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Docket Number 50-346

License Number NPF-3

Serial Number 3064

July 26, 2004

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
11555 Rockville Pike
Rockville, Maryland 20852

Subject: Response to 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"

Ladies and Gentlemen:

This letter transmits the FirstEnergy Nuclear Operating Company (FENOC) response for the Davis-Besse Nuclear Power Station (DBNPS) to Nuclear Regulatory Commission (NRC) Bulletin (BL) 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," requested information item (1). The following information was required within 60 days of the date of BL 2004-01 (May 28, 2004):

(1)(a) A description of the pressurizer penetrations and steam space piping connections at your plant. At a minimum, this description should include materials of construction (e.g., stainless steel piping and/or weld metal, Alloy 600 piping/sleeves, Alloy 82/182 weld metal or buttering, etc.), joint design (e.g., partial penetration welds, full penetration welds, bolted connections, etc.), and, in the case of welded joints, whether or not the weld was stress-relieved prior to being put in service. Additional information relevant with respect to determining the susceptibility of your plant's pressurizer penetrations and steam space piping connections to PWSCC should also be included.

(1)(b) A description of the inspection program for Alloy 82/182/600 pressurizer penetrations and steam space piping connections that has been implemented at your plant. The description should include when the inspections were performed; the areas, penetrations and steam space piping connections inspected; the extent (percentage) of

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coverage achieved for each location which was inspected; the inspection methods used; the process used to resolve any inspection findings; the quality of the documentation of the inspections (e.g., written report, video record, photographs); and, the basis for concluding that your plant satisfies applicable regulatory requirements related to the integrity of pressurizer penetrations and steam space piping connections. If leaking pressurizer penetrations or steam space piping connections were found, indicate what followup NDE was performed to characterize flaws in the leaking penetrations.

(1)(c) A description of the Alloy 82/182/600 pressurizer penetration and steam space piping connection inspection program that will be implemented at your plant during the next and subsequent refueling outages. The description should include the areas, penetrations and steam space piping connections to be inspected; the extent (percentage) of coverage to be achieved for each location; inspection methods to be used; qualification standards for the inspection methods and personnel; the process used to resolve any inspection indications; the inspection documentation to be generated; and the basis for concluding that your plant will satisfy applicable regulatory requirements related to the structural and leakage integrity of pressurizer penetrations and steam space piping connections. If leaking pressurizer penetrations or steam space piping connections are found, indicate what followup NDE will be performed to characterize flaws in the leaking penetrations. Provide your plans for expansion of the scope of NDE to be performed if circumferential flaws are found in any portion of the leaking pressurizer penetrations or steam space piping connections.

(1)(d) In light of the information discussed in this bulletin and your understanding of the relevance of recent industry operating experience to your facility, explain why the inspection program identified in your response to item (1)(c) above is adequate for the purpose of maintaining the integrity of your facility's RCPB and for meeting all applicable regulatory requirements which pertain to your facility.

For lines attached directly to the pressurizer, with the exception of the surge line, the information requested ... should be provided for any locations, including those remote from the pressurizer shell, which contain Alloy 82/182/600 materials which are exposed to conditions similar to those of the pressurizer environment.

RESPONSE

(1)(a) Description of the pressurizer penetrations and steam space piping connections

The general arrangement of pressurizer penetrations is shown on Attachment A, DBNPS Alloy 82/182/600 Pressurizer Penetrations. The pressurizer vessel consists of a $96^{3}/_{8}$-inch outer diameter vertical cylindrical shell with semi-hemispherical heads at both the top and bottom. It is nominally 42 feet and $8^{5}/_{8}$ inches high from top to bottom. The thickness of the vessel walls is $6^{3}/_{16}$ inches at the cylindrical section, $12^{1}/_{2}$ inches at the heater belt insert forgings, and $4^{3}/_{4}$ inches at the upper and lower heads. There are 18 penetrations into the pressurizer at the DBNPS. Most of them contain pressure boundary components fabricated from Alloy 82/182/600 that is known to be susceptible to Primary Water Stress Corrosion Cracking (PWSCC) in the Reactor Coolant System environment. The pressure boundary of the remaining penetrations is stainless steel, which is not known to be susceptible to PWSCC.

1-Inch Vent and Sampling Nozzle (Quantity = 1)

The 1-inch vent and sampling nozzle consists of a single piece of Alloy 600, Schedule 160 pipe attached to the vessel upper head (steam space) interior surface using a partial penetration J-groove Alloy 82/182 weld that was stress relieved with the vessel. It is attached to the vent piping using a bimetallic full penetration V-groove Alloy 182 field weld.

Component	Description	Type	Location
RC239A Vent Nozzle	1-Inch Vent Nozzle	Nozzle to Shell J-Groove Weld	Upper Head – Steam Space

2½-Inch and 3-Inch Pressure Relief Nozzles (Quantity = 3)

The pressurizer has one 2½-inch and two 3-inch nozzles that are attached to the vessel upper head (steam space) using full penetration welds. The nozzles are low-alloy steel and are clad with stainless steel on the inside surface. They are attached to the vessel using a full penetration low-alloy steel weld that was stress relieved with the vessel. A stainless steel safe-end is attached to the outboard end of the nozzle using a full penetration V-groove Alloy 82/182 field weld, buttered, not stress relieved.

Component	Description	Type	Location
RC-PZR-WP-91-Z/W	2½-Inch Z/W Axis Relief Nozzle to Safe End Weld	Buttered Stainless Steel Safe End to Nozzle Weld	Upper Head - Steam Space
RC-PZR-WP-91-W/X	3-Inch W/X Axis Relief Nozzle to Safe End Weld	Buttered Stainless Steel Safe End to Nozzle Weld	Upper Head - Steam Space
RC-PZR-WP-91-Y/Z	3-Inch Y/Z Axis Relief Nozzle to Safe End Weld	Buttered Stainless Steel Safe End to Nozzle Weld	Upper Head - Steam Space

4-Inch Spray Nozzle (Quantity = 1)

The 4-inch spray nozzle is located on the upper head (steam space). It is fabricated from Schedule 120 low-alloy steel with stainless steel cladding on the inside surface and is attached to the vessel with a full penetration low-alloy steel weld. There are Alloy 600 extension pieces welded to both the inboard and outboard ends of the spray nozzle using full penetration Alloy 82 V-groove welds. These welds were stress relieved with the vessel.

A stainless steel thermal sleeve is installed in the spray nozzle. It is mechanically attached to the Alloy 600 safe end and extends past the spray nozzle/extension pin joint. This thermal sleeve is prevented from becoming a loose part by four Alloy 82/182 weld buttons both inboard and outboard of the sleeve.

The inboard end of the extension pin is connected to the stainless steel spray pipe and the outboard end of the safe end is connected to the stainless steel inlet pipe by full penetration Alloy 82/182 V-groove field welds, not stress relieved.

Component	Description	Type	Location
RC-PZR-WP-102	4-Inch Spray Nozzle to Safe End Weld	Inconel Safe End to Nozzle Butt Weld	Upper Head - Steam Space
RC-MK-A-90-FW56	4-Inch Pipe to Safe End Weld	Inconel to Stainless Steel Butt Weld	External to the Pressurizer – Steam Space
Spray Nozzle Pin	4-Inch Inconel Pin Nozzle to Pin	Nozzle to Inconel Pin Butt Weld	Internal to the Pressurizer – Steam Space – Not Accessible
Spray Pipe Pin	4-Inch Inconel Pin to Spray Pipe	Inconel to Stainless Steel Butt Weld	Internal to the Pressurizer – Steam Space – Not Accessible

1½-Inch Thermowell (Quantity = 1)

The 1½-inch thermowell is fabricated from Alloy 600 and is located just above the heater bundle (water space). It is attached to the vessel using a partial penetration J-groove weld with Alloy 182 material. This weld was post-weld stress relieved with the vessel.

Component	Description	Type	Location
TERC15 Thermowell Nozzle	1½-Inch Thermowell Nozzle	Nozzle to Shell J-Groove Weld	Shell – Liquid Space

¾-Inch Level Sensing Nozzles (Quantity = 6)

The six level sensing nozzles are divided into two groups of 3. One group is located in the steam space and the other in the water space. The nozzles are Schedule 160 Alloy 600 and are attached to the vessel using a partial penetration J-groove Alloy 182 weld that was stress relieved with the vessel. The Level Sensing Nozzles are attached to stainless steel pipe stubs at their outboard ends using full penetration V-groove Alloy 182 welds.

Component	Description	Type	Location
RC14B Level Sensing Nozzle	¾-Inch Inconel Nozzle	Nozzle to Shell J-Groove Weld	Shell – Steam Space
RC14D Level Sensing Nozzle	¾-Inch Inconel Nozzle	Nozzle to Shell J-Groove Weld	Shell – Steam Space
RC14F Level Sensing Nozzle	¾-Inch Inconel Nozzle	Nozzle to Shell J-Groove Weld	Shell – Steam Space
RC14A Level Sensing Nozzle	¾-Inch Inconel Nozzle	Nozzle to Shell J-Groove Weld	Shell – Liquid Space
RC14C Level Sensing Nozzle	¾-Inch Inconel Nozzle	Nozzle to Shell J-Groove Weld	Shell – Liquid Space
RC14E Level Sensing Nozzle	¾-Inch Inconel Nozzle	Nozzle to Shell J-Groove Weld	Shell – Liquid Space

1-Inch Sampling Nozzle (Quantity = 1)

The sampling nozzle is located just above the heater bundle (water space). It is Schedule 160 Alloy 600 and is attached to the vessel using a partial penetration J-groove Alloy 182 weld that was stress relieved with the vessel. The Sampling Nozzle is attached to a stainless steel pipe stub at its outboard end using a full penetration V-groove Alloy 82/182 weld.

Component	Description	Type	Location
RC239B Sampling Nozzle	1-Inch Inconel Sample Nozzle	Nozzle to Shell J-Groove Weld	Shell – Liquid Space

Pressurizer Heater Bundles (Quantity = 3, No Alloy 82/182/600)

The heater belt forgings have three 19-inch penetrations to accommodate the Heater Bundle assemblies. There is no Alloy 82/182/600 material in the assemblies. Because the risk of PWSCC of stainless steel is low, the specific configuration of the Heater Bundles or the associated Penetrations will not be discussed further.

10-Inch Surge Nozzle (Quantity = 1, No Alloy 82/182/600)

The surge nozzle is fabricated from Low-Alloy Steel and is clad with stainless steel on its inside surface. It is attached to the vessel using a full penetration low-alloy steel weld that was stress relieved with the vessel. A stainless steel safe-end is attached to the outboard end of the nozzle using a full penetration V-groove weld. This weld and all other welds in the surge line are specifically excluded from the scope of NRC Bulletin 2004-01, which states "It should be noted that pressurizer surge line welds are not intended to be within the scope of this bulletin. The NRC staff is considering separately whether any additional action or information is required to address piping butt welds in the pressurizer surge line and throughout the rest of the reactor coolant system."

Component	Description	Type	Location
Surge Line Nozzle	10-Inch Nozzle to Safe End	Buttered Stainless Steel Safe End to Nozzle Weld	Lower Head – Liquid Space – Not within the Scope of this Bulletin

16-Inch Manway (Quantity = 1, No Alloy 82/182/600)

The manway pressure boundary consists entirely of stainless steel and the manway does not contain any Alloy 82/182/600 material. Because the risk of PWSCC of stainless steel is low, the specific configuration of the manway will not be discussed further.

(1)(b) Inspection History

Visual Inspections

All external Alloy 600 pressurizer connections received a visual inspection in 2002 during extent of condition inspections conducted as result of the degradation of the DBNPS RPV upper head. These inspections were conducted with insulation off (bare metal) and encompassed 100% of the external surface of the Alloy 600 connection. No indications of leakage were noted during these

inspections. Photographs of each inspection location were taken and were included with the written inspection report.

In September 2003, the Reactor Coolant System was pressurized to normal operating pressure and near normal operating temperature conditions (Mode 3). During this period, the Alloy 600 pressurizer connections were VT-2 examined with the insulation on. The inspection results are documented in the applicable test procedure. After maintaining normal operating pressure and near normal operating temperatures for approximately 7 days, the plant was cooled to Mode 5 conditions. The Alloy 600 J-groove level sensing, thermowell, and lower sample nozzle penetrations were then subjected to a bare metal visual inspection. No indications of leakage were noted during these inspections. Photographs of each inspection location were taken and were included with the written inspection report.

In January 2004, the Reactor Coolant System leakage test was conducted in accordance with IWB-5220 of the 1995 Edition through the 1996 Addenda of ASME Code Section XI. This inspection was performed with insulation on. No evidence of leakage was noted at the Alloy 600 pressurizer connections. A written record of these examinations was included with the completed Reactor Coolant System leakage test procedure.

Supplemental Non-Visual Inspections

In October 2002, the internal surface of the RC239A vent nozzle was eddy current examined. A complete scan of the nozzle was performed using a rotating +Point single coil probe. No detectable degradation was identified in the J-groove weld zone of the RC239A vent nozzle. The inspection results are documented in a written record.

In December 2002, the steam space pressurizer level sensing nozzles (RC14B, RC14D, and RC14F) were liquid penetrant examined. The instrument root valves RC14B, RC14D, and RC14F were removed and the internal surface of each nozzle liquid penetrant examined. This examination was limited to approximately 80 – 85% of the nozzle internal surface. No indications were noted in the RC14B nozzle. Indications were noted on the RC14D and RC14F nozzles. Through supplemental visual examination, these indications were determined to be non-relevant fabrication marks. The inspection results were documented in a written record. A video of the inspection was also retained.

ASME Code Section XI Non-Visual Inspections

Since the beginning of the Second Ten-Year Inservice Inspection Interval, the following components received non-visual Non-Destructive Examination (NDE) in accordance with the requirements of the applicable edition of ASME Code Section XI. During the Second Ten-Year Inservice Interval (1990 – 2000), the requirements of the 1986 Edition, No Addenda, were applicable. During the Third Ten-Year Inservice Inspection Interval (2000 to present), the requirements, not including Appendix VIII, of the 1995 Edition through the 1996 Addenda of Section XI, were applicable.

Component ID	Description	Examination Dates	Examination Methods	Extent of Coverage	Examination Results	Quality of Documentation
RC-PZR-WP-102	4 In. Spray Nozzle to Safe End Weld	October 1994 (RFO 9) March 2002 (RFO 13)	Ultrasonic / Liquid Penetrant	100%	No recordable indications	Written Report
RC-MK-A-90-FW56	4 In. Pipe to Safe End Weld	October 1994 (RFO 9) February 2002 (RFO 13)	Ultrasonic / Liquid Penetrant	100%	No recordable indications	Written Report
RC-PZR-WP-91-W/X	3 In. W/X Axis Relief Nozzle to Safe End Weld	September 1991 (RFO 7) February 2002 (RFO 13)	Liquid Penetrant	100%	No recordable indications	Written Report
RC-PZR-WP-91-Y/Z	3 In. Y/Z Axis Relief Nozzle to Safe End Weld	April 2000 (RFO 12)	Liquid Penetrant	100%	No recordable indications	Written Report
RC-PZR-WP-91-Z/W	2 ½ In. Z/W Axis Relief Nozzle to Safe End Weld	October 1994 (RFO 9)	Liquid Penetrant	100%	No recordable indications	Written Report

Basis for Concluding Regulatory Requirements are Satisfied

Satisfaction of regulatory requirements is discussed under "(1)(b), (1)(d) Regulatory Requirements" on page 11.

(1)(c), (1)(d) Inspection Plans

Visual Inspections

All Alloy 600 pressurizer connections receive a visual inspection during each refueling outage. In addition, DBNPS plans to visually inspect the Alloy 600 connections in the pressurizer steam space during the Cycle 14 Mid-Cycle Outage. These inspections are conducted with insulation off (bare metal) and encompass 100% of the external surface of the Alloy 600 connection. The inspections are performed by personnel qualified in accordance with the Boric Acid Corrosion Control Program. Photographs of each inspection location are taken and are included with a written inspection report.

Each refueling outage, all Alloy 600 pressurizer penetrations are inspected during the Reactor Coolant System Leakage Test. This test is conducted in accordance with IWB-5220 of the 1995 Edition through the 1996 Addenda of ASME Code Section XI. This inspection is performed with insulation on with the Reactor Coolant System at normal operating pressure and temperature. A written record of these examinations is included with the Reactor Coolant System Leakage Test Procedure.

ASME Code Section XI Nondestructive Examinations

The four Alloy 600 pressurizer steam space nozzle to safe-end butt welds, and the pressurizer spray nozzle safe end to pipe weld as noted above, are examined in accordance with either Examination Category B-F or B-J of the 1995 Edition through the 1996 Addenda of ASME Code Section XI. Welds RC-PZR-WP-102 (4 inch spray nozzle to safe end weld) and RC-MK-A-90-FW56 (4 inch pipe to safe end weld) are subjected to a volumetric (ultrasonic) and surface examination. The ultrasonic examination is conducted with procedures and personnel qualified in accordance with the industry's Performance Demonstration Initiative (PDI) Program.

The remaining three nozzle to safe end welds (less than 4 inch diameter) receive a surface examination as required by Examination Category B-F. In addition to the surface examination, FENOC also plans to perform an augmented ultrasonic examination of these welds. This augmented examination is planned to be conducted using PDI qualified personnel and procedures based on PDI examination techniques for dissimilar metal welds.

FENOC plans to examine the four Alloy 600 pressurizer steam space nozzle to safe-end butt welds at a frequency such that at least one of the four welds will be examined each refueling outage. Based on previous examination experience, it is expected that 100% of the examination volume depicted in Figure IWB-2500-8 will be examined. All examination indications are recorded, evaluated in accordance with IWB-3130, Inservice Volumetric and Surface Examinations, and documented in a written inspection report.

Corrective Actions

If leaking J-groove penetration nozzles are noted during visual examinations, the leakage is documented and dispositioned in accordance with the DBNPS Corrective Action Program and IWB-3140, Inservice Visual Examinations. In the event of leakage, FENOC plans to perform supplemental NDE of additional J-groove pressurizer penetration nozzles of similar design, material, and service conditions, and repair the nozzle.

Volumetric and surface examination indications exceeding the acceptance standards of IWB-3514 are documented and dispositioned in accordance with the DBNPS Corrective Action Program and in accordance with IWB-3130. Expansion of scope is determined in accordance with the requirements of IWB-2430, Additional Examinations.

(1)(b), (1)(d) Regulatory Requirements

The "Applicable Regulatory Requirements" section of BL 2004-01 lists the following regulatory requirements and plant Operating License (Technical Specifications) requirements pertaining to integrity of the pressurizer and steam space piping connections:

- Appendix A to 10 CFR 50, "General Design Criteria for Nuclear Power Plants"
  - Criterion 14 - "Reactor Coolant Pressure Boundary"
  - Criterion 31 - "Fracture Prevention of Reactor Coolant Pressure Boundary"
  - Criterion 32 -"Inspection of Reactor Coolant Pressure Boundary"
- 10 CFR 50.55a, "Codes and Standards," which incorporates by reference Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the ASME Boiler and Pressure Vessel Code
- Appendix B of 10 CFR 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants;" Criteria V, "Instructions, Procedures, and Drawings;" IX, "Control of Special Processes;" and XVI, "Corrective Actions"
- Plant Operating License, Appendix A, Technical Specifications

The following addresses these requirements for the DBNPS:

10 CFR 50, Appendix A-General Design Criteria (GDC)

The GDC included in Appendix A to 10 CFR 50 did not become effective until May 21, 1971. The construction permit for the DBNPS was issued prior to May 21, 1971; consequently, the DBNPS was not subject to the Appendix A GDCs (reference SECY-92-223, 9/18/92). However, the following addresses compliance with the intent of the design criteria for the Reactor Coolant Pressure Boundary.

- Criterion 14 - Reactor Coolant Pressure Boundary

  "The reactor coolant pressure boundary shall be designed, fabricated, erected, and tested so as to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross failure."

  Compliance with the intent of GDC 14 is described in the DBNPS Updated Safety Analysis Report (USAR), Appendix 3D.1.10. Visual examination of all pressurizer penetrations is performed each refueling outage. Nondestructive examination of the pressurizer penetrations is also performed as required by ASME Code Section XI. Where volumetric examination of the Alloy 600 butt welds is not required by ASME Code Section XI, augmented ultrasonic examination of the examination volume is planned to be performed. These inspections provide a reasonable assurance of the pressure boundary integrity of the pressurizer penetrations and of continued compliance with this criterion.

- Criterion 31 - Fracture Prevention of Reactor Coolant Pressure Boundary

  "The reactor coolant pressure boundary shall be designed with sufficient margin to assure that when stressed under operating, maintenance, testing, and postulated accident conditions (1) the boundary behaves in a nonbrittle manner and (2) the probability of rapidly propagating failure is minimized. The design shall reflect consideration of service temperatures and other conditions of the boundary material under operating, maintenance, testing, and postulated accident conditions and the uncertainties in determining (1) material properties, (2) the effects of irradiation on material properties, (3) residual, steady state and transient stresses, and (4) size of flaws."

Compliance with the intent of GDC 31 is described in the DBNPS USAR Appendix 3D.1.27. The inspections described under Criterion 14 above provide a reasonable assurance of the pressure boundary integrity of the pressurizer penetrations and continued compliance with this criterion.

- Criterion 32- Inspection of Reactor Coolant Pressure Boundary

  "Components which are part of the reactor coolant pressure boundary shall be designed to permit (1) periodic inspection and testing of important areas and features to assess their structural and leaktight integrity, and (2) an appropriate material surveillance program for the reactor pressure vessel."

Compliance with the intent of GDC 32 is described in the DBNPS USAR Appendix 3D.1.28. The inspections described under Criterion 14 assess the structural and leak-tight integrity of the pressurizer penetrations. Although the J-groove Alloy 82/182 welds are not readily accessible for examination, leakage due to degradation of these welds can be determined by inspection of the exposed pressure boundary materials.

10 CFR 50.55a-Codes and Standards

10 CFR 50.55a, "Codes and Standards," requires that inservice inspection and testing be performed in accordance with the requirements of the ASME Boiler and Pressure Vessel Code, Section XI, "Inservice Inspection of Nuclear Plant Components." Section XI contains the applicable rules for the examination, evaluation, and repair of ASME Code components which includes the reactor coolant pressure boundary.

The DBNPS Third Ten-Year In-Service Inspection (ISI) Interval, which began on September 21, 2000, is implemented in accordance with the 1995 Edition through the 1996 Addenda of ASME Code Section XI. ASME Code Section XI establishes through Examination Category B-F, "Pressure Retaining Dissimilar Metal Welds in Vessel Nozzles" requirements for the nondestructive examination of the Pressurizer Nozzle to Safe End Welds. Required volumetric examinations are planned to be conducted with examination techniques which are in accordance with Appendix VII, PDI requirements. Examination Category B-P, "All Pressure Retaining Components", also requires a VT-2 visual examination of the reactor vessel pressure retaining boundary each refueling outage during the system leakage test conducted at normal operating pressures. Similar requirements existed in the 1986 Edition, No Addenda, of ASME Code Section XI, which applied to examinations performed during the Second Ten-Year ISI Interval. Through performance of these examinations in accordance with ASME Code Section XI, the DBNPS is in compliance with the requirements of 10 CFR 50.55a.

10 CFR 50, Appendix B - Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants

- Criterion V- Instructions, Procedures, and Drawings

  "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

  Activities associated with inspection of the pressurizer penetrations (including tests and inspections) are performed in accordance with the FENOC Quality Assurance Program. Procedures that address activities associated with quality-related structures, systems, and components are subject to an established preparation, review, and approval process as defined in the Quality Assurance Program. Appropriate quantitative or qualitative acceptance criteria are included in the inspection procedures.

- Criterion IX - Control of Special Processes

  "Measures shall be established to assure that special processes including welding, heat treating, and nondestructive testing are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specification, criteria, and other special requirements."

  FENOC has implemented a Quality Assurance Program that conforms to the criteria established in 10 CFR 50 Appendix B, Criterion IX. Inspections are conducted and qualified as required by Section XI of the ASME Code. Where ASME Code Section XI is not applicable, personnel and processes are qualified in accordance with the FENOC Quality Assurance Program.

- Criterion XVI - Corrective Action

  "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management."

Activities associated with inspection of the pressurizer penetrations (including corrective actions) are performed in accordance with the FENOC Quality Assurance Program. Under this program, personnel are responsible for implementation of the Quality Assurance Program as it pertains to performance of their activities. The FENOC Corrective Action Program requires that conditions adverse to quality be corrected. In the case of significant conditions adverse to quality, procedures require notification of management, determination of the cause, and action to preclude recurrence. Indications identified during performance of the supplemental non-visual examinations were dispositioned in accordance with the FENOC Corrective Action Program. As noted in the response to item (1)(b), no indications were found during performance of the other examinations, and the indications found during the supplemental non-visual examinations were determined to be non-relevant fabrication marks. Under the FENOC ISI program, indications exceeding the acceptance standards are dispositioned in accordance with the FENOC Corrective Action Program.

Plant Operating License, Appendix A - Technical Specifications

DBNPS Technical Specification Limiting Condition for Operation (LCO) 3.4.6.2 includes a requirement and associated action statements addressing Reactor Coolant System leakage. The limits for Reactor Coolant System leakage are stated in terms of the amount of leakage, for example, less than or equal to one gallon per minute for unidentified leakage; less than or equal to ten gallons per minute for identified leakage; and no Reactor Coolant Pressure Boundary leakage.

The DBNPS RCS Integrated Leakage Program monitors Reactor Coolant System Leakage. Leakage is evaluated to ensure compliance with the requirements of Technical Specification 3.4.6.2. The program identifies several threshold values requiring investigation and/or initiation of a condition report. These threshold values were chosen so that corrective actions can be initiated before the Technical Specification limits are reached. For example, although the Technical Specification limit for unidentified leakage is one gallon per minute, a sustained step change of greater than 0.05 gallons per minute requires a response by the program, and a sustained unidentified leak rate of greater than 0.25 gallons per minute for three consecutive days requires a plant shutdown within thirty days.

If you have any questions or require further information, please contact Mr. Gregory A. Dunn, Manager – Regulatory Affairs, at (419) 321-8450.

The statements contained in this submittal, including its associated enclosures and attachments are true and correct to the best of my knowledge and belief. I am authorized by the FirstEnergy Nuclear Operating Company to make this submittal. I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 7/26/04

By: _____
Mark B. Bezilla, Vice President-Nuclear

MSH

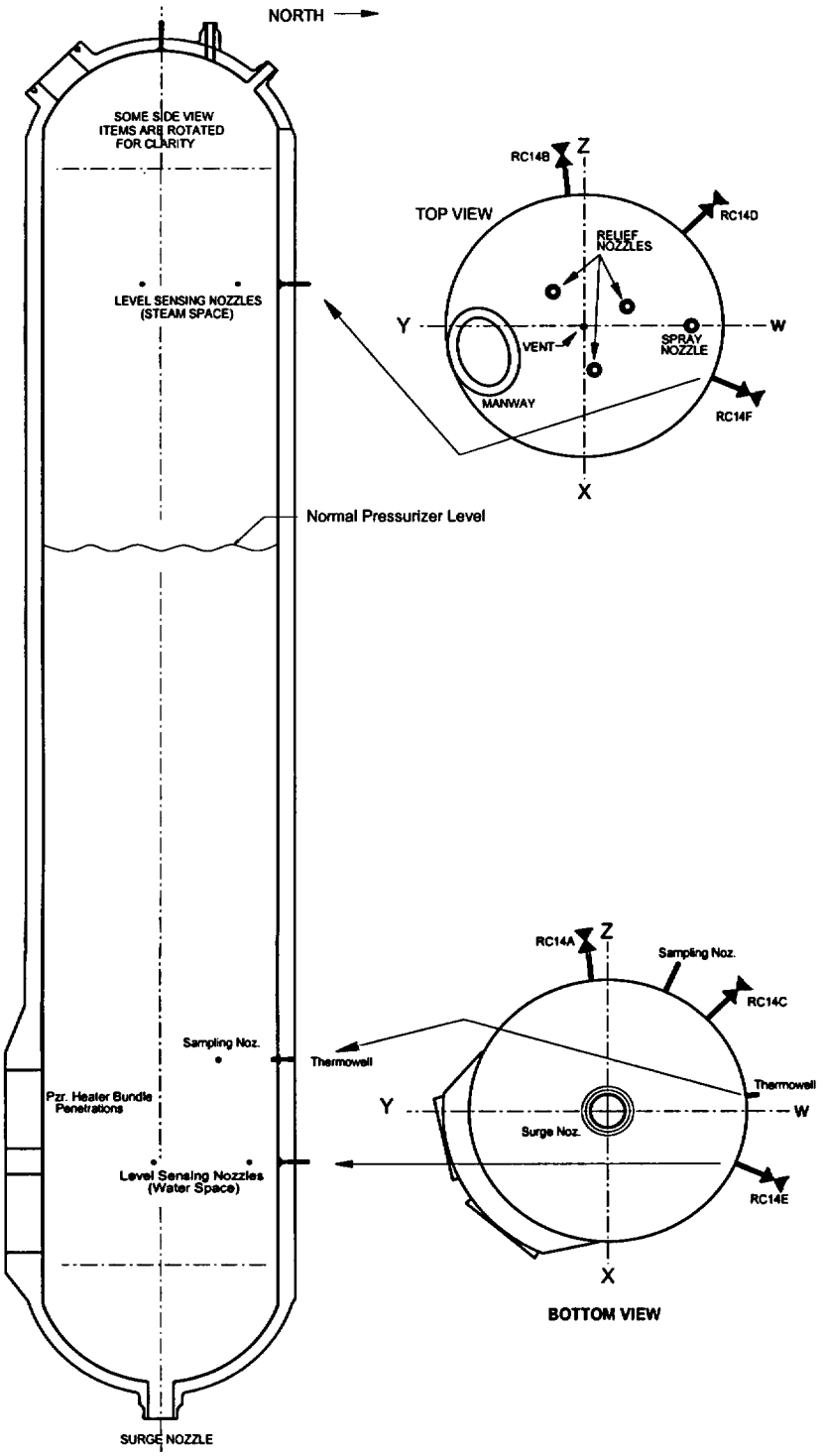
Attachment A. Davis-Besse Alloy 82/182/600 Pressurizer Penetrations (Figure)

Attachment B: Commitment List

cc: J. L. Caldwell, Regional Administrator, NRC Region III
J. B. Hopkins, DB-1 Senior NRC/NRR Project Manager
C. S. Thomas, DB-1 NRC Senior Resident Inspector
Utility Radiological Safety Board

Docket Number 50-346
License Number NPF-3
Serial Number 3064
Attachment A

DBNPS Alloy 82/182/600 Pressurizer Penetrations



Docket Number 50-346
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Attachment B

COMMITMENT LIST

The following list identifies those actions committed to by the Davis-Besse Nuclear Power Station, Unit Number 1, (DBNPS) in this document. Any other actions discussed in the submittal represent intended or planned actions by the DBNPS. They are described only for information and are not regulatory commitments. Please notify the Manager – Regulatory Affairs (419-321-8450) at the DBNPS of any questions regarding this document or associated regulatory commitments.

COMMITMENTS	DUE DATE
None	Not Applicable