

May 7, 2002

Ms. Shari Weir
Ohio Citizen Action
614 Superior NW
Cleveland, OH 44113

Dear Ms. Weir:

I am responding to your letter of March 21, 2002, concerning the recent discovery of a cavity in the reactor pressure vessel (RPV) head at the Davis-Besse Nuclear Power Station (DBNPS). The Nuclear Regulatory Commission (NRC) fully appreciates your concerns, the significance of this degradation, and the uniqueness of any type of repair. We are aggressively assessing this first-of-a-kind event.

The NRC will be conducting extensive inspections and evaluating any corrective actions the licensee may propose to assure this type of condition will not happen again. We are also creating a lessons learned task force to review our regulatory and inspection processes and have established an oversight panel in accordance with Chapter 0350 of the NRC Inspection Manual. The staff will also be looking at the root cause, both from a technical standpoint and from a programmatic standpoint to assess any performance issues associated with the degradation to the RPV head at Davis-Besse. The NRC will be monitoring corrective actions and evaluating the "extent of condition," i.e., whether the conditions that led to the boric acid corrosion of the reactor vessel head can be occurring elsewhere in the plant. In addition, the NRC is evaluating any pertinent issues associated with this degradation that may affect other plants on a generic basis. If we find that certain generic issues are applicable at other plants, the NRC will take appropriate action.

On being informed by the licensee of the cavity in the RPV, the NRC sent an Augmented Inspection Team (AIT) to the Davis-Besse facility to collect, analyze, and document factual information with respect to the degradation to the RPV head. The AIT completed its review and we will post the AIT report on the NRC web site (www.nrc.gov) as soon as it is completed. Now that the AIT has completed its fact finding mission and is in the process of preparing its report, we are conducting an in-depth technical review which will focus on the analysis of data from the AIT report, the licensee's RPV visual inspections, root cause analysis, nondestructive examinations, and proposed corrective actions.

The NRC staff will review the licensee's proposed repair or modification plan against the NRC's structural integrity requirements which include a requirement that any proposed repair or modification meet the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code. As a result, substantial technical resources will be involved in reviewing any proposed repair before determining its acceptability. We will focus on issues such as assuring the repair can withstand the environment of an operating reactor and that it meets all of the stringent requirements a new RPV head would have to meet.

In your letter on behalf of the Ohio Citizen Action and several other Ohio-based groups, you requested that the NRC require that Davis-Besse undergo a "whole plant" X-ray examination followed by a full system walk-down and that the plant remain closed until a new RPV head is installed.

If repairs to the reactor head are approved, the repaired RPV head will be examined using X-ray, or radiographic testing (RT) methods. The NRC will determine whether the licensee's proposed repair is acceptable and meets NRC's regulations. If the NRC finds the repairs unacceptable, the licensee must then decide what course of action it wants to follow. With respect to "whole plant" X-ray examination, each full penetration welded joint in the reactor coolant system (RCS) is radiographically inspected as part of the original construction. Under NRC's regulation, licensees implement an inservice inspection program once a plant goes into production. In accordance with the ASME code, this inspection program requires periodic ultrasonic testing (UT) and inspection of a variety of welds and components and also provides for a visual inspection of welds in components that cannot be volumetrically inspected. The purpose of this program is to detect developing flaws within the RCS, to understand the mechanism behind any flaws that are discovered for potential generic consideration, and to repair them.

In conclusion, I appreciate that you have brought your concerns to my attention, and I assure you that NRC shares your concerns. The NRC is performing a comprehensive, in-depth evaluation of all aspects of this event. The plant will not be restarted until we are fully satisfied that the plant is structurally sound, that the licensee has put in place those corrective action programs necessary to assure that all underlying causes have been corrected, and we are assured that the plant can be safely restarted and operated.

If you have any additional questions in this matter, please do not hesitate to contact me.

Sincerely,

/RA by Jon R. Johnson For/

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation

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