

## **N320. Instrument Port Column Assembly (IPCA) Upgrade**

Interest in upgrading the current existing conoseal at North Anna remains high because the benefits in critical path outage time savings, radiation exposure reduction, and improved sealing reliability that can be gained with implementation of the upgrade are understood. The high exposure associated with conoseal disassembly/reassembly has been identified by station ALARA as an area needing improvement. The Unit 1 average exposure for disassembly/reassembly is 3.2 man-rem and Unit 2 average exposure is even higher at 3.6 man-rem. Along with the high exposures, the work area is very confined and highly contaminated.

The current North Anna conoseal configuration requires approximately 1 to 1.5 hours for disassembly or reassembly per location. Upgrade conoseal assemblies/clamps are offered by Westinghouse and Combustion Engineering and each have been successful at utilities where their products were installed. Each manufacturer's design offers unique advantages.

Combustion Engineering replaces the upper seal gasket with Grafoil packing and requires only one seal area per each conoseal to be worked, thus lowering potential leak sites by 50%. They state that their design can be installed in about 5 minutes, provided the lower clamp joint has not been disassembled.

Westinghouse replaces the male flange with an articulating self-energizing clamp and keeps the same sealing gaskets used by the current installation. Fewer pieces are required to be worked so potential lost time due to lost or dropped parts is minimized. According to Westinghouse, with their proposed upgrade, the time can be shortened to about 10 minutes per location. Either upgrade will allow for radiation exposure, and critical path outage time reduction. The upgrade of conoseals will cut time to about 2 hours or less in the disassembly/reassembly efforts. This is about 10-20% of the time currently required on conoseals. Radiation exposure received should see a similar reduction. Increased reliability is very important as a leak can require several extra days to correct.

*For more, "Instrument Port Column Assembly (IPCA) Upgrade," by D. Thomas. For further information, contact Tony Banks (804)/273-3074 or Jim Schleser (703)/894-2419, Virginia Power.*