

MEMORANDUM FOR THE RECORD**SUBJECT: McNary Project going black.**

Narrative: Due to the workload involved in the incident to be described, times are approximate.

Units and Spill: At time of the event, Units 3, 4, 5, 9, 13 and 14 were out of service for maintenance or repairs. Units 1, 2, 6, 7, 8, 10, 11 and 12 were available.

August 28: transmission line 5 tripped during relay testing at 1343 hours. Units 10, 11 and 12 were removed from service. When reenergizing line 5 and starting units 11 and 12, smoke was noted coming from around a bus switchgear. Before the line could be deenergized, the bus tripped causing McNary to go black, all systems lost power. Units 1, 2, 6, 8, 11 and 12 were all offline at 1413 hours. The emergency diesel generator, which is dedicated to this purpose, was used to establish spill for the incoming flow at 1430 hours. The spill pattern was followed as best as possible under the circumstance. Fuses from a bus not in use were moved to the bus that had tripped, with the bus being restored at 1500 hours. The station service unit along with the station air supply was restored by 1515 hours. Water intrusion into the main units' turbine guide bearing was noted in units 1, 2, 6, 8 and 10 at 1600 hours. Power was restored to the spill at 1715 hours. Three spillbay indicators were fixed by 1730 hours. Units 12, 11, 7, and 6 returned to service at 1846, 1859, 1915 and 1956 hours, respectively. This left units 1, 2, 8 and 10 out of service due to the black out. Due to these circumstances, unit loads may go outside the hard one percent criterion.

August 29: Unit 10 returned to service at 1332. We hope to have units 1, 9 and 2, in that order, back in service before the end of the day. Note that unit 9 was out of service for a different reason but can be returned earlier than the other units. There is no update on unit 8 at the time of this writing.

Adult Fish Ladders:

August 28: Both ladders lost power at 1413 hours. Both ladders were monitored during the outage and after by operators and the fisheries staff. At the Washington ladder, the PUD unit continued to supply auxiliary water. At the Oregon ladder, fish pumps 2 and 3 were out of service, but the 1000 cfs conduit was open. Power returned to both ladders' exits and entrances by 1600 hours. No issues were noted at the Washington shore ladder. For the Oregon ladder, fish pumps 3 and 2 returned to service at 2011 and 2015 hours, respectively. The entrance weirs were returned to automatic mode.

August 29: At the Oregon south shore entrance, we noted SFEW1 had hit its upper limit and was out of the water, though the indicator showed the weir to be at the same depth as SFEW2. The operators resolved the issue by rebooting the weir's control system and had the weir at proper depth by 0800 hours. Fish pumps 2 and 3 were out of service for ground checks from 0254 to 0336 hours.

Juvenile Channel:

August 28: All power and the air supply was lost at 1413 hours. After checking the separator at the facility, the channel was examined at 1421 hours. Due to the forebay elevation rising, the channel elevation rose from 327.50 (a normal low fluctuation) to 327.87 (0.87 above the set point and a high-water alarm level when power is on). This range only reflects what was measure around the power outage. During the outage, the elevation could have been higher. While monitoring the channel, the only way to adjust the water would have been to manually open one or two of the side dewatering valves. Fortunately, this was not needed as the power and air supply returned at 1515 hours. The control system rebooted, and the only issue was the brush cycle sequence reset, so we ran the brushes by using the start button to ensure the screens were clean. Later, at 1845 hours, there must have been a brief power outage as the brush cycle sequence reset again so the fisheries staff ran the brushes again with the start buttons.

August 29: No issues.

Juvenile Fish Facility:

Initially in secondary bypass for sample collection.

August 28: the power and air both went out of service at 1413 hours. With the units tripping offline, a debris surge occurred, and debris accumulated on the perforated plate. Cleaning the plate was continuous. With no air, the system could not be switched to primary bypass, so the adult release gate was opened to reduce the water level in the separator. Though high, no water or fish were lost from the separator. General maintenance was called, arrived with a come-along and helped move the primary/secondary gate to the primary position at 1515 hours, just as the air and power returned to service. The sample gates were turned off at 1545 hours. All facility systems were checked and reset. Due to the uncertainty of the overall situation, we felt it best to stay in primary bypass, and monitor the channel and ladders instead.

August 29: No issues.

Location: McNary Project.

Method: See above.

Timeline - Duration: As outlined above.

A. Species: NA

B. Origin: NA

C. Length: NA

D. Marks and Tags: NA

E. Marks and Injuries Found on the Carcasses: NA

F. Future and Preventative Measures: At this time, will need further discussion after the units are back.

G. Photos Taken: None

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