



NRC NEWS

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NRC FINDS PROBLEM WITH SERVICE WATER PIPING AT THE BYRON NUCLEAR STATION TO BE OF LOW TO MODERATE SAFETY SIGNIFICANCE

The Nuclear Regulatory Commission staff determined that the failure to identify, evaluate and address problems with essential service water piping at the Byron Nuclear Power Station was an issue of low to moderate safety significance. The two-unit plant, located in Byron, Ill., is operated by Exelon Generation Co.

On October 19, 2007, plant workers were removing rust from a small exposed section of an essential service water pipe to measure the thickness of the pipe wall. While performing these activities, they discovered a leak from the pipe. The plant's technical specifications required the shut down of both Byron units when the leak was discovered.

There are eight similar essential service water pipes at the plant. After the essential service water cools essential safety equipment, these pipes carry this water back to basins under the fan-driven cooling tower.

The NRC dispatched a special inspection team to the plant to evaluate the facts, circumstances, and utility's actions surrounding the pipe degradation.

The inspection concluded that, prior to the leak, the utility failed to promptly identify and correct the corrosion of a section of service water piping. The company also did not take timely actions to remove corrosion from these exposed sections of pipe surfaces. Consequently the company failed to evaluate the thickness of pipe walls and determine the extent of possible degradation. Corrosion was found on exposed areas of the eight similar pipes after the plant was shut down. The corrosion of unprotected carbon steel pipes under the cooling basins was caused by the wet environment and a lack of protective coating.

The NRC inspection also found that, prior to the leak, the utility failed to make conservative assumptions and use sufficient data in making decisions about the integrity of service water piping and leaving these pipes in service.

Consequently, the NRC concluded that the plant was operated for an extended period of time with substantial degradation of the exposed section of the pipe wall until a leak developed in the pipes.

The utility has replaced the corroded piping.

James Caldwell, NRC Regional Administrator, said: "Even though the plant continued to operate safely, the NRC's findings show how important it is to identify and fix problems promptly and to make sure that decisions related to the condition of plant equipment are made using sound methodology and data."

The NRC uses color-coded inspection findings and performance indicators to assess nuclear plant performance. The colors start with "green" and then increase to "white," "yellow" or "red," commensurate with the safety significance of the issues involved.

White findings normally result in additional NRC inspections and meetings with the utility. Based on the white finding, the NRC issued a Notice of Violation to Exelon Generation Co. for its failure to take timely actions to address the corrosion of service water piping and to use adequate methodology and data to properly evaluate the structural integrity of these pipes. The company is required to respond to the Notice of Violation within 30 days, describing its corrective actions and steps it is taking to prevent a recurrence of the violation.

The letter notifying Exelon of the white finding will be available from the NRC's Region III Office of Public Affairs or in the NRC's online document library at:

<http://www.nrc.gov/reading-rm/admas/web-based.html>.

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