

Fish Passage Plan (FPP) Change Request Form

Change Form # & Title: 15BON002 – Turbine Maintenance Testing
Date Submitted: 9-Oct-2014
Project: Bonneville Dam
Requester Name, Agency: Ben Hausmann, BON Fisheries
Final Action: [12-Feb-2015 FPOM](#): APPROVED w/ edits.

FPP Section: BON Section 5.3.4. Turbine Unit Maintenance.

Justification: 30 minutes is not enough time for the control room to test turbine units before maintenance or prior to returning them to operational status. The increase in turbine testing time to 60 minutes is more realistic and necessary for standard testing procedures to not violate FPP criteria. Additionally, to fully flush fish from the draft tube and immediate tailrace vicinity, a minimum of 3 hours is best with even longer run times being preferred.

Proposed Change:

5.3.4. Units may be operationally tested for up to ~~30-60~~ minutes before going into maintenance status by running the unit at ~~speed-no-load and~~ various loads within ~~and outside of~~ the 1% range for pre-maintenance measurements and testing, ~~AND TO ALLOW ALL FISH TO MOVE THROUGH THE UNIT.~~ ~~Units will be run for a minimum of 3 hours to flush fish prior to installing tail logs.~~ ~~After maintenance or repair,~~ Units may be operationally tested ~~after maintenance or repair~~ while remaining in maintenance or forced outage status ~~by~~. ~~Operational testing may consist of~~ running the unit for up to a cumulative time of ~~30-60~~ minutes within ~~and outside of the~~ 1% range before returning to operational status. ~~Units may be operated outside of the 1% range for up to 20 minutes during testing.~~ ~~Unit operations below the 1% range will be minimized to the extent practicable.~~ ~~Operational testing OF UNIT UNDER MAINTENANCE is in addition to a unit in run status (e.g., MINIMUM GENERATION) required for power plant reliability.~~ Operational testing may deviate from fish priority units and may require water that would otherwise be used for spill if the running unit for reliability is at its 1% lower limit. Water will be used from powerhouse allocation if possible, and water diverted from spill for operational testing will be minimized to that necessary to maintain and assure generation system reliability.

Comments:

9-Oct-2014 FPOM: Fredricks said this should be included in Appendix C Load Shaping Guidelines. Royer will find out more about speed-no-load operation and if Appendix C covers 60 minutes.

16-Jan-2015 NOAA memo: “This one needs some discussion regarding speed-no-load and other below 1% range operations. The three hour run/flush time is ok and is in keeping with the guidance in the Load Shaping Guidelines in Appendix C. Section 4.7 of that appendix allows for 15 min to 8 hours for routine turbine maintenance. Perhaps these guidelines (written by BPA in the early ‘90s) need to be updated with more current information.”

22-Jan-2015 FPOM: Bettin asked what the purpose of the change form is. Hausmann explained that the Project needs more than 30 minutes and Appendix C requires coordination for every operation. Fredricks said he would rather see the Load Shaping Guidelines updated so the changes apply to every project on the river. Fredricks suggested this won't be solved today but we need to look at what needs changed and go through Appendix C in a stepwise manner. NOAA is ok w/ 3 hr flush and 60 min outside 1%, but requested language to clarify how long units will be operated below 1% (speed-no-load) and to state that ops below the 1% range will be minimized to the extent possible.

29-Jan-2015 email from Ben Hausmann: "In speaking with the individual who does this work, he stated that of that hour, less than 20 minutes are outside of the 1% band. There is no "speed no load" component to this testing. The units are always loaded."

12-Feb-2015 FPOM: Fredricks requested that the additional information be included in the changes to the FPP. FPOM approved.

Record of Final Action:

12-Feb-2015 FPOM: APPROVED with edits.