

LRN HYDROPOWER O&M MAINTENANCE UPDATE

David Mistakovich
Chief, Hydropower Section
LRD/Nashville District
13 October 2021

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CENTER HILL TRUNNION PIN AND SEALS REPLACEMENT / SPILLWAY ELEC/MECH REPAIR



Scope

- Replace the trunnion pin for spillway gate 7
- Replace J-Seals on all spillway gates
- Add metal ladders to each pier to allow for inspection and maintenance of trunnion pins
- Rehabilitation for the spillway gate machinery for each gate
- Add roadway gate controls for high water events



Total Project Cost

- \$8.2 Million
 - \$5.7 Million for the Spillway Gate Machinery
 - \$1.5 Million for the Trunnion Pin / J-Seals
 - \$1 Million for Contact Pattern & Concrete Repairs Mods

Progress

- All original contract work completed.
- Gate 8 alignment mod completed, next is Gate 7.
- Gate 7 concrete repairs completed, next is Gate 2.





BARKLEY TRASH SCREENS



Scope

- To replace the existing trash screens which have missing cross bars making holes and gaps allowing large debris to enter scroll case and damage turbine

Total Project Cost

- \$3.53 Million
 - \$2.18 Million for fabrication contract
 - \$1.346 Million for installation FY21

Progress

- All 48 Sections delivered on site.
- Installation done 26 July to 19 August 2021
- 36 Sections installed; Remainder (Unit 1) will be installed in-house when Intake Crane is complete.





BARKLEY INTAKE/SPILLWAY CRANE



Scope

- To replace the existing Intake/Spillway Gantry Crane and rails with a new 165 Ton Gantry Crane to operate the intake and the spillway.

Total Project Cost

- \$15.5 Million
 - \$7.95 Million originally funded through Funding Pots.
 - \$7.5 Million additional funds through Funding Pots to award mods.
 - Plus an additional \$700K O&M Funds used for design.

Progress

- Contract awarded along with Mods.
- Design submittals being submitted and reviewed.





LRN SCADA REPLACEMENT

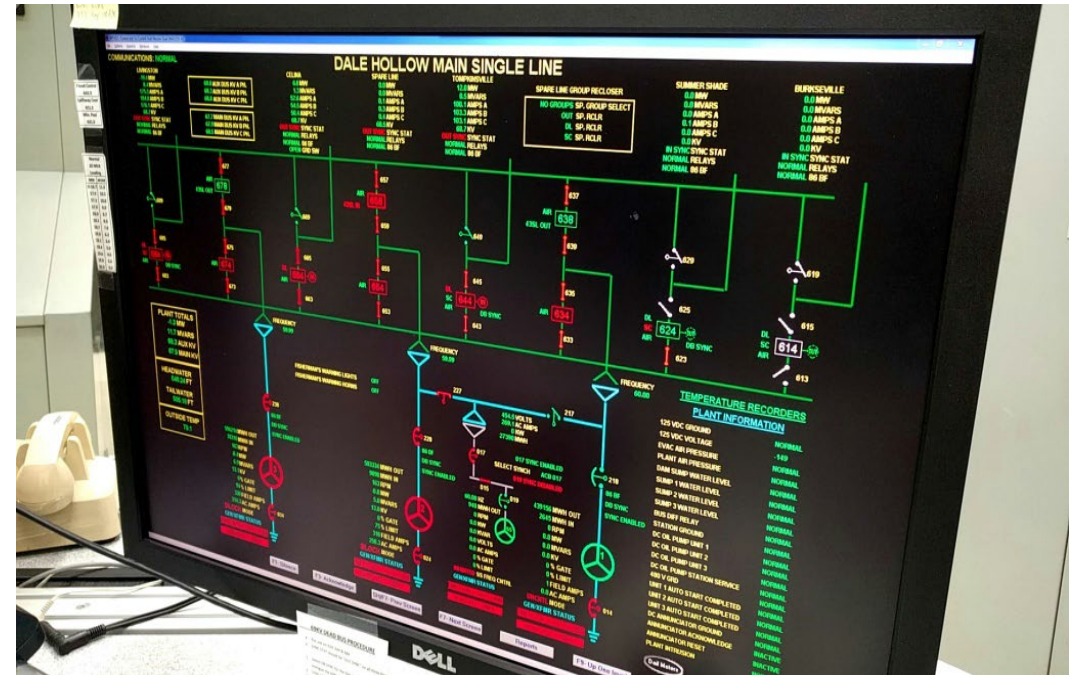


Scope

– The Five remotely-operated hydroelectric power plants in the U.S. Army Corps of Engineers Nashville District (LRN) have supervisory, control, and data acquisition (SCADA) systems that are near end-of-life. Technical support for firmware, replacement hardware, and modern software are no longer available. The objective of this work is to replace the existing SCADA system, convert all the master plants to remote ready, remote the existing master plants and set up a central control center along with a backup central control center in the Nashville District.

Progress

- Automation Controllers are on order.
- RTU and interposing relays designed for JPP, CHE & BAR.
- Starting on CEN RTU cabinet design.
- BAR remote conversion design is about 70% complete.





CHEATHAM MEDIUM VOLTAGE CABLES



Scope

- Replace existing 15kV solid dielectric cables from the generator to the transformer for each of three units.
- Replace existing solid dielectric cable from the generator to the neutral reactor for each unit.
- Replace wall brackets with modern aluminum ladder type cable tray.
- Replace transite conduits with cable tray.

Contract Awarded

- \$2.65 Million
 - \$1.65 Million has been funded through O&M.
 - \$1 Million has been funded through Section 212.

Progress

- Contract awarded Sept 27th, 2021





OLD HICKORY SWITCHYARD CONDUIT & CABLE REPLACEMENT



Scope

- Supply new cable in Switchyard
- Install a new concrete trench system
- Supply new cable termination cabinets inside the switchyard vault
- Supply new switchyard panelboards

Total Project Cost

– \$1.667 Million

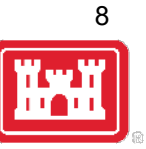
Progress

- Project Awarded Date Sept 29
- Projected Outage dates May 22-July 22





INTERCONNECTION REPORTS FOR BARKLEY & OLD HICKORY



Scope

Provide model test data on equipment at BAR/P and OLD/P to TVA and/or NES

Progress

- Cathy Stillson was notified on 22 Sept 21 that BAR/P study is being executed at TVA
- TVA, POC: Jason Duke

- NES, POC: Andy Foster
- NES is still running their study and will let us know once they are done. (??)