

FEDERAL ENERGY REGULATORY COMMISSION
Washington, D. C. 20426

OFFICE OF ENERGY PROJECTS

Project No. 2785-084--Michigan
Sanford Project
Boyce Hydro Power, LLC.

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

April 23, 2013

Mr. Frank Christie, P.E.
Boyce Hydro Power, LLC.
6000 S. M-30 (P.O. Box 15)
Edenville, MI 49624

RE: Downstream gaging under article 402 and subsequent orders

Dear Mr. Christie:

On February 27, 2013, we received notification from the Michigan Department of Natural Resources (MDNR) requesting information regarding the status of the downstream streamflow gage at the Sanford Project. Although MDNR did not file a formal complaint under 18 CFR §385.206, we are pursuing this issue to ensure that you are operating your project in compliance with amended Article 402 and subsequent Federal Energy Regulatory Commission (Commission) orders, and to clarify the requirements pertaining to downstream flow gaging.

Requirement

Pursuant to amended Article 402¹ of the Sanford license, you are required to file, for Commission approval, a plan to install streamflow gages and pool level gages in the Tittabawassee River to monitor compliance with the minimum flow requirements of amended Article 401² and the reservoir elevation requirements of amended Article 411.

¹ Order on Rehearing and Amending License Order. 85 FERC ¶ 61,066 (October 16, 1998).

² As clarified in the Order Modifying and Approving Article 401 Flow Release Plan, you are required to release a continuous flow of 210 cubic feet per second (cfs) from May 1 through March 14, and 650 cfs during the walleye spawning season from March 15 through April 30. 94 FERC ¶ 62,157 (February 16, 2000).

In July 1999, the Commission approved your plan to release the minimum flows pursuant to Article 401 and your proposal to develop a flow monitoring system pursuant to Article 402 on a phased schedule concurrent with the schedule to release the required minimum flows.³ Subsequently, you proposed a gaging plan that involved recording turbine gate positions to provide a record of flow releases. The Commission concluded that this method was indirect and likely inaccurate, and should not be employed as the primary gaging method.⁴ The Commission required you to file a plan to install a velocity-metering flow gage downstream from the project in a location to gage all project releases (including spill flow and leakage). The installation plan was required to include a description of gage calibration, provisions for electronically recording hourly data from the gage, and documentation of consultation with the MDNR and U.S. Fish and Wildlife Service (FWS).

Compliance History

In November 2001, the Commission stated that your plan to install the required velocity-metering flow gage was overdue, and directed you to file a plan and schedule for installing the gage by January 2002.⁵ The Commission again reminded you to file the overdue gage installation plan in letters dated August 3, 2005, May 18, 2006, and September 29, 2006.⁶ On December 8, 2006, the Commission concluded that your failure to file a gage installation plan was a violation of Article 402 and the 2001 orders, and considered a violation of your license.

In your response to the Commission's August 2005 letter, you stated that you would defer starting work on the streamflow gage until the MDNR was satisfied with the design parameters and results. At the time, you anticipated installing the gage in the summer of 2006 or 2007. The MDNR filed comments in response to the Commission's May 2006 letter, stating that it had not received your finalized gaging plans for review and requesting that your plan respond to concerns raised by the U.S. Geological Survey (USGS). In response to the Commission's September 2006 letter, you provided a brief record of recent events pertaining to the draft gage installation plan and a description of

³ Order Approving Minimum Flow Release and Reservoir Level Gaging Plan. 88 FERC ¶ 62,019. (July 8, 1999).

⁴ Order Modifying and Approving Article 402 Gaging Plan. 94 FERC ¶ 62,180 (March 1, 2001).

⁵ Order Amending Article 401 Flow Release Plan and Requiring Article 402 Flow Gaging. 97 FERC ¶ 62,142 (November 13, 2001).

⁶ These letters provided notice under section 31 (a) of the Federal Power Act.

consultation efforts with the MDNR and USGS. You state that you would complete the flow gaging project in a timely and proper manner, and stated that your draft plan contained a proposed schedule for completing the work. You further state that you do not intend to develop a full scale river gaging station, nor do you intend to accurately monitor high flow conditions, but that you are using the gage to verify the minimum release flows required by amended Article 401. The MDNR filed comments in response to your letter, which listed multiple deficiencies in the March 28, 2006 draft gage installation plan. In part, the MDNR stated that the draft plan lacked a description of the installation location, the type of equipment used, a quality assurance and quality control procedure for gage calibration, data storage, and an installation schedule.

On November 7, 2006, you filed the final plan for downstream gaging. The Commission approved the plan in early 2007,⁷ and required that you provide a report confirming completion of gage installation and reports following the completion of any calibration of the gage. In late 2007, the Commission received notification that the gage had not been installed as anticipated, but that it was expected to be completed by the end of June 2008. The Commission granted an extension of time and required you to file quarterly progress reports to keep the Commission informed of your progress.⁸

The Commission received several progress reports from you. The first, filed on July 31, 2008, stated that you were waiting to receive a stream permit from the Michigan Department of Environmental Quality and anticipated that you would install the gage in August or September. On December 15, 2008, you confirmed that you had installed the gage but that it had not yet been calibrated by the USGS. In a letter filed with the Commission on January 23, 2009, you stated that calibration had been postponed until a time when flows would allow it. On June 29, 2009, you stated that the installed unit had lost communications, and that you removed the sensor unit and communications cable so that the equipment could be tested and/or repaired. You proposed to redesign the installation set-up and to install the gage and complete the calibration in August 2009. On December 28, 2009, you stated that you had arranged for the gage calibration to occur in May or June 2010, with cooperation from the USGS.

In the Commission's September 2010 environmental inspection report, the inspector determined that you failed to make the quarterly reports on the installation of the tailwater gage. The inspector further notes that you mentioned that you had recently upgraded the downstream gage and changed its location, but at the time of the inspection,

⁷ Order Modifying and Approving Installation Plan for River Flow Monitoring Under Article 402. 118 FERC 62,053 (January 22, 2007).

⁸ See Order Granting Extension of Time to Install Downstream Gage Under Article 402 (issued November 14, 2007).

the new acoustic downstream gage had not been calibrated. The inspector instructed you to immediately notify the Commission, per the approved plan, of the changes and the schedule for calibrating the new gage.

In December 2010, you provided a letter stating that the USGS visited the gage site in July and performed calibrations. You concluded that the project discharges more than what is required per the minimum flow requirements of amended Article 401. You further stated that although the calibration was completed and you were recording data from the gage, you had not yet received all the information from the USGS and therefore the data being collected was not valid. In November 2011, you again wrote to the Commission to report that you had not received the final regression calculations from the USGS calibration and without them, you were unable to use the data generated by the flow recorder. You stated that if this information was not received from the USGS in the winter, you would pursue a new calibration test from an independent contractor.

The USGS filed a response on December 12, 2011, stating that it wished to clarify what the 2010 calibration field work entailed. The USGS stated that it agreed to make a one-day series of Tittabawassee River discharge measurements that would allow you to calibrate the meter, and that it agreed to provide you with the measurements and information about how to complete a rating of the acoustic meter. However, the USGS stated that it did not agree to develop a rating that would allow the direct computation of discharge from the acoustic meter, and further cautioned that the one-time set of field conditions it collected is insufficient to develop an accurate meter rating.

On June 28, 2012, you filed a letter describing water discharge from the Sanford Dam for the period of March 15 through April 30, 2012, when minimum flows are required to be 650 cubic feet per second (cfs). Due to environmental conditions (a warm winter and lack of snow), you stated that flow dropped below the required minimum flow for part of the day for 25 days in April. The data you provided describes the turbine settings, discharges for each day, discharge from the spill gates, and leakage through the wicket gates when a turbine is off-line.

Discussion and Conclusion

The minimum flows required by amended Article 401 are in place for the protection and enhancement of fish and wildlife resources, riparian vegetation, aesthetic resources, and water quality in the river downstream of the project. Ensuring that the minimum flow requirements are continuously met requires installation, maintenance, and calibration of the streamflow gage downstream of the project, pursuant to amended Article 402. In 2008, the MDNR stated that the gage is not purposed for simply collecting data for historical records, but that it should have a real-time component that would trigger an alarm if the minimum flows do not meet the seasonal criteria so appropriate corrective measures could be taken.

Based on the above compliance history and the 2011 exchange between you and the USGS regarding calibration of the gage, we are uncertain about the status of the downstream gage. Further, your June 28, 2012 filing includes data that appears to be based on monitoring minimum flows by monitoring turbine gate settings, which both the MDNR and Commission concluded was an unacceptable primary gaging method (see footnote 4). From the record, we are unable to determine whether the gage is currently in place at a location where it best measures spill flow and leakage, accurately calibrated, providing meaningful data about minimum flow conditions, and connected to a SCADA system. We are also uncertain whether you pursued a new calibration test from an independent contractor as you proposed in your November 2011 letter.

Therefore, in order to determine your compliance with the requirements of Articles 401 and 402 at the Sanford Project, you must file, within 30 days of the date of this letter, a report including the information described below.

1. Is the gage installed? If so, describe its location and provide photographs of the installed gage showing the actual equipment as well as its general location within the river and its proximity to the project dam, tailrace, and other hydraulic features that contribute to the flow at that location. The photographs should be clearly labeled and identify all features that effect flow at the gage.
2. If the gage is installed, is it calibrated? Please indicate when the gage was last calibrated and who conducted the calibration.
3. If the gage is not calibrated, please explain why it has not been calibrated and provide a schedule for completing this work during the summer of 2013.
4. Describe the status of connecting the gage to a SCADA system or other type of alarm system so that project operators are alerted to changing flow conditions in order to make adjustments and possibly avert minimum flow deviations.

You may file your response electronically via the Internet, see the instructions on the Commission's web site (www.ferc.gov) under the "e-filing" link. The Commission strongly encourages electronic filings. In lieu of electronic filing, an original and eight copies of all documents may be mailed to the Secretary at the following address:

The Secretary
Federal Energy Regulatory Commission
Mail Code PJ-12
888 First Street, NE
Washington, D.C. 20426

You are advised that issuance of this letter does not preclude the Commission from taking further action under Section 31(a) of the Federal Power Act (FPA), as amended by Section 12 of the Electric Consumers Protection Act of 1986. Section 31(a) provides the Commission authority to assess civil penalties up to a maximum of \$11,000 per day, per violation, for failure to comply with the terms and conditions of your license or revoke your project license for noncompliance. Therefore, this letter constitutes notice pursuant to Section 31(a) of the FPA.

If you have any questions regarding this letter, please contact Holly Frank at (202) 502-6833.

Sincerely,

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

c: Mr. Kyle Kruger
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