Subject: Fish Salvage Reports pursuant to Revised Incidental Take Statement

Dear Mr. Urban:

This acknowledges receipt of your 2019 Fish Salvage Report, filed with the Federal Energy Regulatory Commission (Commission) and the National Marine Fisheries Service (NMFS) on August 22, 2019, pursuant to the amended license for the Packwood Lake Hydroelectric Project No. 2244\(^1\) and NMFS’s Revised Incidental Take Statement.\(^2\) This letter also addresses your February 19, 2019 filing which documents your fish salvage efforts during an unplanned outage at the project.

**Background**

On March 22, 2018, NMFS issued a Biological Opinion (Opinion) that concluded that issuing a license for the project is not likely to jeopardize the continued existence of upper Cowlitz River stocks of Chinook salmon, coho salmon, and steelhead. As part of its Opinion, NMFS included an incidental take statement (ITS) with nine reasonable and prudent measures (RPMs) to minimize take of these three species, along with nine terms and conditions to implement the measures. The license order includes the ITS, RPMs,

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\(^1\) Order Amending License to Incorporate Revised Incidental Take Statement (166 FERC ¶ 62,071), issued February 14, 2019.

\(^2\) Filed by NMFS on November 9, 2018.
On November 9, 2018, NMFS revised the ITS portion of its March 22, 2018 Opinion to clarify some language and improve the efficiency and effectiveness of three of the reasonable and prudent measures. The Commission amended the license to incorporate the revisions, as referenced above.

In accordance with the revised ITS, you are required, in part, to minimize take of listed salmonids trapped or captured during fish salvage operations by:
(1) implementing fish rescue in the tailrace slough for planned and unplanned outages, (2) taking all appropriate steps to minimize the amount and duration of handling of listed salmonids during capture and release operations; and (3) conducting special seining operations when the Cowlitz River meets or exceeds the height of the fish exclusion racks on the tailrace fish barrier or water is observed flowing into the tailrace canal upstream of the barrier.

**February 2019 Fish Salvage: Unplanned Outage**

Your February 19, 2019 letter states that at 3:00 a.m. on February 12, 2019, there was a power outage in the majority of Lewis County, where the project is located, due to heavy snowfall and downed trees impacting power lines. The power interruption resulted in an unplanned outage at the project. Given the accessibility of the site, road conditions, and associated safety considerations, you notified NMFS that you would not be able to implement fish salvage in the tailrace slough within the 12-hour window required by the March 2018 ITS. However, you were able to access the site by February 13, 2019, and initiated the salvage effort around noon until approximately 2:50 p.m. You report that flow in the tailrace slough was minimal, consisting of a very small amount of outflow from the project tailrace and subsurface water from the mainstem. You state that there were isolated pools in the north channel and in the slough immediately downstream of the confluence with the tailrace, but that the south channel of the slough was flowing.

You report that a total of 47 salmonids were captured and relocated to the Cowlitz River during electrofishing efforts: 26 juvenile coho salmon, 17 rainbow trout/steelhead, 3 mountain whitefish, and 1 coastal cutthroat trout. You report 4 rainbow trout/steelhead mortalities resulted from the electrofishing effort. All salvaged salmonids were placed in aerated buckets for release at the confluence of the tailrace slough with the mainstem Cowlitz River.

As relevant to your February filing, the revised November 2018 ITS increased the timeframe for implementing fish rescue for unplanned outages from 12 hours to 36

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3 Order Issuing New License (165 FERC ¶ 62,031), issued October 11, 2018. The reasonable and prudent measures and implementing terms and conditions are attached as Appendix D and made requirements of the license through ordering paragraph (G).
hours. The February salvage effort occurred following receipt of NMFS’s revised ITS, but before the Commission’s approval of it. Due to the accessibility of the site and road conditions immediately following the unplanned outage, you contact NMFS staff when it became apparent that your staff and fisheries consultant would not be able to reach the project within the 12-hour timeline described in the March 2018 ITS, but would conduct the salvage effort as soon as conditions allowed. You report that NMFS was receptive to your approach given the safety concerns caused by the snow and ice in the area. You were able to access the site to initiate fish salvage efforts within approximately 33 hours of the unplanned outage. The Commission approved the revised ITS the following day.

**August 2019 Fish Salvage: Annual Planned Outage**

Your August report describes the salvage efforts for listed salmonids which occurred in August 2019, during the annual planned maintenance outage. You report that you surveyed the tailrace, the tailrace slough downstream of the fish barrier at the terminus of the tailrace, and the stilling basin on August 13, 14, 15 and 16, 2019. In accordance with the revised ITS, you conducted multiple salvage efforts and redd surveys in the slough in advance of the project shutting down on August 15, 2019, and report that you did not document any redds and did not observe any spawning activity or adult anadromous salmonids.

During the surveys in the tailrace slough on August 13-15, you captured a total of 72 salmonids: 58 coho, 5 rainbow trout/steelhead, 8 mountain whitefish, and 1 chinook. On August 15, you salvaged fish from the tailrace and captured 1 juvenile coho. Additionally, you observed approximately 15 coho mortalities immediately upstream of the tailrace barrier, which appeared to be recent mortalities caused by contact with the barrier. On August 16, 2019, you conducted seining in the stilling basin and captured 53 salmonids: 48 coho, 2 rainbow trout/steelhead, 2 mountain whitefish, and 1 coastal cutthroat trout. All salvaged fish were relocated to the mainstem Cowlitz River.

**Future Considerations**

You state that in accordance with the revised November 2018 ITS, you conducted surveys for spawning activity in the tailrace slough during the 3 days prior to the annual outage. The intent of this methodology is to ensure that all salmonids that may be present in the tailrace slough have suitable habitat conditions up to the point when they are removed from the area in advance of the shut down and resultant changes to habitat conditions. After this first year of rescue efforts under this methodology, you believe modifications to the existing rescue regime should be considered for future years to result in a more efficient and effective salvage process.
You plan to discuss with NMFS whether the salvage efforts should be conducted in the tailrace slough on August 15, 16 and 17 in future years as opposed to August 13, 14 and 15. The limited amount of residual flow and shallower overall conditions available in the two days immediately following project shutdown would facilitate a more efficient and effective rescue effort, and increase confidence that a majority of the fish present in the tailrace slough are being captured and relocated. As has been seen in past years, the three or four days immediately after Project shutdown result in conditions with ample refugia and levels of dissolved oxygen to sustain the health of the fish present in the area. You plan to discuss this modification with NMFS at the annual Resource Coordination meeting (held each year at least 60 days preceding the anniversary of the license), and you recognize that any changes to the procedure would require Commission approval before being implemented.

**Agency Consultation**

The terms and conditions of the ITS require you submit a report to NMFS within 10 calendar days of completion of the salvage operations, noting the quantities and species of fish salvaged, and mortalities observed. Due to the ITS revisions and these reports describing the first salvage efforts under the 2018 license, you provided additional information in the report to describe some logistical observations and proposed minor modifications for future years. You also provided a copy to the Cowlitz Indian Tribe, Yakama Nation, and members of the Resource Agencies Committee (RAC).\(^4\) No parties provided comments on the filing.

**Discussion and Conclusion**

Your February and August 2019 reports are the first fish salvage reports under your new license, and meet the reporting requirements by being filed in a timely manner and providing the quantities and species of fish salvaged, and mortalities observed.

With regard to the unplanned outage in February 2019, we recognize that the severity of the snowstorm prevented you from safely accessing the site within the previously required 12-hour timeframe.\(^5\) You were in contact with NMFS regarding the

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\(^4\) The RAC includes, but is not limited to, representatives from Washington Department of Ecology, Washington Department of Fish and Wildlife, U.S. Fish and Wildlife Service, U.S. Forest Service, NMFS, the licensee, and consulting biologists.

\(^5\) Precipitation at Packwood, WA as reported by National Oceanographic and Atmospheric Administration’s National Centers for Environmental Information, indicates accumulation of snow and ice starting on February 9, with 10 inches falling on
difficulties conducting the fish salvage within 12 hours and they agreed that you would conduct the effort as soon as conditions allowed. Due to the storm conditions prohibiting you from safely reaching the site within the then-required 12-hour timeframe, we will not consider this to be a violation of your license requirements. Similar instances are not expected to recur in the future as the timeframe for the response to unplanned outages has been extended to 36 hours by the revised ITS.

Your August 2019 planned outage fish salvage report indicates that there may be future modifications to the methods in order to optimize the timing of the fish salvage efforts. Should you and NMFS agree that changes are needed, you must file for an amendment of license.

Thank you for your cooperation. If you have any questions regarding this matter, please contact Holly Frank at (202) 502-6833 or holly.frank@ferc.gov.

Sincerely,

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