{1/} Pesthigo River Multiple Project Final Environmental Impact Statement. March 1997. Prepared by staff of the Commission's Office of Hydropower Licensing.

Project No. 2522-011

-4-

(and every five years thereafter). By coordinating the timing of monitoring activities with the licensee's other projects on the river, 2/ results from each year of monitoring would provide a more comprehensive view of each project's impact on water quality throughout the river.

Since trout spawning in the Peshtigo River occurs in late September and October, the licensee should be required to continue monitoring water quality through October 31. If the first year of monitoring indicates DO concentrations are above the required standard of 7 mg/L during the trout spawning period, the licensee could, after consulting with the agencies, file a request to end monitoring on September 30.

The WDNR recommended the licensee immediately notify the WDNR of any deviations from the water quality standards and to change project operations to run-of-river if violations are found. To be consistent with the requirements at the licensee's projects, the licensee should be required to provide notification of any DO deficiencies to the WDNR within five working days.

As for the WDNR's recommendation that the project be required to operate in a run-of-river mode should a DO violation occur, this issue was addressed during the licensing process. The licensee is currently required to operate, under article 401, in a run-of-river mode starting in mid-April and continuing for 75 days. After the 75-day run-of-river period, the project license allows the licensee to operate in a peaking mode. Making changes to this mode of operation if a DO violation occurs, as recommended by the WDNR, would require a license amendment proceeding.

It is Commission staff's standard practice to require the licensee to report any deviation from its requirements. After reviewing the licensee's report, Commission staff can make a determination as to whether modifications to project operations or facilities are necessary.

So that the Commission can monitor the licensee's compliance with the water quality requirements of article 407, the licensee should be required to notify the Commission of any deviations from the requirements specified in article 407. Based upon the

2/ The licensee's other projects include: Caldron Falls Project (FERC No. 2525); High Falls Project (FERC No. 2522); Sandstone Rapids Project (FERC No. 2546); Potato Rapids Project (FERC No. 2560); and Peshtigo Project (FERC No. 2581).

Project No. 2522-011

-5-

licensee's report and the Commission's evaluation of the incident, the Commission should reserve the right to require modifications to project facilities and operations to ensure compliance with the state's water quality standards.

The licensee's proposed water quality monitoring plan, with the above modifications, fulfills the requirements of article 407, and should, therefore, be approved.

The Director orders:

(A) The licensee's water quality monitoring plan, filed on June 19, 1998, under article 407 of the license for the Johnson Falls Project (FERC No. 2522), as modified by paragraphs (B) through (D) below, is approved.

(B) The licensee shall continuously monitor water quality from June 1 through October 31, both upstream and downstream of the project, and record the data on an hourly basis to ensure the standards identified in article 407 are met. The location of the monitoring equipment shall be determined in consultation with the Wisconsin Department of Natural Resources (WDNR) and the U.S. Fish and Wildlife Service.

(C) If the dissolved oxygen concentration, water temperature, or pH, as measured by the approved monitoring system, deviates from the requirements of article 407, the licensee shall file a report with the Commission within 30 days of the date that the data becomes available regarding the incident. The report shall, to the extent possible, identify the cause, severity, and duration of the incident, and any observed or reported adverse environmental impacts resulting from the incident. The report shall also include: (1) operational data necessary to determine compliance with article 407; (2) a description of any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents do not recur; and (3) comments or correspondence, if any, received from the resource agencies regarding the incident. Based on the report and the Commission's evaluation of the incident, the Commission reserves the right to require modifications to project facilities and operations to ensure future compliance.

(D) The licensee shall notify the WDNR, within five working days, of any water quality deviations identified at the project.

(E) Unless otherwise directed in this order, the licensee shall file an original and seven copies of any filing required by this order with:

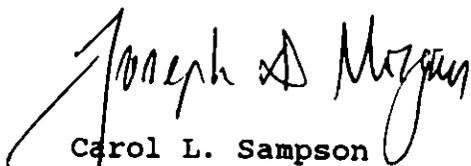
Project No. 2522-011

-6-

The Secretary
Federal Energy Regulatory Commission
Mail Code: DLC, HL-11.2
888 First Street, N.E.
Washington, D.C. 20426

In addition, the licensee shall serve copies of these filings on any entity specified in this order to be consulted on matters related to these filings. Proof of service on these entities shall accompany the filings with the Commission.

(F) 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.



Carol L. Sampson
Director
Office of Hydropower Licensing