

MEMORANDUM FOR THE RECORD: 16 LGS 15 MFR Ladder Cooling Water Pump Outages

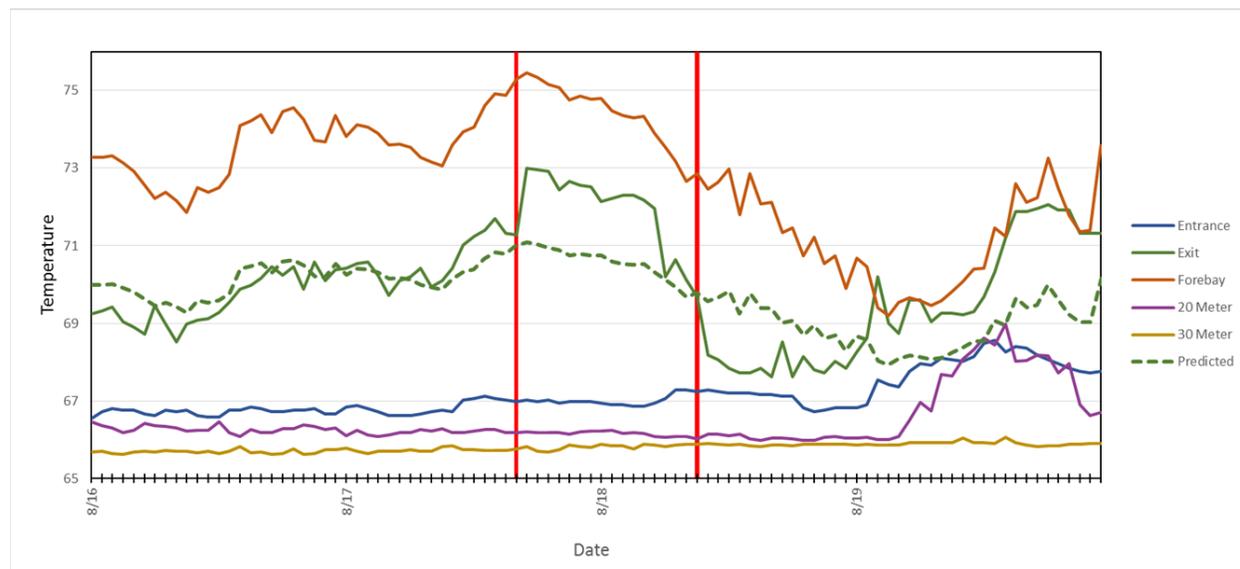
SUBJECT: Adult Fish Ladder Cooling Water Fish Pump Outages.

Little Goose Fish Ladder Cooling Water Pump operations were recently interrupted on 2 occasions. The first interruption in service lasted from 1600 hours on August 17, 2016 to 0855 hours on August 18, 2016 for a total time off line of 16.5 hours. The second interruption in service took place from 0320 hours on August 29, 2016 to 1659 hours on August 30, 2016 for a total time off line of 37.5 hours.

During the August 17 incident, the generator supplying power needed to operate the pumps was shut down as a safety precaution during refueling. Following the fueling operation. The generator failed to restart due to a fault signal. The contractor was able to remedy the situation and bring the pumps back on line the following morning.

Little Goose Daily Adult Fish Counts, August 16 - 19.					
	Date	Chinook	Steelhead	Coho	Sockeye
	16-Aug	194	82	0	0
First	17-Aug	127	67	0	1
Incident	18-Aug	259	42	0	0
	19-Aug	203	96	0	0

Figure 1. Little Goose fish ladder water temperatures during Aug 17 - 18 pump outage (marked by red bars).

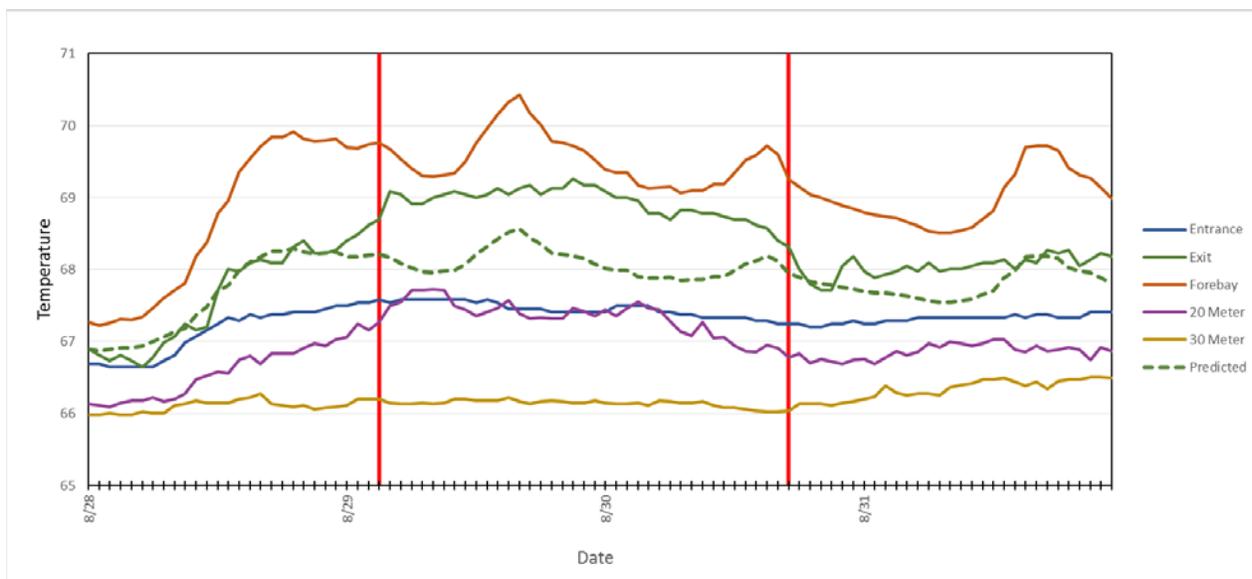


- Green line shows temperature in exit pool while dashed green line shows predicted temperature had the pump been running.
- Predicted temperatures come from July and August data when pump was running.
- Effect of pump outage appears to be a one degree increase in the ladder during outage.

During the August 29 incident, the generator was again shut down to allow for refueling and failed to restart. On August 30, a technician from Cummins Diesel determined the cause of the failure was a failed starter relay. Normal pump operation was restored by 1659 hours.

Little Goose Daily Adult Fish Counts, August 28 - 31.					
	Date	Chinook	Steelhead	Coho	Sockeye
	28-Aug	418	114	0	0
Second	29-Aug	324	92	1	0
Incident	30-Aug	308	71	0	0
	31-Aug	580	111	-1	0

Figure 2. Little Goose fish ladder water temperatures during Aug 29 - 30 pump outage (marked by red bars).



- Green line shows temperature in exit pool while dashed green line shows predicted temperature had the pump been running.
- Predicted temperatures come from July and August data when pump was running.

- Species – N/A
- Origin – NA
- Length – NA
- Marks and tags – NA
- Marks and Injuries found on carcass – NA
- Cause and Time of Death – N/A
- Future and Preventative Measures – Continue monitoring generator and pump operations.

Sincerely,

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Comments from Agencies: