

OFFICIAL COORDINATION REQUEST FOR NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE - 18BCL01 Turbine Testing

COORDINATION DATE - 13 November 2017

PROJECT - Big Cliff Dam

RESPONSE DATE - 27 November 2017

Description of the problem

Turbine outages are proposed for testing during the winter to avoid deviations from down ramping criteria listed in the Biological Opinion (BiOp). This testing is necessary to ensure power generation control and protective systems perform reliability and in accordance with design parameters. During this time, the generator will be cycled between offline (45% of test duration), full load (15% of test duration), as well as various intermediate loads (40% of test duration) to validate the performance, control, and protection capabilities of the unit.

Tests performed at Detroit should not result in a noticeable flow or TDG impact downstream of Big Cliff. Since only one generator will be tested at a time, operators can deviate slightly from the Big Cliff scheduled reservoir elevations to smooth out the effects of variable test flows through a single generator. During the Big Cliff outage, flows of 4000 cfs downstream of Big Cliff will need to be scheduled to ensure operators can transfer flow from the generator to the spillway gates to support various phases of the test without causing the ramp rate violations observed on 13 July 2017 (discussed in MFR 17BCL05). A target window of November-January for the test is preferable, since the mean of monthly discharge is above 3,400 CFS. For the March-June period proposed in NMFS' comments to MFR 17BCL05, the mean of monthly discharge is less than 2,700 cfs. By performing testing during the high flow months, the chance of an impact to stakeholders arising from flow deviations is maximally reduced.

Type of outage/change required

The following outages are proposed to support NERC/WECC Model Validation Testing:

Detroit Unit 1, 23-Jan-2018, 0700-1700, Generation Will Vary 0-60MW

Detroit Unit 2, 24-Jan-2018, 0700-1700, Generation Will Vary 0-60MW

Big Cliff, 25-Jan-2018, 0700-1700, Generation Will Vary 0-23MW

Impact on facility operation

Power will not be available for units taken offline.

Dates of impacts/repairs

Detroit Unit 1, 23-Jan-2018, 0700-1700

Detroit Unit 2, 24-Jan-2018, 0700-1700

Big Cliff, 25-Jan-2018, 0700-1700

Length of time for repairs

The anticipated duration for the test is approximately seven hours, but a ten hour outage is scheduled as a contingency in the event any unexpected challenges arise.

Expected impacts on fish

Elevated TDG levels will be observed during use of the spillway for the test at Big Cliff Dam. Impacts to Chinook salmon sac fry are probably of most concern.

Comments from agencies

Comments from NMFS are in Attachment 1

Final results

Turbine testing will be implemented as planned while incorporating actions listed in Attachment 1 in the best manner possible.