

instruments' calibration is rechecked per manufacturer's specifications. The licensee will seek to achieve an ending calibration error of no more than +/- 1.0 mg/L seventy percent of the time.

Since the intent of the water quality monitoring is to verify compliance with state water quality standards after the change in operation to run-of-river, the licensee proposes to monitor for two consecutive years, with the remaining three years of monitoring to be distributed through the remainder of the license term. If water quality standards are violated during the initial two years and require mitigative measures, continuous monitoring will be continued until a cause for the deficiency is determined. The need for and timing of monitoring beyond the first two years will be determined in consultation with the resource agencies.

Surface to bottom measurements of water temperature, DO, pH, and conductivity will be taken upstream of the Chalk Hill and White Rapids dams in the deepest part of the reservoir. A hydrolab surveyor or equivalent water quality analyzer will be used. Secchi depth measurements will also be taken during the surveys. Measurements will be taken during the first two years (1998-1999 and 1999-2000) during the months of December, January, February, and March.

AGENCY COMMENTS

The Wisconsin Department of Natural Resources (WDNR), by letter dated October 17, 1997, the Michigan Department of Natural Resources (MDNR), by letter dated October 28, 1997, and the Michigan Department of Environmental Quality (MDEQ), by letter dated October 21, 1997, provided comments on the licensee's plan. The U.S. Fish and Wildlife Service did not provide any comments. Except for the issues discussed below, the licensee incorporated the agencies' comments into its plan.

The WDNR and MDNR each recommend DO and water temperature meters be placed in three locations rather than two as proposed by the licensee. The three locations recommended are above Chalk Hill, below Chalk Hill, and below White Rapids.

With respect to the number of years of consecutive monitoring that needs to be completed, the MDEQ recommends two (as proposed by the licensee) while the WDNR recommends at least three then every five years thereafter. The MDNR recommends five consecutive years as stated in the water quality certification, but is willing to accept an initial sampling period of three consecutive years with the final frequency dependent upon the results of the initial three years.

The MDNR also recommends the licensee collect monthly profiles during the period when continuous DO and water temperature data are being collected. The MDNR indicates the profile data are intended

to complement the continuous data and will assist in explaining why water quality violations are occurring, if found.

DISCUSSION AND CONCLUSIONS

Both the WDNR and MDNR recommend the licensee include an additional monitoring location to its plan. Although this would provide additional data on DO concentrations and water temperature in the river, an additional location is not required. Article 405 for each license specifies where the licensee is to monitor water temperature and DO concentration at each project. Since these locations were included in the licensee's plan, the licensee is not required to provide the additional location.

The MDNR's recommendation that the licensee, in addition to the proposed winter profiles, collect monthly profiles during the period when continuous DO and water temperature data are being collected is also beyond what was required by article 405. The licensee's continuous monitoring during these months is sufficient to determine compliance with the water quality requirements.

As for the number of years of monitoring, article 405 requires five years of monitoring following license issuance. The licensee proposes an initial period of two years, which is supported by the MDEQ, while the WDNR and MDNR state at least three years. In its filing, the licensee indicates that at a September 16, 1997 consultation meeting, participants agreed that two to three years of monitoring at the onset of plan implementation would be sufficient.

To account for yearly variability, the licensee should monitor for the first three years. At the end of the three years of monitoring, the licensee should include, in its report summarizing the monitoring results, an analysis of the need for further monitoring. The licensee should allow the agencies at least 30 days to comment on the licensee's report and recommendations.

So that the Commission can monitor the licensee's compliance with the water quality requirements of article 405 of each license, the licensee should be required to notify the Commission of any deviations from the specified article 405 requirements.

The licensee's proposed DO and water temperature monitoring plans, with the above modifications, fulfills the requirements of article 405 of each license, and should, therefore, be approved.
The Director orders:

(A) The licensee's plan to monitor dissolved oxygen concentrations and water temperature under article 405 of the license for the White Rapids Project (FERC No. 2357) and the Chalk Hill Project (FERC No. 2394), filed on November 3, 1997, as modified by paragraphs

(B) and (C) below, is approved.

(B) The licensee shall monitor dissolved oxygen and water temperature as specified in its plan for the first three years beginning in 1998. At the end of the three years of monitoring, the licensee shall include in its report summarizing the monitoring results an analysis of the need for further monitoring. The licensee shall allow the Wisconsin Department of Natural Resources, Michigan Department of Natural Resources, Michigan Department of Environmental Quality, and the U.S. Fish and Wildlife Service at least 30 days to comment on the licensee's report and recommendations prior to filing the final report with the Commission. Agency comments shall accompany the filing. Further, the Commission reserves the right to require changes in project structures or operations based on the monitoring results and conclusions contained in the final report.

(C) If the dissolved oxygen concentration, as measured by the approved monitoring system, deviates from the requirements of article 405, 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 405; (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) 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.

(E) 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.

Project No. 2357-011 et al. -5-

Kevin P. Madden
Acting Director
Office of Hydropower Licensing