

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 11831-108 --Michigan,
Wisconsin
Twin Falls Hydroelectric Project
Wisconsin Electric Power Company

March 18, 2019

Todd Jastremski
Asset Manager Hydro Operations
WE Energies
800 Industrial Park Drive
Iron Mountain, MI 49801

Subject: 2018 Water Quality Monitoring Report - Article 423

Dear Mr. Jastremski:

This letter acknowledges receipt of your 2018 Water Quality Monitoring Report, filed on December 18, 2018 with the Federal Energy Regulatory Commission (Commission), pursuant to license Article 423 of the Twin Falls Project No. 11831. On September 27, 2013, the Commission approved an amendment to your license to allow for construction of a new powerhouse and spillway.¹ Article 423 of the 2013 Order required you to monitor water temperature and dissolved oxygen (DO) within the new tailrace and at a location downstream where tailrace flows become riverine. Monitoring was to be conducted hourly from June 1 through September 30, for two years, and you were required to file a report by December 31 of the first and second year of monitoring. Upon completing the first year of monitoring, you were to consult with members of the Wilderness Shores Implementation Team to discuss corrective actions and to develop possible changes for the second monitoring year. Continuation of monitoring beyond two years is to be determined based on monitoring results and consultation with the resource agencies.

Background

In accordance with the Wilderness Shores Settlement Agreement (WSSA) and the project's Water Quality Certification you are required to ensure that flow releases from

¹ Order Amending License and Revising Annual Charges (144 FERC ¶ 62,268).

the project maintain state standards when flows are greater than or equal to the 95 percent exceedance flow. The WSSA requires that discharge: not exceed maximum monthly water temperature limits; does not warm the Menominee River below the project greater than 5°F above existing water temperature; and does not cause the DO downstream to be less than 5 milligrams per liter (mg/L).

Monitoring Results

Your 2018 report is for the second year of monitoring, conducted June 1 through September 30, 2018. You monitored DO at two locations downstream of the project: within the new tailrace; and at a location downstream where the project's tailrace flow becomes riverine. You also monitored DO and temperature vertical profiles upstream near the powerhouse intake.

According to your report there were no deviations from the DO water quality standard of 5.0 mg/L at any time, at both downstream monitoring locations. There was a period of non-representative data observed in the tailrace location in early August due to equipment failure. Vertical profile readings near the powerhouse intake showed that DO concentrations in the upstream impoundment were above the water quality standard at all depths through the monitoring season. You did not observe stratification of the impoundment.

You also did not observe any deviations from the monthly temperature water quality standards. The median temperature differences between the tailrace and downstream monitoring locations was 0.2°F. Vertical profile readings near the powerhouse intake showed water temperatures in the upstream impoundment were below the monthly temperature water quality standards at all depths throughout the monitoring season, and did not indicated the presence of thermal stratification.

In your report, you recommend to eliminate future water quality monitoring under Article 423, stating that your two years of data has demonstrated that operation of the project meets the water quality standards. You state that the project withdraws water from the entire water column upstream, and this promotes mixing of water and minimizes potential low DO or elevated water temperatures downstream, if the reservoir is stratified near the intake.

Agency Consultation

You provided the 2018 monitoring results to the members of the Wilderness Shores Implementation Team for review and comment on October 29, 2018.² The Michigan Hydro Relicensing Coalition stated they have no concerns with eliminating monitoring, as it is consistent with the terms of the Wilderness Shores Settlement Agreement. The Wisconsin Department of Natural Resources (Wisconsin DNR) stated that the project did meet its requirements, except for temperature monitoring, and that you should deploy a thermistor in a riverine environment above the flowage and one at the furthest downstream monitoring location to collect temperature data for the next two years.

In response to the Wisconsin DNR's comment, you state that you believe you have met the monitoring requirements of Article 423 and that no further monitoring is necessary. You state that during the 2017 monitoring season, you conducted continuous water quality monitoring upstream and downstream of the dam, along with vertical profiles near the powerhouse. The upstream monitoring was performed to document water quality in the event that you observed a deviation downstream. No water quality deviations were observed in 2017, and you proposed to discontinue continuous monitoring upstream for 2018. The Wisconsin DNR did not object to your proposal.

Although not explicitly stated, we assume the Wisconsin DNR's comment is referring to the requirement that you "not warm the river below the project greater than 5°F above the existing water temperatures measured above the project." You state that previous monitoring conducted at the WSSA projects did not reveal compliance issues with this requirement, and monitoring for temperature upstream and downstream has not been required at any of the WSSA projects since the initial monitoring occurred. You further state that vertical profiles conducted near the powerhouse intake in 2017 and 2018 did not reveal thermal stratification near the intake, and therefore colder water is not available to be released downstream temperatures, if it was needed.

² The Wilderness Shores Implementation Team consists of representatives from Wisconsin Electric Power Company, Michigan Department of Natural Resources, Wisconsin Department of Natural Resources, U.S. Fish and Wildlife Service, National Park Service, River Alliance of Wisconsin, and the Michigan Hydro Relicensing Coalition.

Discussion and Conclusion

Our review of your two years of monitoring indicate that you have met the requirements of Article 423. Article 423 required you to monitor water temperature and DO within the new tailrace and downstream of the tailrace, where flow becomes riverine, for two years. You measured these parameters in 2017 and 2018, at these locations, and the results indicate that the project is meeting its WSSA water quality standards by remaining below the maximum allowable water temperatures downstream, and maintaining DO above 5 mg/L. No deviations from the DO or maximum allowable water temperatures have been observed downstream of the project for the past two monitoring seasons. Additionally, in 2017, the upstream monitoring you conducted showed that DO and water temperature was consistent between the three monitoring locations (one upstream and two downstream). The intent of Article 423 was to confirm that water quality standards continued to be met, after the construction of the new powerhouse and spillway. Based on your monitoring results in 2017 and 2018, it appears that the project continues to meet the DO and water temperature requirements. Therefore, no further monitoring is necessary.

In your 2018 report, you state that future monitoring could be reestablished as conditions warrant, as allowed per the 401 Certification and condition 4.1.14 of the WSSA. We agree, and the Commission reserves its authority to require additional monitoring in the future if necessary.

Your filing fulfills the second, and last, reporting requirement under Article 423. Thank you for your cooperation. If you have any questions regarding this letter please contact Andrea Claros at (202) 502-8171 or andrea.claros@ferc.gov.

Sincerely,

Thomas J. LoVullo
Chief, Aquatic Resources Branch
Division of Hydropower Administration
and Compliance