



THE DALLES DAM STATION SERVICE IMPROVEMENTS

Quick Facts

Client:
U.S. Army Corps of Engineers

Location:
Troutdale, OR

Timeline:
September 2008 - December 2013

Divisions:
Engineering

Industries:
Hydroelectric

Initial Value:
\$26,000,000

Description

OS Engineering provided lead technical support for the major upgrade of The Dalles Dam station service system.

This included coordination and commissioning of extensive medium voltage and low voltage distribution equipment as well as complete engineering design of replacement multi-zone GSU transformer relaying, 480V transfer controls, 125V and 250V DC system design, and several unit substations.

Highlights

- All equipment commissioned without incident or process interruption
- Equipment designs integrated into existing facilities without major modifications
- Install and commissioning occurred without interruption or powerhouse operations

Scope

- Designed and commissioned new battery system with two 1228 amp-hour 125VDC banks and one 1895 amp-hour 250VDC bank. System included redundant battery charger systems, redundant distribution systems, complete battery room remodel, and battery monitor system.
- Designed redundant GSU transformer T1 differential relaying system with automatic zone adjustment for fish unit transfer.
- Designed and commissioned redundant preferred AC system with redundant 30KVA PWM, split phase inverters and all distribution equipment.
- Designed and replaced 4160V unit substations for substations FSQ5 and FSQ6.
- Designed and programmed microprocessor based relays to perform double ended substation transfer controls over fiber optic links with operator mode selection.
- Coordinated submittals and provided lead commissioning engineer service for new current limiting reactors, seven medium voltage switchgear arrangements, and seven double ended 480V substations.