Unit 1 DCS & BFPT Controls Projects - The new Distributed Control System was installed the same as was done on Unit 2 last year. This is the fourth and final year of the installation of the DCS replacement project and completes all of the requirements of the existing contract with ABB. The new DCS system replaced the original unit control panels and various control systems with one central PC based system. The new control panel consists of computer displays with a mouse interface.

In addition to the DCS, another significant controls change was made with the two Boiler Feed Pump Turbines (BFPT's) on Unit 1. The original GE electro-hydraulic controls were changed out to new digital systems that will hopefully reduce the number of unit trips that have historically occurred as the result of BFPT controls failures.

Unit 1 Generator Excitation System and Field Rewind - The Unit 1 generator was the critical path and a beehive of activity during the outage. The new excitation system replaces the original GENEREX model that was mounted on the side of the generator. The new system is located on the Mezzanine level below the generator and uses new potential transformers located on the first floor. The excitation system was replaced because GE was no longer supporting the GENEREX model. This same work was also completed last year on Unit 2.

Because of a turn-to-turn short in the field windings, the Unit 1 field was also rewound. The rewind was completed by GE and consisted of removal of all windings, cleaning and then reinstallation with new insulation. When the field was removed for rewinding, inspection revealed damage in the stator core iron from one or more foreign objects. The core was repaired by grinding out and reinsulating the damaged laminations and by testing to verify that there was not hot spots.

Two New Variable Speed Drives on the ID Fans - Two new variable speed drives were installed on Unit 1 ID Fans 1A and 1B. The same drives were previously installed on all four Unit 2 fans and on the other two Unit 1 fans. This is the final year of this project to replace the drives because the manufacturer was no longer supplying parts. The original contract for this work was with Alstom but, this division has since split out and is now Converteam.

Carbon Fiber Reinforcement Circulating Water Lines - The project to restore and protect the structural integrity of the circulating water lines continued with 32 more sections of the pipe receiving carbon fiber reinforcement. 70 of the 372 total sections of Unit 1 pipe have now received carbon fiber reinforcement. This is the total number identified with the original study for reinforcement on Unit 1. Additional eddy-current testing was done on Unit 1 to see if more sections will require reinforcement.

In addition to the carbon fiber, grounding straps were installed between the joints of each section of pipe from the inside so that the pipe can be protected from further corrosion by a cathodic protection system.