

MEMORANDUM FOR THE RECORD – 20 LGS 14-6C2 Orifice Liner

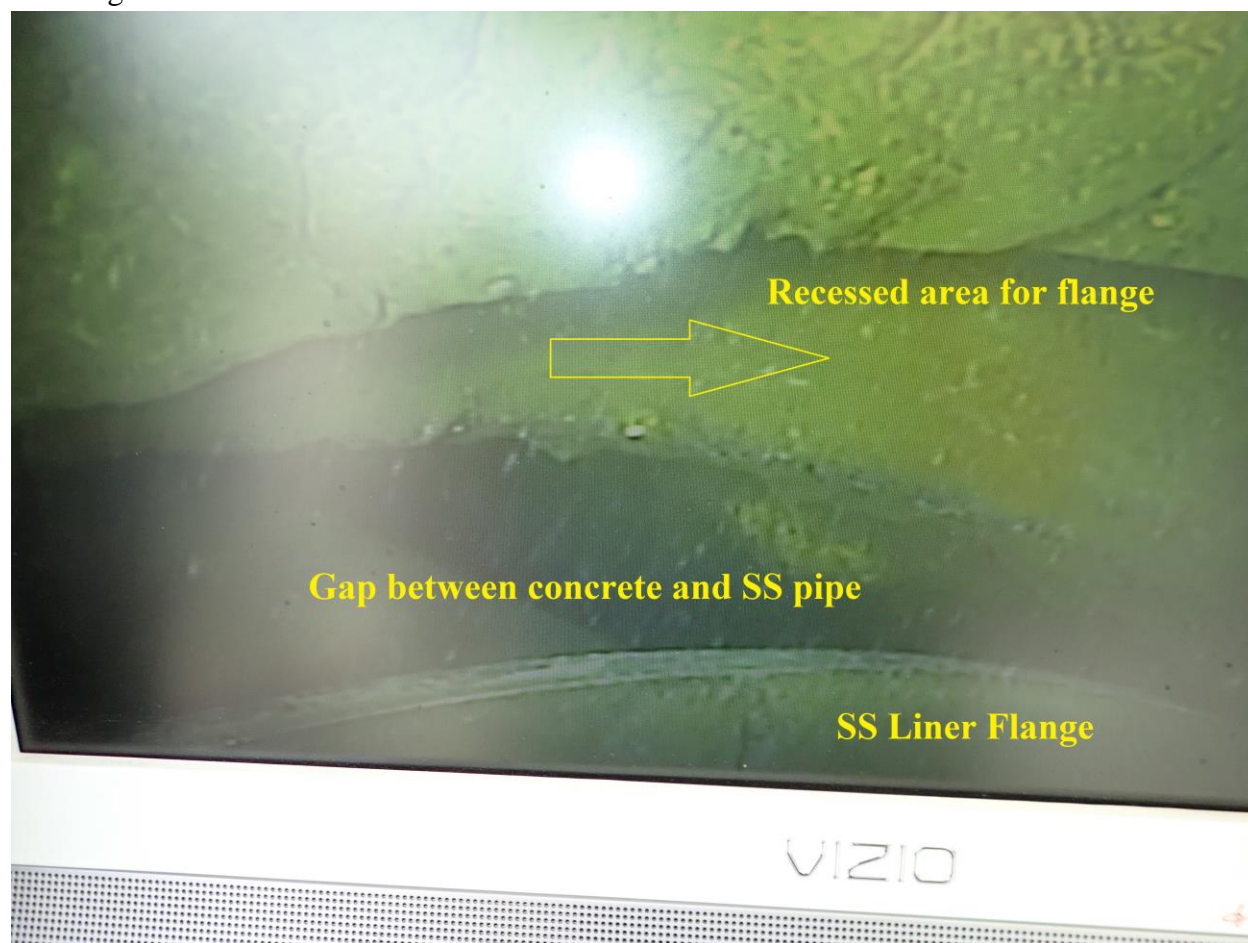
SUBJECT: During ESBS/VBS inspections on July 9, the orifice liner for 6C2 was found detached from the gatewell cement wall (Picture 1). VBS screens and orifices were last inspected via underwater camera on June 8 and no issues were observed. Each orifice at Little Goose, except 1A1, consists of an 18” diameter hole in the concrete protruding from the gatewell slot to the juvenile collection channel. A 16” diameter steel pipe is grouted inside the opening with the 12” diameter stainless steel pipe mounted inside. The 12” diameter pipe, or liner, is the pipe that fish actually pass through when moving from the gatewell into the juvenile channel (Picture 2). This pipe has a flange on the gatewell side which is bolted onto the concrete (Picture 3 & 4). This pipe is extremely smooth and when properly mounted with the flange, prevents fish from striking any portion of the gate valve when entering the juvenile collection channel.

Little Goose staff have determined that in order to properly reattach the 12” diameter pipe, both the gatewell and the juvenile channel will need to be dewatered. The work will likely take at least a full day. Since orifices in operating Units with ESBS screens installed cannot be closed for more than 5 hours, the work cannot be performed during the fish passage season (Fish Passage Plan, Chapter 8, 2.3.2.4.).

Little Goose has shut Orifice 6C2 and plans to keep it shut until repairs are made during the winter maintenance period. Orifice 6C1 remains fully operational and will be monitored and backflushed during routine inspections. This will allow Little Goose to operate the one required orifice per gatewell (Fish Passage Plan, Chapter 8, 2.3.2.4.) Additionally, Unit 6 will likely not operate very frequently as river flows are dropping and will continue to do so through late summer.

- A. Species – N/A
- B. Origin – N/A
- C. Length – N/A
- D. Marks and tags – N/A
- E. Marks and Injuries found on carcass – N/A
- F. Cause and Time of Death – N/A
- G. Future and Preventative Measures – Little Goose staff plan to leave orifice 6C2 closed for the remainder of the year. Staff will continue to monitor orifices during mandatory ESBS/VBS camera inspections. More thorough inspections may be conducted during winter maintenance.
- H. Pictures – See pictures below.

Picture 1: Photo taken from gatewell looking toward the juvenile channel. You can see the top of the 12" diameter pipe flange, the gap between the flange and 16" pipe and the recessed area the flange bolts into.



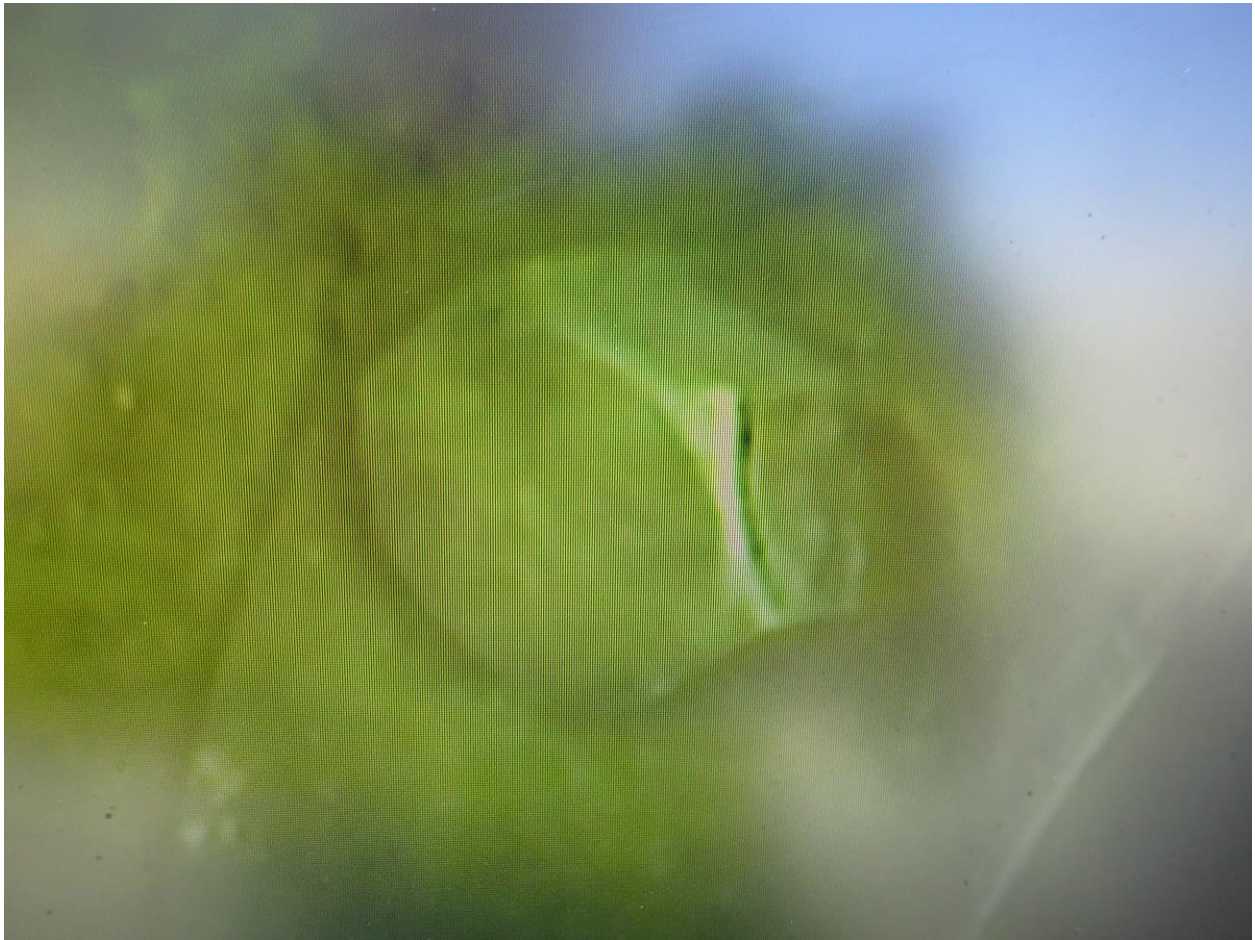
Picture 2: Photo taken looking from the juvenile channel looking toward the gatewell on an unknown orifice from a previous year inspection. You can see the 12" stainless steel liner inside the corroded 16" pipe.



Picture 3: Stainless steel flange with missing bolt found on 6C2, July 9, 2020.



Picture 4: Stainless steel flange with bolt and proper installation found in 6A on July 9, 2020.



Sincerely,
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