

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 2506-246- Michigan
Escanaba River Hydroelectric Project
Upper Peninsula Power Company

December 10, 2015

Mr. Virgil E. Schlorke, Director
Upper Peninsula Power Company
1002 Harbor Hills Drive
Marquette, MI 49855

Subject: Deviation from water quality standard - Article 415

Dear Mr. Schlorke:

We received your letter filed August 26, 2015, regarding a deviation from the water quality standards downstream of Boney Falls (Dam No. 4) development of the Escanaba River Hydroelectric Project No. 2506. The project is located on the Escanaba River, in Delta and Marquette counties, Michigan. You submitted your letter pursuant to the Federal Energy Regulatory Commission's (Commission) Order Approving Modifications to Dissolved Oxygen Monitoring Plan under Article 403 and 415 (2005 order).¹

License Requirements

The 2005 order requires, in part, that you monitor dissolved oxygen (DO) concentrations at a monitoring station located 600 feet downstream of the Boney Falls development to ensure that the standard of 7.0 milligrams per liter (mg/l) is met when river discharges are at or above the 95 percent exceedance flow and when the facility is not augmenting. In accordance with the 2005 order, you monitor DO at one-hour intervals during the months of July and August. The reporting requirements for any deviations from the water quality standards are described in ordering paragraphs (C) and (D) of the Order Modifying and Approving Water Quality Monitoring Plan.²

¹ 110 FERC ¶ 62,237 (issued March 9, 2005).

² 78 FERC ¶ 62,036 (issued January 22, 1997).

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Deviation Incident

You report that during the August 3 through August 17, 2015, monitoring period, DO readings downstream of Dam No. 4 were below 7.0 mg/l on August 3 and 4, and again on August 17, 2015. You state that the low DO concentrations on August 3 and 17 were caused by warm water temperatures, and the lowest DO concentrations recorded on each day were 5.8 and 6.6 mg/l, respectively. During the monitoring period, daily average water temperatures ranged from 70°F to 73°F, with a daily maximum temperature of 74°F. You state that a lightning strike caused a disruption at the Boney Falls (Dam #4) powerhouse, which resulted in the loss of two hourly temperature data points on August 13. Low DO concentrations on August 4 were recorded from 1:00 p.m. to 4:00 p.m., with the lowest DO concentration recorded being 3.8 mg/l. This incident was due to biofouling and plant accumulation on the monitoring probe, which resulted in anomalous DO concentration readings. You quickly identified and corrected the problem.

In order to mitigate for the warm water temperatures in the Escanaba River downstream of the powerhouse, you initiated flow augmentation daily on August 3, 7, and 11-17, 2015. During the flow augmentation procedure, you increased flow from the powerhouse to 150 percent of the base flow between 11:00 a.m. to 6:00 p.m., then reduced flow to 75 percent of the base flow to allow the reservoir to refill. When low DO concentrations are observed and the facility is not augmenting flow or in isolation mode, aeration flow is released through a gate. Such DO corrective actions occurred daily between on August 4, 11, 13-15, and 17, 2015.

Your filing includes a DO concentration and temperature data record for July 1 through August 17, 2015, and a copy of your August 21, 2015 notification to the Michigan Department of Natural Resources, Michigan Department of Environmental Quality, and U.S. Fish and Wildlife Service about the deviation. The agencies did not file comments.

Conclusion

The deviations at Boney Falls were brief and slightly below the required DO concentration. You took actions to release aeration flow to improve DO concentrations and initiated a flow augmentation event to mitigate for warm water temperatures. You addressed issues with biofouling on the monitoring probe quickly to ensure the data readings were accurate. As required, you provided notice of the water quality deviations to the Michigan Department of Environmental Quality, the Michigan Department of Natural Resources and Environment, and the U.S. Fish and Wildlife Service via e-mail on August 21, 2015.

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Considering that the deviations were caused by warm water temperatures, and you took a proactive response to provide corrective actions by releasing aeration flow, we will not consider these events to be a violation of your license.

Thank you for your cooperation in this matter. While these incidents will not be considered a violation of your license, please note that the incidents will be made a part of the compliance history for this project and considered in the course of our review of any similar incidents to determine appropriate Commission action. If you have any questions pertaining to this letter, please contact Ms. Holly Frank at (202) 502-6833.

Sincerely,

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

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