

FEDERAL ENERGY REGULATORY COMMISSION
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OFFICE OF ENERGY PROJECTS

Project No. 637-081-Washington
Lake Chelan Hydroelectric Project

October 21, 2011

Ms. Michelle Smith
Licensing & Compliance Manager
Public Utility District No. 1 of Chelan County
P.O. Box 1231
Wenatchee, WA 98807-1231

Subject: Minimum Flow and Ramping Rate Deviations Pursuant to Article 405 of the License

Dear Ms. Smith:

This is in response to your filing submitted on June 16, 2011, pertaining to deviations from minimum flow and ramping rates requirements at the Lake Chelan Hydroelectric Project, FERC No. 637. You submitted the filing pursuant to Article 405 of the license,¹ and your approved Operations Compliance and Monitoring Plan (Plan).²

License Requirements

Article 405 of the license requires you to file a Plan that describes how you will comply with the instream flows, ramping rates, and tailrace flows, as set forth in Article 7 of the Lake Chelan Settlement Agreement, (Agreement) and Chapter 7 of the Comprehensive Plan attached to the Agreement. Under the Agreement, you are required to maintain a minimum flow of 320 cfs into Reaches 1 through 4 of the Chelan River, for steelhead trout spawning, from May 15 through July 15 during high runoff years. In

¹ See, Order on Offer of Settlement and Issuing New License, 117 FERC ¶ 62,129, issued November 6, 2006.

² See, Order Modifying and Approving Operations Compliance and Monitoring Plan Article 405, 121 FERC 62,152, issued November 30, 2007.

addition, the project must not exceed two inches per hour ramping rate, for the purpose of preventing stranding of fish in the Chelan River. Furthermore, under Article 405 of the license you are required to notify the Washington Department of Ecology (Ecology) and the Commission within 48 hours after you are aware of any deviation from the minimum flow requirements.

In accordance with the approved Plan, you are required to file a report with the Commission, within 30 days of any deviation from minimum flow requirements, lake levels or ramping rates. The report must 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 must also include: operational data necessary to determine compliance with the license requirements regarding minimum flows, lake levels, and ramping rates, as appropriate; a description of any corrective measures implemented at the time of occurrence and the measures implemented or proposed to ensure that similar incidents will not recur; and comments or correspondence, if any, received from the resource agencies and others regarding the incident.

Instream Flow and Ramping Events

In the filing, you explain that the minimum flow of 320 cfs as required for high runoff years, was not met on May 15, and 17, 2011, for about one hour, and three hours, respectively. On May 15 at about 9:00 PM, the Low Level Outlet (LLO) control system partially closed one of the gates, even though no commands were given to move the gate. The partial gate closure was due to a second programmable logic controller (PLC), which was linked to the slide gate operating motors through a different logic path. The incident resulted in flows below minimum levels, from 320 cfs to 285 cfs for about one hour. Water levels in Reach 4 of the Chelan River decreased by 3 inches over a 30 minute time period.

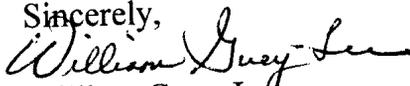
On May 17, 2011, a second incident occurred when personnel were attempting to repair the LLO gate position indicators, which were giving inaccurate flow readings. The PLC was rebooted, and the LLO flow meter also rebooted and began to indicate that LLO flow was exceeding 500 cfs. A plant operator partially closed the LLO gates, based on this flow meter information, which later was proven to be false. This event resulted in flows decreasing to about 250 cfs before the flow meter readings were determined to be inaccurate. Subsequently, when water levels began to decrease in Reach 4, personnel reset the LLO slide gates to a previous setting to restore water levels in Reach 4 to those observed when flows were known to be near 330 cfs. This incident also resulted in a flow reduction lasting for about 3 hours, with water level decreasing 4 inches in the first

hour and about 2.5 inches during the second hour. You determined that the incident was caused by a malfunction of the LLO flow meter. Since the malfunction of the flow meter, the LLO has been operated to maintain Reach 4 water levels at the elevations recorded when flow releases ranged from 330-340 cfs. The flow meter was returned to service on May 24, but the LLO remains on manual control, until the automated control system can be reprogrammed and tested. You state in the filing, that since the incidents the LLO has been disconnected from the PLC's operating motors to prevent further incidents.

In addition, you state, that no adverse biological effects were observed as a result of these incidents. Chinook fry that were observed in Reach 4 during surveys conducted on May 10 and May 18 were seen to be rearing in shoreline areas with water depths greater than 6 inches. No fish stranding or other adverse ecological effects were observed as a result of these flow and ramping rate deviations. Furthermore, you state that you reported the deviations to the Commission's Portland Regional Office and Ecology via electronic correspondence on May 19, 2011, within 48 hours of when you became aware of the incident. No comments were received regarding the incidents.

Conclusion

After reviewing the information included in your report, we have determined that the minimum flow and ramping rate deviations that occurred on May 15, and May 17, 2011, will not constitute violations of the project license. The incidents were caused by a malfunction of the PLC, and you restored the flow by disconnecting the gate motors from the PLC system and manually operating the LLO gates to maintain the minimum flow and ramping rate requirements. You indicate that the LLO will remain manual with the automated system disconnected until the control logic has been revised to allow remote manual operation. No adverse biological impacts were observed as a result of the incident. Your filing adequately fulfills the reporting requirements pursuant to Article 405 of the license and your approved Plan. Thank you for your cooperation. If you have any questions concerning this letter, please contact Anumzziatta Purchiaroni at (202) 502-6191, or by e-mail at anumzziatta.purchiaroni@ferc.gov.

Sincerely,

William Guey-Lee
Chief, Engineering Resources Branch
Division of Hydropower Administration
and Compliance