CENWW-OD-DWR

MEMORANDUM FOR THE RECORD: 20 LWG 01 ESBS and ROV Stuck in Gatewell slot 1A

SUBJECT: Unit 1 ESBS removal issues and ROV entangled on ESBS gear

ESBS removal for unit 1 began November 25 due to this units not being returned to service until after December 15. When removing unit 1 ESBS in slot 1A there was an issue with retracting the ESBS screen. ROV camera inspections to investigate the issue with the ESBS in slot 1A began November 25, 2019 continuing through November 27, 2019. Investigating the issue resumed the following Monday. After several attempts to identify the problem the ROV was pulled through the orifice in gatewell slot 1A on December 4, 2019. The ROV was retrieved and re-deployed that day. During this time both orifices in the gatewell were closed and the gatewell was continuously monitored. During these inspections operation was shifted to the 10" orifice. On December 5, 2019 the ROV became entangled in the ESBS components requiring the slot 1A orifices to be closed until the ROV was removed. Opening one of the orifices in slot 1A would have resulted in cables/cords and possibly the ROV obstructing the orifice. The ROV was retrieved, the ESBS in slot 1A was removed, and unit 1 was returned to service December 12, 2019. It was determined that a cable issue was the problem preventing slot 1A ESBS removal. No fish were seen in the gatewell during this period. Gatewell slot 1A was continuously monitored during daylight hours. Dipping the gatewell was not possible due to the risk of the basket becoming tangled in the ESBS gear and ROV camera cable.

- A. Species N/A
- B. Origin Clipped
- 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 N/A

Sincerely, Elizabeth Holdren Supervisory Fisheries Biologist Lower Granite Project Ph. (509) 843-2263