February 22, 2008

Vice President, Operations
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
P.O. Box 110
Lycoming, NY 13093

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT – RELIEF REQUEST NO. 3 RISK-INFORMED INSERVICE INSPECTION PROGRAM (TAC NO. MD4755)

Dear Sir or Madam:

By letter dated February 27, 2007, Entergy Nuclear Operations, Inc. (ENO), submitted Relief Request No. 3 (RR-3) for the Fourth Inservice Inspection (ISI) Interval Inspection Program Plan at the James A. FitzPatrick Nuclear Power Plant (JAFNPP). Specifically, you requested authorization to use the JAFNPP risk-informed inspection program as an alternative to the current American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, 2001 Edition with 2003 Addenda inspection requirements for Class 1 and 2, examination requirement B-F, B-J, C-F-1 and C-F-2 piping welds.

The Nuclear Regulatory Commission (NRC) staff has reviewed your request as documented in the enclosed safety evaluation. Based on its review, the NRC staff concludes that the proposed alternative provides an acceptable level of quality and safety. Therefore, pursuant to Title 10 of the *Code of Federal Regulations* Part 50, Section 50.55a(a)(3)(i), the proposed alternative in RR-3 is authorized for the fourth 10-year ISI Interval which ends on December 31, 2017. Although the current license for JAFNPP expires on October 17, 2014, the licensee has applied for license renewal.

If you have any questions regarding this matter, please contact Adrian Muñiz at 301-415-4093.

Sincerely,

/RA/

Mark G. Kowal, Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-333

Enclosure:
As stated

cc w/encl: See next page

February 22, 2008

Vice President, Operations
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
P.O. Box 110
Lycoming, NY 13093

SUBJECT: JAMES JAMES A. FITZPATRICK NUCLEAR POWER PLANT – RELIEF REQUEST NO. 2. FROM THE REQUIREMENTS OF AMERICAN SOCIETY OF MECHANICAL ENGINEERS BOLIER AND PRESSURE VESSEL CODE SECTION XI, APPENDIX VIII, SUPPLEMENT 10 (TAC NO. MD4754)

Dear Mr. Sir or Madam:

By letter dated February 27, 2007, Entergy Nuclear Operations, Inc. (ENO), submitted Relief Request No. 3 (RR-3) for the Fourth Inservice Inspection (ISI) Interval Inspection Program Plan at the James A. FitzPatrick Nuclear Power Plant (JAFNPP). Specifically, you requested authorization to use the JAFNPP risk-informed inspection program as an alternative to the current American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, 2001 Edition with 2003 Addenda inspection requirements for Class 1 and 2, examination requirement B-F, B-J, C-F-1 and C-F-2 piping welds.

The Nuclear Regulatory Commission (NRC) staff has reviewed your request as documented in the enclosed safety evaluation. Based on its review, the NRC staff concludes that the proposed alternative provides an acceptable level of quality and safety. Therefore, pursuant to Title 10 of the *Code of Federal Regulations* Part 50, Section 50.55a(a)(3)(i), the proposed alternative in RR-3 is authorized for the fourth 10-year ISI Interval which ends on December 31, 2017. Although the current license for JAFNPP expires on October 17, 2014, the licensee has applied for license renewal.

If you have any questions regarding this matter, please contact Adrian Muñiz at 301-415-4093.

Sincerely,
/RA/
Mark G. Kowal, Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-333
Enclosure: As stated
cc w/encl: See next page
Distribution:

PUBLIC	RidsNrrLASLittle	RidsNrrPMAMuniz	DTarantino
LPL 1-1 Reading	RidsNrrDciCpnb	RidsNrrPMJBoska	RidsOGCMailCenter
RidsAcrsAcnw&mMailCenter		RidsNrrDorlLpla	

Accession Number: ML080420427 *See memo dated

OFFICE	LPL3-1\PM	LPL1-1/PM	LPL1-1\LA	CPNB/BC	DRA/APLA	OGC	LPL1-1\BC
NAME	AMuñiz	JBoska	SLittle	TChan JTsao for	MRubin	EBowdenBerry	MKowal
DATE	2/22/08	2/14/08	2/13/08	2/4/08*	9/27/07*	2/20/08	2/22/08

Official Record Copy

FitzPatrick Nuclear Power Plant
cc:

Senior Vice President
Entergy Nuclear Operations, Inc.
P.O. Box 31995
Jackson, MS 39286-1995

Vice President Oversight
Entergy Nuclear Operations, Inc.
P.O. Box 31995
Jackson, MS 39286-1995

Senior Manager, Nuclear Safety & Licensing
Entergy Nuclear Operations, Inc.
P.O. Box 31995
Jackson, MS 39286-1995

Senior Vice President and COO
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

Assistant General Counsel
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

Manager, Licensing
Entergy Nuclear Operations, Inc.
James A. FitzPatrick Nuclear Power Plant
P.O. Box 110
Lycoming, NY 13093

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Resident Inspector's Office
James A. FitzPatrick Nuclear Power Plant
U. S. Nuclear Regulatory Commission
P.O. Box 136
Lycoming, NY 13093

Mr. Charles Donaldson, Esquire
Assistant Attorney General
New York Department of Law
120 Broadway
New York, NY 10271

Mr. Paul Tonko
President and CEO
New York State Energy, Research, and
Development Authority
17 Columbia Circle
Albany, NY 12203-6399

Mr. John P. Spath
New York State Energy, Research,
and Development Authority
17 Columbia Circle
Albany, NY 12203-6399

Mr. Paul Eddy
New York State Dept. of Public Service
3 Empire State Plaza
Albany, NY 12223-1350

Oswego County Administrator
Mr. Steven Lyman
46 East Bridge Street
Oswego, NY 13126

Supervisor
Town of Scriba
Route 8, Box 382
Oswego, NY 13126

Mr. James H. Sniezek
BWR SRC Consultant
5486 Nithsdale Drive
Salisbury, MD 21801-2490

Mr. Michael D. Lyster
BWR SRC Consultant
5931 Barclay Lane
Naples, FL 34110-7306

Mr. John Doering
BWR SRC Consultant
P.O. Box 189
Parker Ford, PA 19457

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO RELIEF REQUEST NO. 3 (RR-3)

FOR THE FOURTH 10-YEAR INTERVAL OF THE INSERVICE INSPECTION PROGRAM

ENTERGY NUCLEAR OPERATIONS, INC.

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

DOCKET NO. 50-333

1.0 INTRODUCTION

By letter dated February 27, 2007, Entergy Nuclear Operations, Inc. (ENO), submitted the James A. FitzPatrick Nuclear Power Plant (JAFNPP) fourth 10-year Inservice Inspection (ISI) Interval Program Plan and associated relief requests. Specifically, the licensee requested authorization to use the JAFNPP risk-informed inspection program as an alternative to the current American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, 2001 Edition with 2003 Addenda inspection requirements for Class 1 and 2, examination requirement B-F, B-J, C-F-1 and C-F-2 piping welds.

2.0 REGULATORY REQUIREMENTS

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) must meet the requirements, except the design and access provisions and the pre-service examination requirements, set forth in the ASME Code, Section XI, "Rules for ISI of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components.

The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The ASME Code of record for the current, fourth 10-year ISI interval at JAFNPP is the 2001 Edition with 2003 Addenda.

In accordance with 10 CFR 50.55a(g)(6)(ii)(C), the implementation of Supplements 1 through 8, 10 and 11 of Appendix VIII to Section XI, 1995 Edition with the 1996 Addenda of the ASME Code is required on a phased schedule ending on November 22, 2002. Supplement 10 was included

in the last phase of implementation and was required to be implemented by November 22, 2002. Additionally, 10 CFR 50.55a(g)(6)(ii)(C)(2) requires licensees implementing the 1989 Edition and earlier editions of Section XI of the ASME Code to implement the 1995 Edition with the 1996 Addenda of Appendix VIII and supplements to Appendix VIII of Section XI of the ASME Code. Pursuant to 10 CFR 50.55a(a)(3), alternatives to requirements may be authorized by the Nuclear Regulatory Commission (NRC) if the licensee demonstrates that: (i) the proposed alternatives provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

3.0 TECHNICAL EVALUATION

3.1 System/Components Affected

The following table provides a description of JAFNPP Class 1 and 2 system/components affected for RR-3.

JAMES A. FITZPATRICK CLASS 1 AND 2 SYSTEM/COMPONENTS			
REFERENCE	EXAMINATION CATEGORY	ITEM NUMBERS	EXAMINATION DESCRIPTION
ASME Code, Section XI, IWB-2500-1 and IWC-2500-1	B-F, B-J, C-F-1 and C-F-2 welds	B5.10, B5.20, B5.30, B9.11, B9.21, B9.31, B9.32, B9.40, C5.10, C5.11, C5.20, C5.21, C5.30, C5.40, C5.41, C5.50, C5.51, C5.70, C5.80, C5.81	Risk Informed-Inservice Inspection (ISI) for Class 1 B-F & B-J Welds and Class 2 C-F-1 and C-F-2 Welds

3.2 Applicable Code Requirement, Edition and Addenda

JAFNPP Class 1 and 2 ASME Code requirements are provided in the following table.

JAMES A. FITZPATRICK ASME CODE REQUIREMENTS		
CODE EDITION AND ADDENDA	REFERENCE	CODE REQUIREMENT
2001 Edition with 2003 Addenda	IWB-2500-1	For each successive 10-Year ISI Interval, 100% of Category B-F welds and 25% of B-J welds for ASME Class 1 piping nominal pipe size (NPS) 4" or greater shall be selected for volumetric and surface examination.
		For each successive 10-Year ISI Interval, 100% of Category B-F welds and 25% of B-J welds for the ASME Class 1 piping less than NPS 4" shall be selected for surface examination.

2001 Edition with 2003 Addenda	IWC-2500-1	For each successive 10-Year Interval, 7.5% of C-F-1 and C-F-2 welds for ASME class 2 piping greater than 4" NPS and 3/8" or greater nominal wall thickness be selected for volumetric and surface examination.
		For each successive 10-Year Interval, 7.5% of C-F-1 and C-F-2 welds for ASME Class 2 socket welds and pipe branch connection 2" NPS or greater shall be selected for surface examination.

The JAFNPP ISI program is a full scope risk-informed inservice inspection (RI-ISI) program as approved by the NRC. This full scope program, in addition to Class 1 and 2 (i.e., examination categories B-F, B-J, C-F-1 and C-F-2), includes Class 3 and non-nuclear safety (NNS) piping.

3.3 Reason for Request

ASME Code, Section XI, IWB-2500-1, 2001 Edition with 2003 Addenda, Examination Categories B-F, B-J, C-F-1 and C-F-2 currently contain the requirements for the non-destructive examination (NDE) of Class 1 and 2 piping components. The previously approved RI-ISI program will be substituted for Class 1 and 2 piping (Examination Categories B-F, B-J, C-F-1 and C-F-2) in accordance with 10 CFR 50.55a(a)(3)(i) by alternatively providing an acceptable level of quality and safety. As discussed above, the previously approved JAFNPP RI-ISI program also includes Class 3 and NNS related piping. Other non-related portions of the ASME Code, Section XI will be unaffected. For example, existing pressure testing requirements remain unchanged.

3.4 Proposed Alternatives and Basis

ENO requests approval of the JAFNPP RI-ISI as an alternative to the current ASME Code, Section XI, 2001 Edition with 2003 Addenda inspection requirements for Class 1 and 2, Examination Category B-F, B-J, C-F-1 and C-F-2 piping welds pursuant to 10 CFR 50.55a(a)(3). The JAFNPP RI-ISI program developed in accordance with the Electric Power Research Institute (EPRI) methodology contained in Topical Report (TR) EPRI TR-112657, "Risk-Informed Inservice Inspection Evaluation Procedure" was approved for use at JAFNPP during the second period of the third ISI interval and remains applicable for the fourth ISI interval. The JAFNPP specific RI-ISI program is summarized in Table 1 of RR-3 and consistent with EPRI TR-112657 and NRC Regulatory Guide (RG) 1.174 risk acceptance criteria.

ENO conducted a review of various inputs required to develop the RI-ISI program to meet the JAFNPP commitment to maintain a living program and consisted of reviewing probabilistic safety assessment (PSA) changes, plant design changes, procedures, NDE inspection results, plant specific operating history and industry operating events since issuing the original RI-ISI submittal. ENO stated that no changes were identified which impact the RI-ISI program; therefore, no change to the locations selected for NDE of the fourth ISI interval when compared to the locations selected during the original RI-ISI program evaluation. The JAFNPP RI-ISI program utilized the EPRI RI-ISI method and plant changes are made in accordance with 10 CFR 50.59. Large changes to the RI-ISI program, as a result of the updating process, are not expected due to the order of magnitude approach embedded in the EPRI RI-ISI methodology.

As an example, the original application may have used a conditional core damage probability (CCDP) value of 2E-05 from the PRA model at the time, thereby assigning a consequence rank of Medium. The CCDP value may have changed to 9E-06 using the updated probabilistic risk assessment (PRA) model; however, with the EPRI RI-ISI methodology this changed value will again result in a Medium consequence rank and therefore, no change to the RI-ISI program. As a second example, only changes that will increase a consequence rank (e.g., from Medium to High) have the potential to impact the program in a negative way (e.g., increase in the number of required inspections) when using the EPRI RI-ISI methodology. A third example consists of design changes and two of the design changes that were reviewed, as part of the most recent update, impacted risk category 6 piping (i.e., piping categorized as low risk). The EPRI RI-ISI methodology does not require NDE of low risk piping, therefore, additions or deletions of low risk piping will not impact the number or location of inspections.

ENO stated that the model has undergone changes since the initial RI-ISI submittal, with respect to the PRA. The draft of the Revision 1 PSA model was peer reviewed in December 1997 using the Boiling Water Reactor Owners Group (BWROG) PSA Peer Review Certification Implementation Guidelines. Facts and observation sheets documented the certification teams' insights and potential level of significance. All issues and observations from the BWROG Peer Review (i.e., Level A, B, C, and D observations) have been addressed and incorporated into the current PSA model (JAFNPP Revision 2, October 2004).

Examples of key changes to the PRA include reflecting new data, calculations and modifications to the plant design and procedures such as:

- Updated initiating event database
- Updated component failure database
- Modifications to the physical plant such as; fire protection system supplying emergency diesel generator (EDG) jacket cooling water directly through the emergency service water (ESW) system cross-tie, bonnet vents installed on the low-pressure coolant injection (LPCI) and core spray injection valves to preclude common-cause pressure locking of the valves, new keylock bypass switch allowing LPCI and core spray injection valves to be manually opened from the control room, new keylock bypass switch allows high-pressure coolant injection (HPCI) auto transfer on high suppression pool level to be bypassed from the control room, rather than the relay room, residual heat removal (RHR) minimum flow bypass valves was changed from normally closed to normally open, etc.
- Modifications to procedures such as, operators are directed to enhance control rod drive (CRD) flow in certain accident sequences, new procedure directing operators to align the fire protection system to the tube side of the RHR heat exchangers in loss of containment heat removal accident sequences, revised station blackout procedures explicitly addressing bus recovery, etc.

The ASME Code, Section XI required minimum percentage of weld inspections in the first period of the 10-year interval, thirty-three percent (33%), were completed in the first period of the third ISI interval and the remaining sixty-six percent (66%) of the RI-ISI program welds were completed by the end of the third inspection interval.

RR-3 will align the RI-ISI interval and code year with the fourth interval ISI program. One hundred percent (100%) of the RI-ISI program weld examinations will be completed in the fourth ISI interval. Additionally, JAFNPP will implement the inspection requirements of BWRVIP-075A as an alternative to Generic Letter (GL) 88-01. JAFNPP will continue to inspect a minimum of ten percent (10%) of Class 1 piping welds.

3.5 Duration

ENO proposes to use the alternative for the fourth ISI interval for JAFNPP, March 1, 2007 through December 31, 2017. The current JAFNPP operating license expires on October 17, 2014. ENO has submitted a license renewal application to the NRC.

ENO requests approval of RR-3 for implementation through the end of the fourth ISI interval. The end date of the fourth ISI interval will be controlled by the ISI program plan, commensurate with the operating license renewal application.

3.6 NRC Staff Evaluation

ENO's submittal was reviewed with respect to the methodology and criteria contained in EPRI Report EPRI-TR 112657, Revision B-A. Further guidance in defining acceptable methods for implementing an RI-ISI program is also provided in RG 1.174, RG 1.178 and Standard Review Plan (SRP) Chapter 3.9.8.

3.6.1 Proposed Changes to the RI-ISI Program

ENO proposed to implement the RI-ISI program in accordance with the EPRI methodology contained in EPRI TR-112657, Revision B-A, as an alternative to the ASME Code, Section XI examination requirements for ASME Class 1 and 2 piping for use at JAFNPP. The previously approved RI-ISI program was approved for use at JAFNPP during the third ISI interval and has been updated for use during the fourth ISI interval. The previously approved JAFNPP RI-ISI program also includes Class 3 and NNS related piping.

ENO stated in its submittal, RR-3, that other non-related portions of the ASME Code, Section XI will be unaffected by this program, such as pressure testing. The inspection requirements of BWRVIP-075-A, "BWR Vessels and Internals Project, Technical Basis for Revisions to Generic Letter 88-01 Inspection Schedules, October 2005," will be implemented at JAFNPP as an alternative to GL 88-01. JAFNPP will continue to inspect a minimum of 10% of Class 1 piping apart from the requirements of BWRVIP-075-A.

The NRC staff notes that program changes would result in the number and locations of NDE inspections based on ASME Code, Section XI requirements being replaced by the number and locations of these inspections based on RI-ISI guidelines. ENO stated that no changes were identified which impact the RI-ISI program; therefore, there will be no change to the locations selected for NDE during the fourth ISI interval when compared to the locations selected during the original RI-ISI program evaluation.

3.6.2 Engineering Analysis

The NRC staff notes that the safety evaluation (SE) of October 28, 1999, approving the methodology described in the EPRI TR-112657, Revision B-A, concluded that the methodology conforms to guidance provided in RGs 1.174 and 1.178, and that no significant risk increase should be expected from the changes to the ISI program resulting from applying the methodology.

In accordance with the direction provided in RGs 1.174 and 1.178, an engineering analysis of the proposed alternative was performed using a combination of traditional engineering analysis and supporting insights from the PRA. An evaluation was performed to determine the susceptibility of components (i.e., a piping weld) to a particular degradation mechanism which may be a precursor to leak or rupture, and then to perform an independent assessment of the consequence of a failure at that location.

Results of this analysis assure that the proposed changes are consistent with the principles of defense-in-depth because the EPRI TR-112657 methodology requires that the population of welds with high consequences following failure will always have some weld locations inspected regardless of the failure potential. Therefore, sufficient safety margins will be maintained.

3.6.2.1 Failure Potential

Piping systems within the scope of the RI-ISI program are divided into piping segments. Pipe segments are defined as lengths of pipe for which a failure, at any point within the pipe segment, would result in the same consequence (e.g., loss of the system) as a failure at any other point in the segment and which are exposed to the same degradation mechanisms. That is, some lengths of pipe whose failure would lead to the same consequence may be split into two or more segments when two or more regions are exposed to different degradation mechanisms.

ENO reviewed various inputs consisting of PSA changes, plant design changes, procedures, NDE inspection results, plant specific operating history and industry operating events required to maintain a living program since issuing the original RI-ISI submittal.

The NRC staff concludes that ENO has met the SRP 3.9.8 guidelines to confirm that a systematic process was used to identify the component's (i.e., pipe segments) susceptibility to common degradation mechanisms and to categorize these degradation mechanisms into the appropriate degradation categories with respect to their potential to result in a postulated leak or rupture.

3.6.3 Probabilistic Risk/Safety Assessment

The licensee is requesting relief that would permit continued use of the approved RI-ISI program plan in the fourth 10-year ISI interval instead of the ASME Code, Section XI program. An acceptable RI-ISI program plan is expected to meet the five key principles of risk-informed decisionmaking, discussed in RG 1.178, "*An Approach for Plant-Specific Risk-Informed Decision Making: Inservice Inspection of Piping*," SRP, Chapter 3.9.8, "Standard Review Plan for Trial Use for the Review of Risk-Informed Inservice Inspection of Piping," NUREG-0800 Chapter 19 "Use of Probabilistic risk Assessment in Plant-Specific, Risk-Informed Decisionmaking: General Guidance," and the EPRI TR-112657, Rev. B-A, as stated below.

1) The proposed change meets the current regulations unless it is explicitly related to a requested exemption or rule change.
2) The proposed change is consistent with the defense-in-depth philosophy.
3) The proposed change maintains sufficient safety margins.
4) When proposed changes result in an increase in core damage frequency and/or large early release frequency (LERF), the increases should be small and consistent with the intent of the Commission's Safety Goal Policy Statement.
5) The impact of the proposed change should be monitored by using performance measurement strategies.

The first principle is met in this relief request because an alternative ISI program may be authorized pursuant to 10 CFR 50.55a(3)(i).

The second and third principles require assurance that the alternative program is consistent with the defense-in-depth philosophy and that sufficient safety margins are maintained, respectively. The methodology used to develop the fourth 10-year RI-ISI program interval is unchanged from the methodology approved for use in the third 10-year RI-ISI program interval. Assurance that the second and third principles are met is based on the application of the approved methodology and not on the particular inspection locations selected. Therefore, the second and third principles are met.

The fourth principle requires an estimate of the change in risk, and the change in risk is dependent on the number and location of inspections in the proposed ISI program compared to the number and location of inspections that would be inspected using the requirements of ASME Code, Section XI. The topical requires that a change in risk measurement must consider the discontinuance of ASME code required inspections, as well as any new inspections resulting from the application of its methodology. The licensee is continuing to inspect the same number and location as approved in the third 10-year ISI interval. The submittal argues that the number and locations of inspections have not changed and therefore the original changes in risk estimate remain valid.

For the fourth 10-year interval, the licensee stated that it has reviewed the inputs from the updated PRA against inputs used in the original RI-ISI consequence assessment. The result of the review concluded there are no required changes to the RI-ISI consequence ranking due to the updated PRA input. The EPRI method estimates risk based on bounding values for the consequence categories. Therefore, the NRC staff concurs that the results and conclusions of the original risk impact analysis are unaffected because the risk ranking of line segments has not changed and the number and location of exams has not changed.

Given the above considerations concerning the increase in risk, the NRC staff finds that the licensee's analysis provides assurance that the fourth key principle is met and, thus, is consistent with the intent of the Commission's Safety Goal Policy Statement.

For the fifth principle of risk-informed decisionmaking, the JAFNPP Relief Request states that the RI-ISI program is developed in accordance with the methodology contained in EPRI Report TR-112657. For the fourth interval, this program has been updated with inputs from the updated PRA model (even though no changes to the number or location of inspections were identified) and, thus, the program continues to be a living program and meets the risk acceptance criteria.

Therefore, the fifth key principle is also met. Based on the above factors, the NRC staff concludes that the five key principles of risk-informed decisionmaking are ensured by the licensee's proposed fourth 10-year RI-ISI program and, therefore, the proposed program for the fourth 10-year ISI interval is acceptable.

3.6.4 Integrated Decision Making

ENO used an integrated approach in defining the proposed RI-ISI program by considering in concert the traditional engineering analysis, the risk evaluation, the implementation of the RI-ISI program, and performance monitoring of piping degradation. This is consistent with the guidelines given in RG 1.178 and is, therefore, acceptable.

3.6.5 Implementation and Monitoring

The NRC staff notes that implementation and performance monitoring strategies require careful consideration and are addressed in Element 3 of RG 1.178 and SRP 3.9.8. The objective of Element 3 is to assess performance of the affected piping systems under the proposed RI-ISI program by implementing monitoring strategies that confirm the assumptions and analyses used in the development of the RI-ISI program. To approve an alternative pursuant to 10 CFR 50.55a(a)(3)(i), the RI-ISI program, including inspection scope, examination methods, and methods of evaluation of examination results, must provide an adequate level of quality and safety.

ENO states that the ASME Code, Section XI required minimum percentage of weld inspections in the first period of the 10-year interval (thirty three percent (33%)) were completed in the first period of the third ISI interval and the remaining sixty six percent (66%) of the welds were completed by the end of the third inspection interval. Furthermore, one hundred percent (100%) of the RI-ISI program weld examinations will be completed in the fourth ISI interval. ENO stated that the inspection requirements of BWRVIP-075A will be implemented as an alternative to GL 88-01 at JAFNPP. JAFNPP will continue to inspect a minimum of ten percent (10%) of Class 1 piping welds.

The NRC staff notes that the BWRVIP, formed in June 1994, is an association of utilities focused on BWR vessel and internals issues. Report BWRVIP-075A provides the technical basis for revising the inspection schedules stated in GL 88-01. The report was reviewed by the NRC staff and found to be acceptable by letter dated October 31, 2005. Therefore, the NRC staff finds the proposed alternative of implementing the inspection requirements of BWRVIP-75A acceptable as these requirements have been previously approved by the NRC staff.

4.0 CONCLUSION

The NRC staff determines that ENO's proposed alternative, RR-3, provides an acceptable level of quality and safety. ENO proposed to implement the previously approved RI-ISI program in accordance with the EPRI methodology contained in EPRI TR-112657, Revision B-A, as an alternative to the ASME Code, Section XI NDE requirements for ASME Code Class 1 and 2 piping for use at JAFNPP. The previously approved RI-ISI program also includes Class 3 and NNS related piping. ENO also proposed to implement the inspection requirements of BWRVIP-075A as an alternative to GL 88-01 inspection schedules. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the proposed alternative in RR-3 is authorized for the fourth 10-year ISI

Interval which ends on December 31, 2017. Although the current license for JAFNPP expires on October 17, 2014, the licensee has applied for license renewal.

All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in this relief request remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

Principal Contributors: D. Tarantino
D. Chung

Date: February 22, 2008