Unit 1 ID Fan Start-up Testing
March to April 2005

March 28 5:30 pm until March 29 6:30 am

Flow testing - operate the 'C' and 'D' ID Fans from the control room to provide maximum possible draft. Perform exciter phase checks, transfers between dual and single channel operation, trip test, speed change overshoot and record and measure operating parameters.

March 30 through April 1

Run 'C' and 'D' fans on turning gear or at low speed to provide boiler draft. Fans should be running as much possible, but may be turned off to reduce draft in boiler or scrubbers.

During the day, we will be monitoring fan performance and conducting training for the electricians. As part of the training, we will shutdown individual channels (links) and calibrate replacement circuits boards and install them in the channels. This procedure will verify our spare parts and give the electricians experience in troubleshooting and repair. During the night, the fans should be run to gain operating time.

April 2 and April 3

As the unit is brought on line, use the 'C' and 'D' fans first. During this period, we will measure and record drive operating parameters. When the unit load is stable (above 400 MW) and all four ID fans are in service we will perform trip tests on individual channels (links) by isolating the exciter feeds and tripping input circuit breakers. We will also test speed response and overshoot by placing one fan in manual control and biasing the fan to the maximum possible load. During this time we will also measure and record drive operating parameters.

April 4

Performance testing of the ID fans. **Unit load must be initially limited to 875 MW to limit pressure swings in boiler if a fan trips.** The bid for this work should allow for operating the unit between 875 MW and 950 MW. Part of this test is to determine the maximum ID fan capacity so we may need to raise unit load, above 875 MW as the testing progresses.. This work should be bid for 7:30 am until 5:30 pm.

By placing one or two ID fans in manual control and biasing the fans we will slowly raise one of the fans operating speed until the fan is current or speed limited. The new drives are designed to limit fan speed to 954 rpm and will trip at 975 rpm. The drives also have a current limit of 472 amperes per channel, in dual channel operation, and 538 amperes, in single channel operation.

As we raise fan speed we will measure and record drive operating parameters and change speed to measure system speed response.