

July 31, 2007

Mr. Mark B. Bezilla
Site Vice President
FirstEnergy Nuclear Operating Company
Davis-Besse Nuclear Power Station
Mail Stop A-DB-3080
5501 North State Route 2
Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1 - ISSUANCE OF
AMENDMENT RE: STEAM GENERATOR TUBE INTEGRITY TECHNICAL
SPECIFICATION AMENDMENT USING THE CONSOLIDATED LINE ITEM
IMPROVEMENT PROCESS (TAC NOS. MD2145 AND MD0077)

Dear Mr. Bezilla:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 276 to Facility Operating License No. NPF-3 for the Davis-Besse Nuclear Power Station, Unit No. 1 (DBNPS). The amendment revises the technical specifications (TS) in response to your application dated May 30, 2006, as supplemented by letters dated April 24 and June 27, 2007, regarding DBNPS steam generator (SG) tube integrity TSs.

This amendment revises the existing SG tube surveillance program to be consistent with the Commission's approved TS Task Force (TSTF) Standard TS Change Traveler No. 449 (TSTF-449), Revision 4, "Steam Generator Tube Integrity." A notice of availability for this TS improvement using the consolidated line item improvement process was published in the *Federal Register* on May 6, 2005 (70 FR 24126). As stated in your letter dated February 26, 2006, the amendment is also the modification of the SG portion of the TSs requested in NRC Generic Letter (GL) 2006-01, "Steam Generator Tube Integrity and Associated Technical Specification." The NRC staff considers the amendment to be an acceptable and complete response to GL 2006-01. This completes the NRC staff's efforts on TAC No. MD0077.

M. Bezilla

-2-

TS pages 6-1 through 6-9, 6-14, and 6-16 through 6-22 are not changed by this amendment, however are included for administrative purposes.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Thomas J. Wengert, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-346

Enclosures:

1. Amendment No. 276 to NPF-3
2. Safety Evaluation

cc w/encls: See next page

M. Bezilla

-2-

TS pages 6-1 through 6-9, 6-14, and 6-16 through 6-22 are not changed by this amendment, however are included for administrative purposes.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Thomas J. Wengert, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-346

- Enclosures: 1. Amendment No. 276 to NPF-3
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION:

PUBLIC	LPL3-2 R/F	RidsNrrPMTWengert
RidsNrrDirsltsb	RidsOgcRp	RidsRgn3MailCenter
RidsAcrcAcnwMailCenter	RidsNrrLAEWhitt	RidsNrrDorlLpl3-2
RidsNrrDciCsgb	RidsNrrDorlDpr	RidsNrrPMSSands
GHill (2)	EMurphy, NRR	TWertz, NRR
DBeaulieu, NRR		

Package No.: ML072050089 Amendment No.: ML072040417 TS Accession No.: ML

OFFICE	LPL3-2/PM	LPL3-2/PM	LPL3-2/LA	DCI/CSGB/BC	DIRS/ITSB/BC	LPL3-2/BC
NAME	SSands	TWengert	EWhitt	AHiser	TKobetz	RGibbs
DATE	7/31/07	7/31/07	7/31/07	7/30/07	7/30/07	7/31/07

OFFICIAL RECORD COPY

Davis-Besse Nuclear Power Station, Unit No. 1

cc:

Manager, Site Regulatory Compliance
FirstEnergy Nuclear Operating Company
Davis-Besse Nuclear Power Station
Mail Stop A-DB-3065
5501 North State Route 2
Oak Harbor, OH 43449-9760

Director, Ohio Department of Commerce
Division of Industrial Compliance
Bureau of Operations & Maintenance
6606 Tussing Road
P.O. Box 4009
Reynoldsburg, OH 43068-9009

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
Suite 210
2443 Warrenville Road
Lisle, IL 60532-4352

Resident Inspector
U.S. Nuclear Regulatory Commission
5503 North State Route 2
Oak Harbor, OH 43449-9760

Stephen Helmer
Supervisor, Technical Support Section
Bureau of Radiation Protection
Ohio Department of Health
35 East Chestnut Street, 7th Floor
Columbus, OH 43215

Carol O'Claire, Chief, Radiological Branch
Ohio Emergency Management Agency
2855 West Dublin Granville Road
Columbus, OH 43235-2206

Zack A. Clayton
DERR
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, OH 43266-0149

State of Ohio
Public Utilities Commission
180 East Broad Street
Columbus, OH 43266-0573

Attorney General
Office of Attorney General
30 East Broad Street
Columbus, OH 43216

President, Board of County
Commissioners of Ottawa County
Port Clinton, OH 43252

President, Board of County
Commissioners of Lucas County
One Government Center, Suite 800
Toledo, OH 43604-6506

The Honorable Dennis J. Kucinich
United States House of Representatives
Washington, D.C. 20515

The Honorable Dennis J. Kucinich
United States House of Representatives
14400 Detroit Avenue
Lakewood, OH 44107

Joseph J. Hagan
President and Chief Nuclear Officer
FirstEnergy Nuclear Operating Company
Mail Stop A-GO-14
76 South Main Street
Akron, OH 44308

David W. Jenkins, Attorney
FirstEnergy Corporation
Mail Stop A-GO-15
76 South Main Street
Akron, OH 44308

Danny L. Pace
Senior Vice President, Fleet Engineering
FirstEnergy Nuclear Operating Company
Mail Stop A-GO-14
76 South Main Street
Akron, OH 44308

Manager, Fleet Licensing
FirstEnergy Nuclear Operating Company
Mail Stop A-GO-2
76 South Main Street
Akron, OH 44308

Davis-Besse Nuclear Power Station, Unit 1

cc:

Director, Fleet Regulatory Affairs
FirstEnergy Nuclear Operating Company
Mail Stop A-GO-2
76 South Main Street
Akron, OH 44308

Jeannie M. Rinckel
Vice President, Fleet Oversight
FirstEnergy Nuclear Operating Company
Mail Stop A-GO-14
76 South Main Street
Akron, OH 44308

Richard Anderson
Vice President, Nuclear Support
FirstEnergy Nuclear Operating Company
Mail Stop A-GO-14
76 South Main Street
Akron, OH 44308

James H. Lash
Senior Vice President of Operations
and Chief Operating Officer
FirstEnergy Nuclear Operating Company
Mail Stop A-GO-14
76 South Main Street
Akron, OH 44308

FIRSTENERGY NUCLEAR OPERATING COMPANY

AND

FIRSTENERGY NUCLEAR GENERATION CORP.

DOCKET NO. 50-346

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 276
License No. NPF-3

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by FirstEnergy Nuclear Operating Company et al. (the licensee), dated May 30, 2006, as supplemented by letters dated April 24 and June 27, 2007, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-3 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 276, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 120 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Russell Gibbs, Chief
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications and Facility Operating License

Date of Issuance: July 31, 2007

ATTACHMENT TO LICENSE AMENDMENT NO. 276

FACILITY OPERATING LICENSE NO. NPF-3

DOCKET NO. 50-346

Replace the following pages of the Facility Operating License and Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

Insert

License NPF-3
Page 4

License NPF-3
Page 4

TSs
INDEX, V
INDEX, VII
INDEX, IX
INDEX, XII
INDEX, XV

TSs
INDEX, V
INDEX, VII
INDEX, IX
INDEX, XII
INDEX, XV

1-4
3/4 1-1
3/4 4-6
3/4 4-6a
3/4 4-6b
3/4 4-7
3/4 4-8
3/4 4-9
3/4 4-9a
3/4 4-10
3/4 4-10a
3/4 4-11
3/4 4-12
3/4 4-15
3/4 4-16

1-4
3/4 1-1
3/4 4-6

3/4 4-15
3/4 4-16
3/4 7-38
3/4 7-39

6-1
6-2
6-3
6-4
6-5
6-6
6-7
6-8
6-9
6-10
6-11
6-12
6-13

6-1
6-2
6-3
6-4
6-5
6-6
6-7
6-8
6-9
6-10
6-11
6-12
6-13

Remove

TSs
6-14
6-15
6-16
6-17
6-18
6-19
6-20
6-21
6-22
6-23
6-24

Insert

TSs
6-14
6-15
6-16
6-17
6-18
6-19
6-20
6-21
6-22

2.C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

FENOC is authorized to operated the facility at steady state reactor core power levels not in excess of 2772 megawatts (thermal). Prior to attaining the power level, Toledo Edison Company shall comply with the conditions identified in Paragraph (3) (o) below and complete the preoperational tests, startup tests and other items identified in Attachment 2 to this license in the sequence specified. Attachment 2 is an integral part of this license.

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 276, are hereby incorporated in the license. FENOC shall operate the facility in accordance with the Technical Specifications.

(3) Additional Conditions

The matters specified in the following conditions shall be completed to the satisfaction of the Commission within the stated time periods following the issuance of the license or within the operational restrictions indicated. The removal of these conditions shall be made by an amendment to the license supported by a favorable evaluation by the Commission:

- (a) FENOC shall not operate the reactor in operational Modes 1 and 2 with less than three reactor coolant pumps in operation.
- (b) Deleted per Amendment 6
- (c) Deleted per Amendment 5

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 276 TO FACILITY OPERATING LICENSE NO. NPF-3
FIRSTENERGY NUCLEAR OPERATING COMPANY
FIRSTENERGY NUCLEAR GENERATION CORP.
DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1
DOCKET NO. 50-346

1.0 INTRODUCTION

By letter to the Nuclear Regulatory Commission (NRC, the Commission) dated May 30, 2006 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML061560134) as supplemented by letters dated April 24, 2007 (ADAMS Accession No. ML071160351), and June 27, 2007 (ADAMS Accession No. ML071790511), FirstEnergy Nuclear Operating Company (the licensee), requested changes to the technical specifications (TSs) for the Davis Besse Nuclear Power Station, Unit No. 1 (DBNPS).

The supplements dated April 24 and June 27, 2007, provided additional information, that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's proposed no significant hazards consideration determination as published in the *Federal Register* on May 6, 2005 (71 FR 59532).

The proposed changes would revise the existing steam generator (SG) tube surveillance program. The changes are modeled after TS Task Force (TSTF) Standard TS Change Traveler No. 449 (TSTF-449), Revision 4, "Steam Generator Tube Integrity," and the model safety evaluation (SE) prepared by the NRC and published in the *Federal Register* on March 2, 2005 (70 FR 10298). In this regard, the scope of the application includes changes to the definition of leakage, changes to the primary-to-secondary leakage requirements, changes to the SG tube surveillance program (SG tube integrity), changes to the SG reporting requirements, and associated changes to the TS Bases.

2.0 REGULATORY EVALUATION

The background, description, and applicability of the proposed changes associated with the SG tube integrity issue and the applicable regulatory requirements were included in the NRC staff's model SE published in the *Federal Register* on March 2, 2005 (70 FR 10298). The "Notice of Availability of Model Application Concerning Technical Specification Improvement To Modify Requirements Regarding Steam Generator Tube Integrity Using the Consolidated Line Item Improvement Process" was published in the *Federal Register* on May 6, 2005 (70 FR 24126), and made the model SE available for licensees to reference.

3.0 TECHNICAL EVALUATION

3.1 Overview

In its May 30, 2006, application and April 24 and June 27, 2007, supplements, the licensee proposed changes to the TS that are modeled after TSTF-449, Revision 4. The TS changes in the TSTF template are relative to a reference standard known as the standard TSs for Babcock and Wilcox plants as contained in NUREG-1430, Volume 1, Revision 3. The current DBNPS TSs contain many differences relative to the standard TSs in terms of specification numbering, format, and content. These differences have necessitated some differences, largely administrative, in the specific changes requested for DBNPS versus those contained in the TSTF changes. In addition, the requested changes for DBNPS would continue to include tube repair provisions and associated inspection requirements and special inspection requirements related to the internal auxiliary feedwater header that are contained in the current TS, but which are not specifically addressed in the TSTF. The following evaluates the differences between the proposed DBNPS TS changes and the TSTF changes (apart from differences in specification numbering or formatting which the NRC staff has determined to be of a purely administrative nature).

Proposed TS 3/4.1.1, SHUTDOWN MARGIN

The APPLICABILITY statement for this specification includes MODE 2 which is footnoted. The footnote currently states, "See LCO 3.4.5, Steam Generators, for additional SHUTDOWN MARGIN requirements." The licensee is proposing to revise this footnote as follows: "See LCO 3.7.9, Steam Generator Level, for additional SHUTDOWN MARGIN REQUIREMENTS." This is consistent with the proposed relocation of the Steam Generator Level LCO, which includes the additional SHUTDOWN MARGIN requirements, from TS 3/4.4.5, LCO 3.4.5, to TS 3/4.7.9, LCO 3.7.9. This change is administrative and is acceptable to the NRC staff.

Proposed TS 3/4.4.5, STEAM GENERATOR (SG) TUBE INTEGRITY

TS 3/4.4.5 is currently entitled, "STEAM GENERATORS." The LIMITING CONDITION FOR OPERATION (LCO) (TS 3.4.5) for this specification (TS 3/4.4.5) currently states, "Each steam generator shall be OPERABLE with a minimum water level of 18 inches and the maximum specified below as applicable: ..." The portion of this specification dealing with water level, with its accompanying (and applicable) APPLICABILITY statement, ACTION statement, and SURVEILLANCE REQUIREMENTS is being relocated to TS 3/4.7.9, STEAM GENERATOR LEVEL. Apart from being relocated, there are no proposed changes to the LCO, APPLICABILITY statement, ACTION statement, or SURVEILLANCE REQUIREMENTS pertaining to SG level. This is consistent with the TSTF changes which did not include any changes relating to SG level. The relocation of the steam generator level specification is strictly administrative and is acceptable.

The remaining portion of current TS 3/4.4.5, including the remaining portion of LCO 3.4.5, i.e., "Each steam generator shall be OPERABLE," with its accompanying (and applicable) APPLICABILITY statement, ACTION statement, and SURVEILLANCE REQUIREMENTS would be replaced by a new specification TS 3/4.4.5, STEAM GENERATOR (SG) TUBE INTEGRITY. This new specification is fully consistent with the TSTF changes and is acceptable.

Proposed TS 6.8.4.g.2.b, Accident induced leakage performance criterion:

TSTF-449 states, in part, "Leakage is not to exceed [1 gpm] per SG, [except for specific types of degradation at specific locations as described in paragraph c of the Steam Generator Program]." The exception noted in brackets does not apply to DBNPS since there are no special accident leakage criteria in proposed paragraph c. The proposed TS 6.8.4.g.2.b states "Leakage is not to exceed 1 gpm per SG except for a SG tube rupture." The words, "except for a SG tube rupture," are not in the TSTF version of this sentence. However, as stated in the preceding sentence of the accident leakage performance criterion (both for DBNPS and the TSTF), the criterion is intended to apply to all design basis accidents other than a SG tube rupture. The NRC staff has no objection to clarifying that this exception applies to both the first and second sentence of the accident leakage performance criterion and, therefore, finds the proposed second sentence of the criterion acceptable.

Proposed TS 6.8.4.g.3, Provisions for SG tube repair criteria:

The TSTF version of this specification states:

Tubes found by inservice inspection to contain flaws with a depth equal to or exceeding [40%] of the nominal tube wall thickness shall be plugged [or repaired].

[The following alternate tube repair criteria may be applied as an alternative to the 40 percent depth based criteria:

1.]

The bracketed depth value of 40 percent of the nominal tube wall thickness is consistent with the value in the current TS for DBNPS. In addition, the bracketed words "or repaired" are appropriate for inclusion in the DBNPS TS since the application of repair methods is authorized in the current TS. The bracketed words concerning alternate repair criteria do not apply to DBNPS since the current TS for DBNPS do not include provisions for alternate tube repair criteria. However, the proposed 6.8.4.g.3 concerning tube repair has been expanded beyond what is contained in the TSTF to address special considerations associated with the approved tube repair methods at DBNPS.

Proposed TS 6.8.4.g.3 states:

- a. Tubes found by inservice inspection to contain flaws, in a region of the tube that contains no repair, with a depth equal to or exceeding 40% of the nominal tube wall thickness shall be plugged or repaired.
- b. Sleeves found by inservice inspection to contain flaws, in a region of the sleeve that contains no sleeve joint, with a depth equal to or exceeding 40% of the nominal sleeve wall thickness shall be plugged.
- c. Tubes with a flaw, either in the parent tube or the sleeve, within a sleeve-to-tube joint shall be plugged.
- d. Tubes with a flaw in a repair roll shall be plugged.

Items a. and b. are consistent with the current TS for DBNPS and are, therefore acceptable. Item b. improves upon the current TS by clarifying that tubes with sleeves containing flaws equal to or exceeding 40 percent of the nominal sleeve wall thickness must be plugged rather than repaired. Item c. is more restrictive than the current TS which allows tubes with flaws with depths less than 40 percent in the sleeve or tube wall at the sleeve-to-tube joints to remain in service. Item c. provides added assurance that the sleeve-to-tube joints will maintain structural and leakage integrity. Item d. improves on the current TS by clarifying that the repair rolls must be free of degradation not just when the roll repairs are installed but thereafter as well. Items c. and d. are consistent with the design and licensing basis for these repairs and are acceptable.

Proposed TS 6.8.4.g.4, Provisions for SG tube inspections:

Proposed TS 6.8.4.g.4 is consistent with the TSTF template that is applicable to SGs with Alloy 600 mill annealed tubing such as those at DBNPS, supplemented by additional provisions (not included in the TSTF). These provisions addressed inspection issues associated with roll repairs and sleeve repairs which are authorized for use in the current TS and which would continue to be authorized in proposed TS 6.8.4.g.6. and to address DBNPS unique inspection issues in portions of peripheral tubes in the vicinity of the internal auxiliary feedwater header.

Consistent with TSTF-449, proposed TS 6.8.4.g.4 states in part, "The number and portions of the tubes inspected and methods of inspection shall be performed with the objective of detecting flaws of any type (e.g., volumetric flaws, axial and circumferential cracks) that may be present along the length of the tube, from the tube-to-tubesheet weld at the tube inlet to the tube-to-tubesheet weld at the tube outlet, and that may satisfy the tube repair criteria. The tube-to-tubesheet weld is not part of the tube." At this point, proposed TS 6.8.4.g.4 adds two additional sentences, which are not in the TSTF, to address inspections associated with roll and sleeve repairs which are authorized under the current TS. These sentences state: "For tubes that have undergone repair rolling, the tube and tube roll, outboard of the new roll area in the tube sheet, can be excluded from inspections because it is no longer part of the pressure boundary once the repair roll is installed. For tubes that have undergone sleeving repairs, the segment of the parent tube between the bottom of the uppermost sleeve roll and the top of the middle sleeve roll can be excluded from inspection because it is no longer part of the pressure boundary once the sleeve is installed." These exclusions are acceptable to the NRC staff since they are authorized under the current TS.

The provision for roll repairs in the current TS for DBNPS includes a special inspection requirement in TS 4.4.5.9 that states: "When steam generator tube inspection is performed as per section 4.4.5.2, an additional but totally separate inspection shall be performed on special interest tubes that have been repaired by the repair roll process. This inspection shall be performed on 100% of the tubes that have been repaired by the repair roll process. The inspection shall be limited to the repair roll joint and the roll transitions of the repair roll. Defective or degraded tubes found in the repair roll region as a result of the inspection need not be included in determining the Inspection Results Category for the general steam generator inspection." The licensee is proposing to carry over the essence of this requirement to proposed TS 6.8.4.g.4.d. Specifically, proposed TS, TS 6.8.4.g.4.d states, "During each periodic SG tube inspection, inspect 100% of the tubes that have been repaired by the repair roll process. This special inspection shall be limited to the repair roll joint and the roll transitions of the repair roll." The words from the original requirement not being carried over only have meaning in the context of the current TS. The proposed TS and the TSTF TS template do not include "Inspection Results Categories" and, thus, there is no need to refer to "additional but totally separate inspections." Also, the words "degraded or degraded tubes" are no longer

defined in the proposed TS or TSTF TS template. The NRC staff concludes that proposed TS

6.8.4.g.4.d is equivalent to the current requirement and is acceptable.

Consistent with the TSTF changes, the proposed TS changes for DBNPS would eliminate current requirements in TS 4.4.5.3.c concerning unscheduled inspections, including TS 4.4.5.3.c.1 which requires an unscheduled inspection during plant shutdown following a primary to secondary leak in excess of the limits in LCO 3.4.6.2.c. However, current TS 4.4.5.3.c.1 differs from the current standard TS requirement (upon which the TSTF changes are based) in that it includes a special unscheduled inspection requirement applicable to the roll repairs. This requirement states, "If the leak is determined to be from a repair roll joint, rather than selecting a random sample, inspect 100% of the repair roll joints in the affected steam generator. If the results of this inspection fall into C-3 category, perform additional inspections of the new roll areas in the unaffected steam generator." Thus, elimination of TS 4.4.5.3.c for DBNPS would eliminate the current special unscheduled inspection requirement applicable to the roll repairs. However, the repair rolls, like all other portions of tubing, will be subject to the performance based inspection requirements in the proposed TS 6.8.4.g.4 for DBNPS that inspection intervals, inspection scope, and inspection methods shall be such as to ensure tube integrity is maintained until the next SG inspection. In addition, proposed TS 6.8.4.g.4 for DBNPS requires that 100% of the repair rolls be inspected at intervals not exceed 24 effective full power months or one interval between inspections (whichever is greater), thus providing added assurance that the integrity of the repair roll joints will be maintained. Also, in the event of primary-to-secondary leakage exceeding the LCO 3.4.6.2.c limit, the licensee will likely find it necessary to perform plugging or repairs to correct the leakage and, thus, be required to perform a condition monitoring assessment in accordance with proposed TS 6.8.4.g.1 for DBNPS to confirm that the structural and accident leakage performance criteria are met. Plant shutdown due to primary-to-secondary leakage exceeding the LCO 3.4.6.2.c limit is reportable in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50.72 and Part 73. Should either the structural or accident leakage integrity performance criteria not be met, that too would be reportable under 10 CFR 50.72 and 73, and the licensee would be required to submit a Licensee Event Report describing, in part, the corrective actions taken to prevent recurrence. For these reasons the NRC staff concludes it is acceptable not to carry over current TS 4.4.5.3.c.1 to the new proposed TS for DBNPS.

The current TS for DBNPS contain another special inspection requirement in TS 4.4.5.7 that states, "When steam generator tube inspection is performed as per TS 4.4.5.2, an additional but totally separate inspection shall be performed on special interest peripheral tubes in the vicinity of the secured internal auxiliary feedwater header. This testing shall only be required on the steam generator selected for inspection, and the test shall require inspection only between the upper tube sheet and the 15th tube support plate. The tubes selected for inspection shall represent the entire circumference of the steam generator and shall total at least 150 peripheral tubes." The licensee is proposing to carry over the essence of this requirement to proposed TS 6.8.4.g.4.e. Specifically, proposed TS 6.8.4.g.4.e states, "Inspect peripheral tubes in the vicinity of the secured internal auxiliary feedwater header between the upper tube sheet and the 15th tube support plate during each periodic SG tube inspection. The tubes selected for inspection shall represent the entire circumference of the steam generator and shall total at least 150 peripheral tubes." The proposed TS and the TSTF TS template do not include "Inspection Results Categories" and, thus, there is no need to refer to "additional but totally separate inspections." There is no meaningful difference between the words "testing shall only be required on the steam generator selected for inspection" in the current requirement versus the words "inspect ... during each periodic tube inspection" in the proposed TS. Proposed

TS 6.8.4.g.4.b requires that both SGs be inspected every 24 effective full power months or one

interval between refueling outages (whichever is less). The NRC staff concludes that proposed TS 6.8.4.g.4.e is equivalent to the current requirement and is acceptable.

Proposed TS 6.8.4.g.6, Provisions for SG tube repair methods:

In TSTF-449, this specification is shown in brackets and is only to be included in a plant specific application if there are approved tube repair methods which is the case for DBNPS. Proposed TS 6.8.4.g.6 lists the tube repair methods authorized in the current TS for DBNPS as follows:

- a. Sleeving in accordance with Topical Report BAW-2120P.
- b. Repair rolling in accordance with Topical Report BAW-2303P, Revision 4. The new roll area must be free of flaws in order for the repair to be considered acceptable.

The NRC staff finds the proposed repair method descriptions to be equivalent to the descriptions in the current TS. (Inspection and repair limit requirements associated with the implementation of these repair methods are addressed elsewhere in the proposed TS for DBNPS as discussed above and are also equivalent to the requirements in the current TS.) The NRC staff concludes proposed TS 6.8.4.g.6 is consistent with TSTF-449 and is acceptable.

Proposed TS 6.8.4.g.7, Special Visual Inspections:

The current TS for DBNPS contains special visual inspection requirements in TS 4.4.5.8 pertaining to the secured internal feedwater header, header to shroud attachment welds, and the external header thermal sleeves. These requirements would now be contained in proposed TS 6.8.4.g.7. Proposed TS 6.8.4.g.7 is outside the scope of the TSTF changes. However, proposed TS 6.8.4.g.7 is equivalent to the special visual inspection in the current TS and is acceptable.

Proposed TS 6.9.1.12, STEAM GENERATOR TUBE INSPECTION REPORT

Proposed TS 6.9.1.12 for DBNPS is consistent with the TSTF-449 TS template reporting requirements, including the adoption of the TSTF requirements which are shown in brackets which are applicable to plants authorized to perform tube repairs. The proposed reporting requirements in TS 6.9.1.12.h and 6.9.1.12.i are as follows:

- h. The effective plugging percentage for all plugging and tube repairs in each SG, and
- i. Repair method utilized and number of tubes repaired by each repair method.

These reporting requirements replace the existing reporting requirement pertaining to tube repairs in TS 4.4.5.b.3 which requires, "Identification of tubes plugged, sleeved or repair rolled." The proposed reporting requirements will provide sufficient information to allow the NRC staff to monitor the utilization of tube repair methods at DBNPS, is consistent with the TSTF template approved by the NRC, and is acceptable.

Planned Revisions to the Technical Specification BASES

The NRC staff also reviewed for information the planned changes to the TS BASES associated with the requested TS changes. (The TS BASES are a licensee controlled document not subject to NRC approval.) The content of the current TS BASES for DBNPS is not as extensive

as the standard TS in NUREG-1430 which were the benchmark to which the TSTF changes apply. For example, the APPLICABLE SAFETY ANALYSES sections, APPLICABILITY sections, and ACTION statements in the standard TS BASES are beyond the level of detail included in the DBNPS TS BASES. The TSTF includes changes to these BASES sections; however, the proposed BASES for DBNPS do not include these sections. The proposed BASES for DBNPS have nevertheless been extensively revised consistent with the revisions in the TSTF BASES. The proposed BASES delete much of the discussion in the current BASES concerning inspection of sleeves and repair rolls. However, as discussed earlier in this SE, proposed TS 6.8.4.g.4 includes inspection requirements relating to sleeves and repair rolls, which the NRC staff has determined to be acceptable.

Based on its review, the NRC staff finds the planned changes to the TS BASES to be consistent with the TS Bases in TSTF-449, but not to the same level of detail or completeness as in the TSTF template due to the non-standard nature of the DBNPS TS.

The remainder of the application was consistent with, or more limiting than, TSTF-449.

In summary, the NRC staff determined that the model SE is applicable to this review and finds the proposed changes acceptable.

Consistent with TSTF-449, the proposed TS changes include: (1) a revised definition of LEAKAGE, (2) a revised TS 3/4.6.2, "Reactor Coolant System Operational Leakage," (3) a new TS 6.8.4.g, "Steam Generator (SG) Program," (4) a revised TS 3/4.4.5, "Steam Generator Tube Integrity," (5) a new TS 6.9.1.12, "Steam Generator Tube Inspection Report," and (6) a revised Table of Content pages to reflect the proposed changes.

3.2 Technical Evaluation Conclusion

The proposed TS changes establish a programmatic, largely performance-based regulatory framework for ensuring SG tube integrity is maintained. The NRC staff finds that it addresses key shortcomings of the current framework by ensuring that SG programs are focused on accomplishing the overall objective of maintaining tube integrity. It incorporates performance criteria for evaluating tube integrity that the NRC staff finds consistent with the structural margins and the degree of leak tightness assumed in the current plant licensing basis. The NRC staff finds that maintaining these performance criteria provides reasonable assurance that the SGs can be operated safely without increase in risk.

The revised TSs will contain limited specific details concerning how the SG program is to achieve the required objective of maintaining tube integrity; the intent being that the licensee will have the flexibility to determine the specific strategy for meeting this objective. However, the NRC staff finds that the revised TSs include sufficient regulatory constraints on the establishment and implementation of the SG program such as to provide reasonable assurance that tube integrity will be maintained.

Failure to meet the performance criteria will be reportable pursuant to the requirements in 10 CFR Parts 50.72 and 50.73. The NRC reactor oversight process provides a process by which the NRC staff can verify that the licensee has identified any SG program deficiencies that may have contributed to such an occurrence and that appropriate corrective actions have been implemented.

In conclusion, the NRC staff finds that the TS changes proposed by the licensee in its May 30, 2006, application and April 24 and June 27, 2007, supplements conform to the requirements of

10 CFR 50.36 and establish a TS framework that will provide reasonable assurance that SG tube integrity is maintained without undue risk to public health and safety.

The licensee included in its application the revised TS Bases to be implemented with the TS change. The NRC staff finds that the TS Bases Control Program is the appropriate process for updating the affected TS Bases pages and has, therefore, not included the affected Bases pages with this amendment.

In addition, the licensee proposed to reformat TS pages 6-1 through 6-9, 6-14 and 6-16 through 6-22 for proper pagination. This change is to correct the format/pagination of the TS document and is administrative in nature and is, therefore, acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Ohio State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (71 FR 59531; October 10, 2006). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

A complete list of references used to complete this review can be found in the NRC's model SE published in the *Federal Register* on March 2, 2005 (70 FR 10298).

Principal Contributors: E. Murphy, NRR
T. Wertz, NRR

Date: July 31, 2007