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# NRC NEWS

**U.S. NUCLEAR REGULATORY COMMISSION**

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## **NRC STAFF ISSUES BULLETIN TO NUCLEAR POWER PLANTS ON REACTOR PRESSURE VESSEL LOWER HEAD PENETRATIONS**

The Nuclear Regulatory Commission staff has issued a Bulletin to companies licensed to operate the 58 PWRs which have penetrations in the bottom (i.e., lower head) of the vessel to accommodate instrumentation for monitoring the reactor core (i.e., the nuclear fuel). The Bulletin directs them to provide information on how they inspect the lower portion of their reactor vessels to detect any possible leakage.

In April, an inspection of the lower head at South Texas Project (STP) Unit 1 revealed boric acid residue on two penetrations; the residue was later determined to have indicated the presence of small cracks in the penetrations. The NRC staff determined the residue and small cracks discovered at STP Unit 1 were not an immediate safety concern. Nonetheless, since more significant leakage could challenge safety systems, the staff concluded licensees should assess their current inspection practices to ensure there is no lower head leakage. The Bulletin requests licensees to provide the following:

- 1) A description of the lower head penetration inspection program currently in place, including data such as when inspections were performed, the methods used, and the basis for concluding the plant satisfies applicable regulations;
- 2) A description of the lower head penetration inspections to be performed during the plant's future refueling outages, including data such as the extent of the inspections, the methods to be used, and the basis for concluding the plant will satisfy applicable regulations;
- 3) If the licensee is unable to perform a bare-metal inspection of the lower head during the next refueling outage, the licensee is to inform the NRC whether bare-metal visual inspections will be performed during future outages, as well as describe the actions it plans to take to permit the inspection, and;
- 4) If the licensee does not plan to perform bare-metal inspections during future refueling outages, the licensee should provide the basis for concluding that the inspections the licensee does perform satisfy applicable regulations.

Within 60 days of restarting a plant following the next inspection of the lower head, licensees should submit a summary of the inspections performed, the conditions found, and any actions to be taken.

Bulletin 2003-02, "Leakage From Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity," will be available on the NRC web site at: <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/bulletins/2003/> .

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