CENWW-OD-McNary **08/13/2020**

MEMORANDUM FOR THE RECORD - 20 MCN 08

SUBJECT: Missed Sampling due to juvenile channel dewatering valve failure and transition screen brush issues.

Narrative: 1. On August 5 at about 0530 hours, the transition screen brush tripped an alarm. The biologist found no issues and reset the alarm at about 0930 hours. The brush again tripped a timing alarm on August 6 at about 1330 hours. The roving operator found no issues and reset the system, but this did not reset the brush. With the transition brush alarm still in, the rectangular screen brush alarmed at about 1800 hours, which appeared to be related to the brush cycle sequence program. Due to inadvertent miscommunication, the transition and rectangular screen alarms were not reset by another roving operator until August 7 at about 0320 hours. The technician and biologist on duty found no issues with the brushes at about 0700 hours. The dewatering screens appeared clean. The causes of the two transition brush timing alarms and the one related rectangular brush alarm were undetermined. As will be described below, the south side dewatering valve failed on August 8. In order to concentrate on this issue, the transition brush was turned off. The project biologist cleaned the limit switches on August 11 at about 1228 hours and returned the brush to automatic mode. No further issues have occurred. The air burst system's zone 5 keep the transition screen clean.

2. On August 8 at about 0355 hours, the south side dewatering valve failed (one of two valves that regulate the channel water elevation) at about 50% open. The valve appeared to have slipped down some. The forebay elevation was high enough that the north valve topped out at 100% open when trying to compensate. The technician on duty closed two orifices in unit 1, which was out of service. The channel was stable and functional on one dewatering valve. The assistant biologist came in at about 0700 hours and verified the channel stability. Also, they cancelled sample collect, which was to begin at 0700 hours. At 0800 hours, the project biologist came in and closed one more orifice in unit 1, leaving 39 orifices supplying the channel. Due to high forebay elevations, in order to close the north valve further, the project biologist also opened the west and east floor valves approximately one inch each, from approximately 21 to 22 inches open. Like the north side dewatering valve approximately one month ago, the south side valve's coupler had failed. All crew were notified so repairs could begin on Monday, August 10.

On that day, from 0800 to 1030 hours, the south valve was disassembled, a new coupler was installed, and the valve was reassembled. From 1230 to 1630 hours, attempts to calibrate the valve's upper and lower limits were not successful. On August 11, from 0730 to 1430 hours, the south valve's limits were finally set. The valve was returned to automatic mode and unit 1's orifices were reopened, resulting in 42 orifices being open. During calibration attempts, the north valve was off and orifices in units 1 through 3 were opened and closed as needed to maintain channel elevation in a reasonable range.

3. The fisheries staff monitored the channel 24/7 to insure there was not a more significant channel failure. With only one side dewatering valve functional in automatic mode and calibration attempts causing wide channel elevation changes, we did not attempt sampling on August 8 and 10. There was 48

hours of sampling missed. GBT monitoring concluded the week before. Normal scheduled sampling resumed August 12.

4. Due to the Corona virus in our area, the project continues to work with two teams. However, now, one team works outside the powerhouse, and the second team works inside the powerhouse. Limited staffing due to the virus continues to effect response times for repairs.

Location: McNary juvenile collection channel and fish facility.

Method: In order to monitor the channel 24/7, sampling did not occur at the facility until the south side dewatering valve returned to automatic mode.

Timeline - Duration: From August 8 to 11.

A. Species: No fish mortalities occurred. Index sampling was missed for two full days.

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: We will continue to examine the nature of the failures and the best course of action to take to reduce the probability of these type of failures. Also, we will continue to insure proper spare parts are on hand. Finally, channel screen brushes and dewatering valves will be the focus of the winter outage.

G. Photos Taken: No

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