UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Wisconsin Electric Power Company) Project No. 2431-018

ORDER MODIFYING AND APPROVING WATER QUALITY MONITORING PLAN

SEP 10 1997

Wisconsin Electric Power Corporation (licensee) filed for Commission approval, on February 28, 1996, a water quality monitoring plan required by article 405 of the license for the Brule Project. 1/ The project is located on the Brule River in Florence County, Wisconsin, and Iron County, Michigan.

Article 405 requires the licensee to consult with Michigan Department of Natural Resources (MDNR), Wisconsin Department of Natural Resources (WDNR), and the U.S. Fish and Wildlife Service (FWS) and develop a plan to monitor dissolved oxygen (DO) and water temperature immediately downstream of the Brule Dam for a period of five years and for one year every five years thereafter. The plan shall include those items stipulated in article 405.

LICENSEE'S PROPOSED PLAN

From June-September, the licensee proposes to continuously monitor water temperature and DO upstream and downstream of the dam. This monitoring will be performed for five years after approval of the plan and then yearly every five years thereafter for the life of the license. The licensee plans to calibrate the monitoring equipment according to manufacturer's recommendations.

Data will be compared weekly to the DO and monthly temperature standards required by article 405. The licensee plans to provide this data to the agencies within 10 days of any request. The licensee proposes to submit annual reports to the agencies and the Commission by November 30 of each year of monitoring. Within one working day of identifying a deviation from the required water quality standards, the licensee plans to notify the Michigan Department of Environmental Quality (MDEQ) explaining the nature of the incident. Within 30 days, the licensee will notify the FWS, MDNR, WDNR, and the Commission.

In the event of low DO caused by project operation, the licensee plans to spill approximately 25 percent of inflow through the spillway. Upon spilling, the licensee proposes to measure DO below the confluence of the spillway and tailrace, and

1/ 72 FERC ¶ 62,190. See also Order on Rehearing, issued August 6, 1996 (76 FERC ¶ 61,183).

determine the appropriate mix of generation and spill to achieve the desired DO. These efforts will be coordinated with MDEQ. If low DO occurrences become frequent, the licensee may modify the water quality monitoring plan to include alternative mitigative measures, in consultation with the agencies.

AGENCY COMMENT

The MDNR (collectively with the MDEQ) provided comments on the proposed plan in a letter dated February 22, 1996. The WDNR and FWS did not provide comments on the proposed plan.

The MDNR recommends the licensee monitor water quality on the Paint River at Horseshoe Rapids. 2/ The MDNR states water quality of this stream is different from the Brule River and must be accounted for during sampling of upstream water quality. The MDNR also recommends water quality data be validated with an independent measurement system such as a National Bureau of Standards thermometer for temperature and a Winkler analysis for DO.

The MDNR states the proposed plan does not include a means of monitoring water quality in the impoundment. Therefore, DO and water temperature should be measured weekly at one meter intervals, in the deepest part of the reservoir, from May through October and in February. Further, water temperature monitoring should be continuous and DO monitoring should occur from May-October.

The MDNR suggests hourly temperature readings should be compared instantaneously when and if the license article is changed to include delta temperature standards. The licensee should also provide quarterly transmittals of raw data and information on the calibration of monitoring equipment. The plan should also address mitigative measures for low DO in the immediate tailwater area, such as installation of aeration equipment, and include a provision for determining its effectiveness.

The licensee's response to these comments is included with the proposed plan. Other comments made by the MDNR were incorporated into the proposed plan.

DISCUSSION

The licensee's proposed plan includes those items required by article 405. Implementation of the plan will allow the licensee to identify deviations from the standards required by

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2/ The Paint River, along with the Brule River, provides inflow to the project's reservoir.

article 405 and implement measures in efforts to improve water quality. Calibration of the monitoring equipment according to manufacturer's recommendations, as proposed by the licensee, should be adequate to ensure accurate data are collected. Using a National Bureau of Standards thermometer and the Winkler Analysis, as recommended by the MDNR, is not necessary. Further, the licensee proposes to provide water quality data to the resource agencies within ten days of any request for the data and notify them within 24 hours of identifying a deviation from state standards. Quarterly water quality reports are not necessary.

The MDNR also recommends the licensee monitor water quality at Horseshoe Rapids on the Paint River and take depth-profile measurements in the project reservoir. As discussed in the environmental assessment prepared for the application for license, 3/ results of water quality monitoring in 1990 indicate that water quality in the project area exceeds the state standards with upstream water quality comparable to water quality downstream of the dam. However, the Brule impoundment, approximately 65 feet deep, has the potential to thermally stratify. The agencies and the Commission will have the opportunity to review the results of the monitoring in the annual reports. If data from future water quality monitoring indicate low DO events occur more often than expected, the Commission will determine if additional monitoring, i.e., reservoir water quality monitoring, or alternative mitigative measures, are necessary. The Commission should reserve the right to require changes to the licensee's water quality monitoring plan.

The MDNR also recommends that hourly temperature readings be compared instantaneously when and if delta temperature standards are included in the license. As discussed in the Order on Rehearing, 4/ fish and aquatic resources downstream of the dam are affected by water temperature occurring in their local habitat, not by any difference between water temperature upstream and downstream of the dam. Therefore, hourly comparisons of upstream and downstream water temperature and maintenance of the delta temperature standard are not required.

The licensee's proposed water quality monitoring plan, with the modification discussed, should be approved.

The Director orders:

(A) The licensee's water quality monitoring plan, filed on February 28, 1996, as modified in paragraph (B), is approved.

3/ 72 FERC ¶ 62,190.

4/ 76 FERC ¶ 61,183.

(B) Based on the water quality data collected by the licensee, the Commission shall reserve the right to require changes to the licensee's water quality monitoring plan.

(C) 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, NE
Washington, DC 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.

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

Kevin P. Madden
Acting Director
Office of Hydropower Licensing