

MEMORANDUM FOR THE RECORD

SUBJECT: Sampling cancelled due to channel water elevation fluctuations.

Narrative: Last year, we noted severe juvenile channel water elevation fluctuations starting in October. The issue was investigated but no cause was found. This year severe fluctuations, which adversely effected the facility separator and sampling, began in late August. There were three water elevation alarms before the dates listed in the table below.

Channel Water Elevation Alarms

| Date | Time | Alarm Type | Comments |
|------|--------------|------------|---------------------------------|
| 8/30 | 1128 | High | |
| 8/31 | 0344 | High | |
| | 0933 | High | |
| | 1543 | High | |
| | 2309 | High | |
| 9/1 | 0012 | High | |
| | 0314 | High | |
| | 0825 | High | |
| 9/2 | 1735 | High | |
| | 2255 | High | |
| 9/3 | 0113 | High | |
| | 0432 | High | |
| | 0519 | High | |
| | 0900 | High | |
| | 1315 to 1410 | High | 3 alarms together |
| 9/4 | 0626 | High | |
| | 0641 | High | |
| | 0809 to 0857 | High | 4 alarms while cycling orifices |
| | 1020 | High | 3 alarms together |
| 9/5 | 1211 | High | |
| 9/7 | 0616 | High | |
| 9/8 | 1512 | High | |
| | 1546 to 1548 | High | 3 alarms together |
| | 1656 | High | |
| | 2043 | High | |

It was decided on September 4 to suspend sampling (separator operation) until the cause of these channel fluctuations and alarms could be determined. Again, this year, the electrical staff found no issues with the channel control system. It was determined the issue must be below water in the elevation meter’s still well. The juvenile system was switched from primary to emergency bypass on September 11, from 0900 to 1300 hours. We discovered the shroud around the still well to be covered in freshwater sponge, which was not allowing for proper water flow to the still well. See photos below. The shroud was cleaned the next day. The system was switched back from emergency bypass to primary bypass on September 12, from 1200 to 1345 hours. Since that time, there have been no severe water fluctuations in the channel or channel elevation water alarms. Every other day sample collection resumed on September 15, at 0700 hours.

Location: McNary juvenile fish facilities.

Method: Stopped sample collection. Switch from primary to emergency bypass to clean water elevation meter still well. Switch back to primary bypass. With no issues observed, resume sample collection.

Timeline - Duration: Five sample days (September 5, 7, 9, 11 and 15) were missed. One day of emergency bypass occurred as outlined above.

A. Species: During the switching mentioned above, about two adult Chinook, 12 adult steelhead, and four adult lampreys along with one channel catfish, several adult shad, a few small mouth bass, and walleye were observed. Several hundred juvenile shad were noted. No smolts or juvenile lamprey were observed. Only one adult shad mortality and a few juvenile shad mortalities were noted.

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: The still well and shroud are cleaned every winter. It appears freshwater sponge is becoming an increasing issue in our systems and more frequent cleaning will be required.

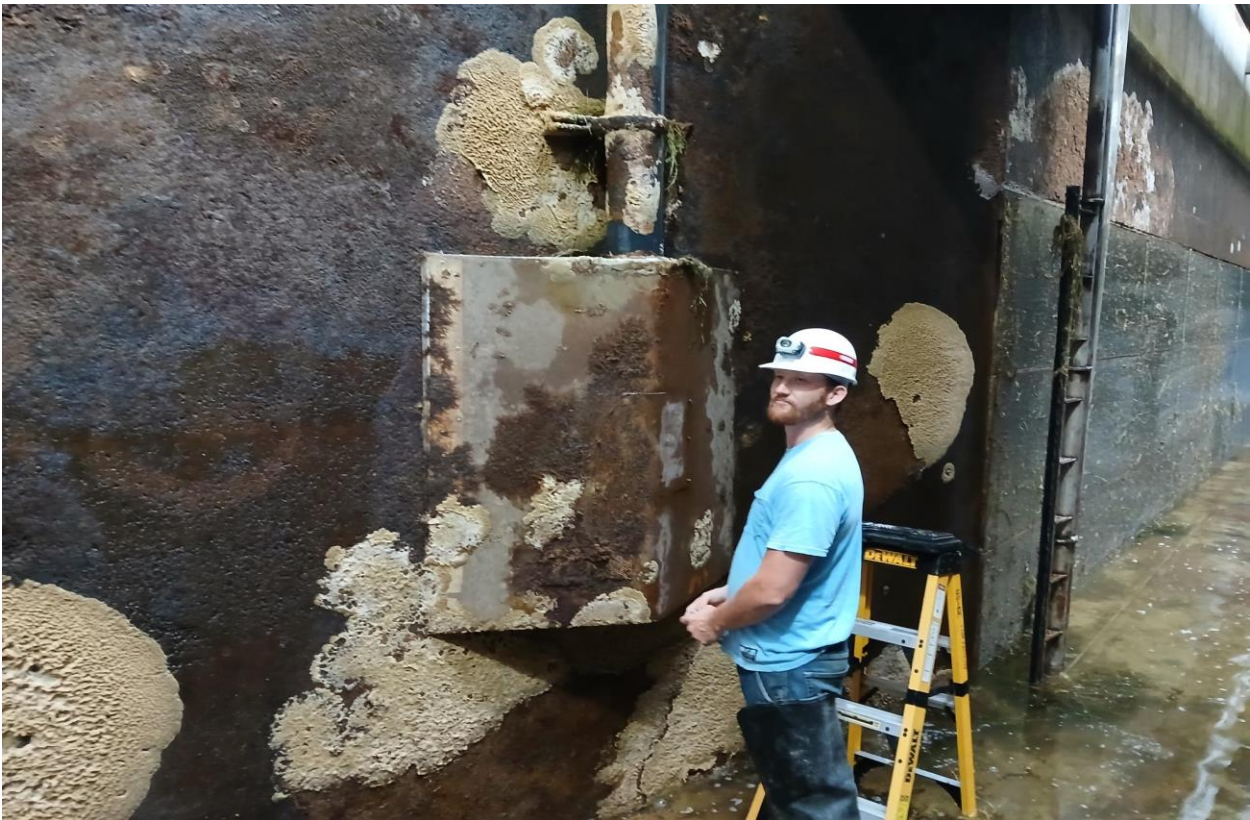
G. Photos Taken:
Shroud Top



Shroud Bottom



Shroud



Channel Rectangular Screen along with Walls and Floor



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