

September 15, 2004

Mr. Mark B. Bezilla  
Vice President-Nuclear, Davis-Besse  
FirstEnergy Nuclear Operating Company  
Davis-Besse Nuclear Power Station  
5501 North State Route 2  
Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION  
NOTIFICATION OF NRC INSPECTION AND REQUEST FOR INFORMATION

Dear Mr. Bezilla:

On January 17, 2005, the NRC will begin a special inspection (NRC Procedure 93812) at the Davis-Besse Nuclear Power Station. This inspection will include a review of your activities associated with examination of the upper and lower reactor pressure vessel head in accordance with your commitments to the NRC under Confirmatory Order EA-03-214. This inspection will also include a review of your activities related to examination of the pressurizer penetrations in accordance with your commitments to NRC in response to Bulletin 2004-01 "Inspection of Alloy 82/182/600 Materials Used in the Fabrication of Pressurizer Penetrations and Steam Space Piping Connections at Pressurized-Water Reactors." This on-site inspection is scheduled to be performed from January 17, 2005, through February 4, 2005.

We anticipate that this inspection will be resource intensive both for the NRC inspector and your staff. In order to minimize the impact to your on-site resources and to ensure a productive inspection for both sides, we have enclosed a request for documents needed for this inspection. These documents have been divided into two groups. The first group identifies information necessary to ensure that the inspector is adequately prepared. The second group identifies the information the inspector will need upon arrival at the site. It is important that all of these documents are up to date and complete in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection.

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be J. Wolf, of your organization. If there are any questions about this inspection or the material requested, please contact the inspector, Mr. Mel Holmberg at (630) 829-9748.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's

M. Bezilla

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document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

David Hills, Chief  
Mechanical Engineering Branch  
Division of Reactor Safety

Docket Nos. 50-346  
License Nos. NPF-03

Enclosure: SPECIAL INSPECTION DOCUMENT REQUEST

cc w/encl: The Honorable Dennis Kucinich  
G. Leidich, President - FENOC  
J. Hagan, Senior Vice President  
Engineering and Services, FENOC  
L. Myers, Chief Operating Officer, FENOC  
Plant Manager  
Manager - Regulatory Affairs  
M. O'Reilly, Attorney, FirstEnergy  
Ohio State Liaison Officer  
R. Owen, Administrator, Ohio Department of Health  
Public Utilities Commission of Ohio  
President, Board of County Commissioners  
of Lucas County  
C. Koebel, President, Ottawa County Board of Commissioners  
D. Lochbaum, Union Of Concerned Scientists  
J. Riccio, Greenpeace  
P. Gunter, N.I.R.S.

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## INSERVICE INSPECTION DOCUMENT REQUEST

Inspection Dates: January 17, 2005 - February 4, 2005.

Inspection Procedures: IP 93812, "Special Inspection"  
TI 2515/XX (In Draft), "Pressurizer Penetration Nozzles and  
Steam Space Piping Connections in U.S. Pressurized Water  
Reactors (NRC BULLETIN 2004-01)"

Inspectors: Mel Holmberg (630) 829-9748, Carla Roque-Cruz (630) 829-9745

### **A. Information Requested for the In-Office Preparation Week**

The following information (electronic copy if practicable - msh@nrc.gov) is requested by January 7, 2005, to facilitate the selection of specific items that will be reviewed during the onsite inspection week. The inspector will review the information below and may request additional documents to be added to Section B. If you have any questions regarding this information, please call the inspector as soon as possible.

- 1) A detailed schedule of nondestructive examinations (NDE) planned for the upper and lower reactor vessel heads and pressurizer. Provide a detailed schedule of steam generator (SG) tube inspection and repair activities for the upcoming outage.
- 2) A copy of the NDE procedures used to perform the examinations identified in A.1 (including calibration and flaw characterization/sizing procedures). For ultrasonic examination procedures qualified in accordance with Appendix VIII, of Section XI of the ASME Code, provide documentation supporting the procedure qualification (e.g., the EPRI performance demonstration qualification summary sheets). Also, include documentation of the specific equipment to be used (e.g., ultrasonic unit, cables, and transducers including serial numbers).
- 3) A copy of any correspondence and commitments related to NRC Confirmatory Order EA-03-214 and NRC Bulletin 2004-01, "Inspection of Alloy 82/182/600 Materials Used in the Fabrication of Pressurizer Penetrations and Steam Space Piping Connections at Pressurized-Water Reactors," applicable to the examinations identified in A(1).
- 4) Copy of the SG history documentation given to vendors performing eddy current (ET) testing of the SGs during the upcoming outage.
- 5) Copy of the procedure containing screening criteria used for selecting tubes for in-situ pressure testing and the procedure to be used for in-situ pressure testing.
- 6) Copy of the SG tube operational assessment completed for the previous outage following ET of the SG tubes and the SG tube degradation assessment that identifies what damage mechanisms are potentially applicable to the Davis-Besse SGs.

- 7) Copy of the document defining the planned ET scope for the SGs and the scope expansion criteria which will be used. Also, identify and describe any deviations in this scope or expansion criteria from the EPRI Guidelines.
- 8) Copy of the document describing the ET probe types, and ET acquisition equipment to be used, including which areas of the SG (e.g., top of tube sheet, U-bends) each probe will be used in.
- 9) Copy of your response letter and any other correspondence related to Generic Letter 2004-01, "Requirements for Steam generator Tube Inspections."
- 10) Identify and quantify any SG tube leakage experienced during the previous operating cycle. Also provide documentation identifying which SG was leaking and corrective actions completed or planned for this condition.
- 11) Provide the detailed scope of the planned NDE of the vessel upper and lower heads and pressurizer which identifies the types of NDE methods to be used on each specific part of the vessel heads or pressurizer to fulfill NRC commitments. Also include examination scope expansion criteria and planned expansion sample sizes if relevant indications are identified.
- 12) Identify what standards or requirements will be used to evaluate indications identified during NDE examinations of the upper and lower vessel heads or pressurizer. (e.g., the specific industry or procedural standards which will be used to evaluate potential leakage indications. Including any plans to use chemical testing of leakage related deposits with applicable acceptance standards/criteria (e.g., 4 to 1 boron to lithium ratio, isotopic (CS 137/134 ratio) type analysis to date deposits).

**B. Information to Be Provided On-site to the Inspector at the Entrance Meeting:**

- 1) Provide a list of NDE personnel performing inspections of:
  - a. the reactor vessel upper head;
  - b. the reactor vessel lower head; and
  - c. the pressurizer.
- 2) Provide the NDE qualification records and procedures used to qualify the personnel identified in item B1.
- 3) Updated schedules for item A.1 (including schedule showing contingency repair plans for leakage identified in the reactor vessel or pressurizer if available).
- 4) Copy of the vendor qualification report(s) used to demonstrate the detection capability of the NDE equipment used for the vessel head penetration inspections (upper and lower head) and pressurizer. Also, identify any changes in system configurations and equipment used for head inspection discussed in item A.1 which differ from that used for in the vendor qualification report(s).

- 5) Provide a brief overview of the planned repair process (including drawings) for use on the vessel head nozzles or pressurizer penetrations and identify the repair procedures to be used. Also include any documented NRC reviews/evaluation/approval of this repair process.
- 6) Provide a copy of drawings showing:
  - a. the upper and lower vessel head and penetration nozzle configurations;
  - b. current reactor upper and lower head insulation configuration;
  - c. pressurizer penetration fabrication drawings for all pressurizer penetrations which contain Inconel 600 or Inconel 182/82 weld materials; and
  - d. pressurizer insulation configuration.
- 7) Copy of the document describing the flaw evaluation guidelines which will be followed for any cracking identified in the vessel nozzles or J-welds or pressurizer penetration nozzles.
- 8) Copy of the procedures which govern the scope, equipment used and implementation of the inspections required to identify boric acid leakage from systems and components above the vessel head.
- 9) Completed copy of the document recording the results of the last two Mode 3 walkdowns/inspections conducted near the reactor vessel upper head.
- 10) Copy of the plant procedures used to perform inspections to identify reactor coolant system leaks or boric acid deposits and the procedures for resolution of leaks or boric acid deposits.
- 11) Drawings/procedures or records that identify the systems and components which could be sources of boric acid leakage onto the upper vessel head.
- 12) Copy of the technical basis for not performing a bare metal visual examination of all pressurizer penetration locations which contain Inconel 600 or Inconel 182/82 weld materials during each refueling outage.
- 13) Provide a copy of the EPRI Technique Specification Sheets which support qualification of the ET probes to be used during the upcoming SG tube inspections.
- 14) Provide a copy of the drawings of the calibration standards to be used for the ET probes to be used during the SG inspection.
- 15) Provide a copy of the guidance to be followed if a loose part or foreign material is identified in the SGs.
- 16) Copy of the document describing actions to be taken if a new SG tube degradation mechanism is identified.

- 17) Identify the types of SG tube repair processes which will be implemented for defective SG tubes (including any NRC reviews/evaluation/approval of this repair process). Provide the flaw depth sizing criteria to be applied for ET indications identified in the SG tubes.
  
- 18) Ready access (e.g., copies provided to the inspector to use for the duration of the inspection at the on-site inspection location) to the Editions of the ASME Code (Sections V, IX and XI) applicable to the inservice inspection program and the repair/replacement program. Ready access to the EPRI and industry standards referenced in the procedures used to perform the SG tube eddy current examination.