NRC Approves Power Uprate for Monticello Nuclear Power Plant in Minnesota

The Nuclear Regulatory Commission has approved a request by Northern States Power Co. to increase the generating capacity of the Monticello nuclear power plant in Minnesota.

Northern States applied for the extended power uprate in November 2008. The license amendment, approved Dec. 9, allows the plant to increase its maximum core thermal power level from 1,775 megawatts thermal (MWt) to 2,004 MWt. This equates to an expected increase in electrical output from 600 megawatts electric (MWe) to 671 MWe.

The NRC staff’s review of the uprate plan included two unique issues: a Westinghouse-designed steam dryer in use at the plant since 2011; and crediting containment accident pressure (CAP) in predicting the performance of emergency core cooling pumps during an accident. Monticello is the first U.S. plant to use the Westinghouse steam dryer, although the design has been in use in nine European nuclear plants over the past 25 years. On CAP, the staff concluded that Northern States properly applied NRC guidance but noted that the issue may need to be revisited because of ongoing post-Fukushima actions.

Northern States expects to implement the uprate this month. That will require certain modifications to handle increased flows, heat transfer and power utilization. NRC’s Resident Inspectors and special inspectors from the Region III office in Illinois will be at the plant to monitor the uprate implementation.