

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D.C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 10855-339, 10855-340, 10855-341,
10855-342, 10855-343, – Michigan
Dead River Hydroelectric Project
Upper Peninsula Power Company

August 25, 2021

VIA FERC Service

Virgil E. Schlorke, Director
Upper Peninsula Power Company
800 Greenwood Street
Ishpeming, MI 49849

Subject: Minimum Flow Deviations and Dry Year Consultation

Dear Mr. Schlorke:

This letter is regarding your reports of minimum flow deviations and notification of dry year consultation for the Dead River Hydroelectric Project No. 10855. You filed the minimum flow deviation reports with the Federal Energy Regulatory Commission (Commission) on July 23, 29, and August 4, 2021, pursuant to Article 403 of the project license¹ and the Operations Monitoring Plan required by Article 405, which was approved by an order issued March 11, 2010 (2010 Order).² Additionally, you filed notifications with the Commission on July 29, and August 11 and 24, 2021 regarding initiation of dry year consultation and intention to file for a temporary variance. The filings are pursuant to ordering paragraph (E) of the 2010 Order and according to the requirements set forth in Article 402 of the project license. The Dead River project consists of three separate developments: Silver Lake, Dead River (Hoist), and McClure.

¹ Order Issuing Original License (101 FERC ¶ 62,013), issued October 4, 2002.

² Order Modifying and Approving Article 405 Operations Monitoring Plan (130 FERC ¶ 62,214).

License Requirements

Minimum Flow

Article 403 requires that you maintain continuous minimum flows downstream of the McClure and Dead River (Hoist) powerhouses of 80 cubic feet per second (cfs) and 100 cfs, respectively, for the protection and enhancement of water quality, recreation, and aquatic resources in the Dead River. Additionally, you must provide a minimum instream flow of 20 cfs to the bypassed natural river channel below McClure dam. Releases from the project may be temporarily modified for short periods upon mutual agreement with the Michigan Department of Natural Resources, Michigan Department of Environment, Great Lakes, and Energy, and U.S. Fish and Wildlife Service (collectively referred to as “resource agencies”). As amended by an order issued September 1, 2011,³ you must report all deviations that last longer than one hour or result in environmental impacts, to the Commission within 30 days of the date that the data become available.

Dry Year Consultation

Article 402 requires, in part, that you operate the project to maintain certain minimum storage basin water surface elevations at each of the project developments for the protection and enhancement of water quality, recreation, aesthetics, and fishery resources in the Dead River. Additionally, you must strive to operate existing project facilities at each development in order to achieve certain start-of-month target elevations.⁴ The pertinent water surface elevation requirements for this proceeding are identified in National Geodetic Vertical Datum (NGVD) in Table 1:

Table 1: Water Surface Elevation Requirements

Storage Basin	Month	Start-of-Month Target Elevation	Minimum Elevation
Dead River	July	1,341.0 feet	1,339.5 feet
	August		
Silver Lake	July	1,485.0 feet	1,480.0 feet
	August	1,482.5 feet	1,479.0 feet

³ Order Amending License (136 FERC ¶ 62,186).

⁴ The March 8, 2021 *Order Approving Request for Temporary Variance from License Requirements of Article 402*, (174 FERC ¶ 62,150), in part, approved the proposed start-of-month target elevation of Silver Lake Storage Basin for July from 1,481.5 to 1,485.0 feet NGVD, and for August from 1,480.0 to 1,482.5 feet NGVD.

You may temporarily modify surface elevations, if required by operating emergencies beyond your control, including but not limited to floods, ice conditions, drought, and electrical emergencies, or for short periods, upon mutual agreement among you and the resource agencies. During the adverse conditions described above, you must, within one business day after identifying the noncompliance condition relating to water surface elevations, consult with the resource agencies regarding the emergency actions taken or planned.

Consultations during the adverse conditions must continue, following a mutually agreed upon schedule with the resource agencies. Upon cessation of the adverse conditions, you must resume the normal project operating water levels. You must notify the Commission as soon as possible, but no later than 10 days after each such emergency incident and shall provide the reason for the modified reservoir elevations and actions taken to return the project to normal operating levels.

Ordering paragraph (E) of the 2010 Order requires you, if reservoir inflow is insufficient to maintain minimum reservoir elevation requirements at any of the project developments, to implement the dry year consultation process. You must consult with the resource agencies, Keweenaw Bay Indian Community, and Dead River Campers, Inc. to determine appropriate temporary modifications to the operating requirements of Articles 402 and 403 of the project license. You must begin the dry year consultation process no later than the first business day following the day when a reservoir decreases below the required minimum elevation due to low inflow conditions. In addition, ordering paragraph (F) of the 2010 Order further details deviation notification and reporting requirements for any deviation not covered by the provisions in dry year consultation or Articles 402 and 403.

Summary of Minimum Flow Deviations

In your reports, you detail three deviations that occurred at your project in July and August 2021. On July 16, 2021, your remote operations center was adjusting outflows to balance headwater conditions downstream at the McClure Development and inadvertently set Hoist powerhouse outflows to 95 cfs, five cfs lower than the license limit. The deviation was identified the next morning during operator shift change and the outflows were increased to 110 cfs. On July 24, 2021, Hoist powerhouse tripped offline at 0056 hours due to a transmission system fault caused by severe weather. You dispatched an operator to the site who performed an evaluation and opened the low-level outlet to restore flows at 0315 hours (duration of 1 hour and 17 minutes). You state that you observed no adverse environmental effects as a result of the deviations. You notified the resource agencies on July 19 and 26, 2021, respectively, and received no comments regarding the incidents.

On July 26 and 28, 2021, as directed by the Commission's Division of Dam Safety and Inspections, you performed planned Part 12D upstream underwater inspections at the Silver Lake and McClure developments, respectively. Prior to the inspections, you requested comments from the resource agencies on April 27, 2021 via email. You discussed the work plan with the resource agencies at the annual agency meeting on April 28 and you received no additional comments within 30 days. Additionally, on June 2 you sent an email reminding the resource agencies of the pending inspections and received no further comments prior to the initiation of the work.

The inspections resulted in three planned deviations from the minimum flow requirements, as anticipated. A 37-minute deviation of no flow occurred at Silver Lake due to the closing of the outlet. At McClure, the powerhouse was taken offline to facilitate the dive inspection, which resulted in a deviation of no flow lasting one hour and 21 minutes. Additionally, you ceased flow through the bypass siphon at McClure for 15 minutes to allow for continued underwater inspections. In each case, you performed stranded aquatic organism surveys as planned and observed no adverse environmental effects as a result of the deviations. You also note that a significant amount of water remained in the projects' tailraces and bypass reach during the deviations. You received no comments from the resource agencies following the events.

Discussion and Conclusions – Minimum Flow Deviations

Upon review of your reports, we will not consider the July 24, 2021 deviation that occurred at the project to be a violation of Article 403 of your project license. The deviation was caused by a transmission system fault from severe weather and you took appropriate and timely measures to restore required flows. You surveyed the downstream area for adverse environmental effects and found none. You notified the resource agencies of the incidents and received no comments. Regarding the planned deviations on July 26 and 28, 2021, we find that you took appropriate measures to keep the resource agencies informed of the pending inspections and work plan, as well as keeping them apprised of their status through completion. The inspections were necessary and directed by the Commission, and you completed stranded aquatic organism surveys according to your work plan. Therefore, we do not consider these deviations to be a violation of Article 403 of your license.

Regarding the July 16, 2021 deviation, we determine that the cause of the reduced minimum flow was due to an erroneous setting by the remote operator; therefore, we consider this deviation to be a violation of Article 403 of your license. Although relatively minor in scale, the preventable error resulted in a sustained deviation that was discovered after the shift change, at which time you increased the outflow to compensate

for the previous loss. You notified the resource agencies and surveyed the downstream area; you found no adverse effects to aquatic resources and received no agency comments. You state that you are reviewing the incident to determine corrective actions to prevent similar future incidents from occurring. These deviations and violation will be made a part of the project's compliance history and may be considered in our course of review to determine appropriate Commission action in future proceedings.

Dry-year Consultation

In your July 29, 2021 filing, you indicate that you initiated dry year consultation with the resource agencies on July 13, immediately following a headwater elevation at Silver Lake Storage Basin (SLSB) that was 0.04 foot below the license-required minimum of 1480.0 feet NGVD in the month of July. The dry year consultation ended on August 1 when the August recorded headwater elevation was above the August elevation requirement.

In your August 11, 2021 filing, you indicate that you reinitiated dry year consultation with the resource agencies on August 4, immediately following an observed minimum reservoir elevation at Dead River Storage Basin (DRSB) that was less than the license required minimum of 1339.5 feet NGVD.

In an August 18, 2021 conversation with Commission staff, you indicated that due to the severely dry conditions in the basin, you foresee the SLSB headwater elevation dropping below the license-required August minimum elevation soon, and likely remaining for a sustained amount of time, possibly until spring runoff if current conditions persist. You also similarly indicated that DRSB headpond elevations would likely remain below the minimum required elevation in the same manner. Additionally, you indicated in an August 24, 2021 letter that given the long-term nature of the conditions at the project and in the watershed, you intend to file a request for a temporary variance from the requirements of Article 402 and potentially Article 403. Your request would also include a proposed increase the start-of-month target elevations at SLSB and DRSB, similar to past requests,⁵ in an effort to proactively allow for increased storage in your impoundments in the event that the watershed receives significant precipitation and/or snowmelt in the spring. You state that the agencies currently support maintaining minimum flows and that you are providing the required minimum flows accordingly.

Commission staff find your reports to be consistent with the requirements set forth in Article 405 and your approved Operations Monitoring Plan; however, given the

⁵ *Upper Peninsula Power Company*: 166 FERC ¶ 62,044 (2019); 170 FERC ¶ 62,142 (2020); 174 FERC ¶ 62,150 (2021).

anticipated long-term nature of the conditions in the watershed and at your project, we concur that you should file a request for temporary variance of the requirements of Article(s) 402 (and 403, if warranted) of your license as detailed above. You should include justification for the variance, proposed dates and duration of the variance, an environmental review of the proposed variance, and documentation of consultation with the resource agencies, as well as any comments or recommendations you receive and how you incorporated them into your proposal. If you did not incorporate a recommendation you must provide an explanation based on project-specific information.

Thank you for your cooperation. If you have any questions regarding this letter, please contact Brian Bartos at brian.bartos@ferc.gov or (202) 502-6679.

Sincerely,

Andrea Claros
Chief, Aquatic Resources Branch
Division of Hydropower Administration
and Compliance