

Testing out systems at **Dry Fork Station**

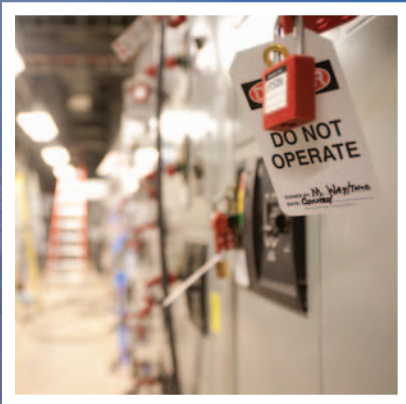
By Tracie Bettenhausen

With construction more than 90 percent complete at Dry Fork Station, the plant is in the phases of commissioning and startup. During commissioning, systems are tested, and construction contractors transfer control of systems to Basin Electric.

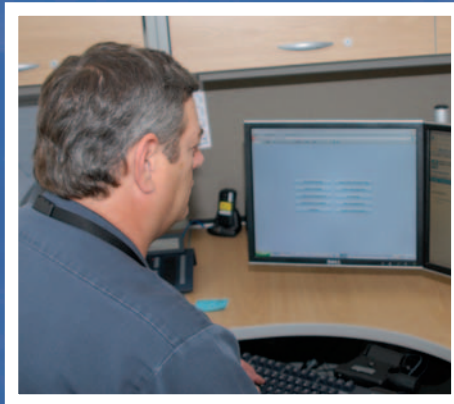
The demineralization system was considered fully operational June 30. Once the plant is operational, the demineralization system is designed to treat 136 gallons of water per minute. The cylindrical tank you see beyond the pond is part of the demineralization system. Well water is held in the tank until it is brought into the water treatment building behind it. Any waste water flows back to this pond and is stored to be used in other areas of the plant.



The turbine lube oil system is flushed during commissioning. Over the span of a month, about 2,000 gallons of oil per minute is pumped through the entire lube oil system to flush out impurities, according to Joel Dingman, operations superintendent at Dry Fork Station. Once the flush is complete, the oil is drained and replaced by fresh oil. "Once we're satisfied, we'll put the turbine on turning gear. We'll turn it at about three rounds per minute constantly from then on, until the plant starts up." Dingman says putting the turbine on turning gear keeps it from bowing under its own weight.



Tags are used to safely coordinate schedules between contractors and Basin Electric employees. In the distribution system for the main turbine/generator and boiler building, a "Do Not Operate" tag means that area remains under contractor control. Contractors continue work on some sections, while others are commissioned. "We're getting equipment off construction power and using power off the grid," Dingman says.



Greg Opdahl, maintenance superintendent at Dry Fork Station, is part of the team responsible for identifying all assets at the plant and entering them into a database. Opdahl says there are more than 8,000 Dry Fork Station spare parts assets in the database currently; there will be more than 14,000 when the project is complete. The equipment list will contain more than 50,000 items. "It's everything from the nuts, bolts and light bulbs, to the Mitsubishi turbine," Opdahl says. "This system will help procurement buy replacement parts later on."



A blue ribbon signifies this section of the water treatment plant is under Basin Electric control. It's no longer part of construction and controlled by the contractor who built it. "It takes a lot of coordination. We have the water available from our wells, pumping to our service water tank so when that was ready, we could pump the water from the service water tank to the demineralization system," Dingman says.