84 FERC ¶ 62,222

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Wisconsin Public Service Corporation) Project No. 2595-018

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 406 of the license for the High Falls Project (FERC No. 2595). The project is located on the Peshtigo River, in Marinette County, Wisconsin.

BACKGROUND

Article 406 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 High 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 5.0 milligrams per liter (mg/L) at any time; (2) water temperature shall not exceed 89 degrees Fahrenheit; and (3) the pH shall 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 High 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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LICENSEE'S PLAN

A profile for DO concentration and water temperature will be taken in the headwater to determine if the reservoir has stratified during the summer period. If the reservoir has stratified, the extent of the mixing zone in the tailrace will be determined by conducting profile monitoring for pH, DO concentration, and water temperature in a transect at the downstream edge of the mixing zone. In the same transect, flow measurements will be taken to verify the flow exceeds the 50 cfs minimum flow. Monitoring will be conducted once per month during the months of June, July, August, and September in 1999 and 2000. The June monitoring will be conducted provided the reservoir has stratified and there is enough time (one day) after run-of-river operation has ceased. The transect will be identified in the first monitoring session.

After the 2000 monitoring schedule is complete, monitoring will be conducted in the same manner utilizing transects (once during June, July, August, and September) on a five-year schedule for the remaining term of the license, beginning in 2005.

The profile in the headwater will be taken directly behind the trashracks and in front of the penstock intakes. The tailwater transect location will be determined by identifying the mixing zone where water from the minimum flow unit and the leakage through the wicket gates has had a chance to thoroughly mix and provide a DO content greater than 5 mg/L. The first year of monitoring will require additional transects to determine the edge of the mixing zone which will be used in future monitoring.

The WDNR and USFWS will be provided with the results of m 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 2, 1998, provided comments on the licensee's plan. The WDNR indicates a DO problem exists at the project and proposed measures to be implemented. The WDNR recommends continuous monitoring of DO, water temperature, and pH should occur in the tailrace of the project, immediately below the powerhouse. The WDNR states it will not allow for a mixing zone to meet the water quality requirements. The WDNR indicates the data collected in the tailwater of the Caldron Falls Project (FERC No. 2525), assuming that the water quality monitoring at

both projects takes place in the same year, could be used instead of an upstream monitoring location. Further, the WDNR recommends it be immediately informed of any violations of state water quality standards and if violations are found, the project should be required to switch 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 High Falls Project meets state water quality standards with the exception of DO concentrations in the tailrace, which sometimes falls below 5 mg/L from mid-June through mid-September. Staff also indicated the depressed DO concentrations occur only during peaking operations and result from summer thermal stratification of the reservoir. During plant shut down, oxygen depleted waters from the lower stratum of the reservoir (hypolimnion) leak through the turbines and comprise the only project releases.

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 50 cubic feet per second from July 1 through April 14. Water quality downstream of the project should improve compared to past years when the project shuts down during peaking operations, except during July, August, and September. The licensee's proposed method of monitoring water quality once per month during the months of June through September would not, however, be sufficient to ensure state standards are being met at the project, especially during peaking operations from July through September.

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 406 are met. As indicated in article 406, the location of the monitoring equipment should be determined in consultation with the WDNR and USFWS. The WDNR indicates data collected in the tailwater of the Caldron Falls Project (FERC No. 2525), 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 should have the monitoring equipment installed to begin monitoring during the 1999 season and again in the 2000 season (and every five years thereafter). By coordinating the timing of monitoring activities

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

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.

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 406, the licensee should be required to notify the Commission of any deviations from the requirements specified in article 406. Based upon the licensee's report and the Commissions 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 406, and should, therefore, be approved.

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

The Director orders:

(A) The licensee's water quality monitoring plan, filed on June 19, 1998, under article 406 of the license for the Caldron Falls Project (FERC No. 2525), as modified by paragraphs (B) through (D) below, is approved.

(B) The licensee shall 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 406 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. The licensee shall have the monitoring equipment installed to begin monitoring during the 1999 season and again in the 2000 season (and every five years thereafter).

(C) If the dissolved oxygen concentration, water temperature, or pH, as measured by the approved monitoring system, deviates from the requirements of article 406, 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 406; (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:

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