



Terry J. Garrett
Vice President Engineering

March 2, 2006
ET 06-0010

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Reference: Letter ET 05-0014, dated September 28, 2005, from T.J. Garrett, WCNOC, to USNRC

Subject: Docket 50-482: Inservice Inspection Program Plan for the Third Ten-Year Interval and 10 CFR 50.55a Requests I3R-01, I3R-02, and I3R-04

Gentlemen:

Pursuant to ASME Section XI, IWA-1400(c), enclosed is the Inservice Inspection (ISI) Program Plan for the third ten-year ISI interval at Wolf Creek Generating Station (WCGS).

Letter ET 05-014, referenced above, submitted 10 CFR 50.55a Request Number I3R-03 for the third ten-year ISI interval separate and prior to the program plan and relief requests being submitted at this time to help expedite its review.

Pursuant to 10 CFR 50.55a(a)(3)(i), Wolf Creek Nuclear Operating Corporation (WCNOC) hereby requests NRC approval of the following two (2) 10 CFR 50.55a Requests (Attachments 1 and 2) for the Third Ten-Year Interval of WCNOC's ISI Program, which began on September 3, 2005.

Attachment 1 provides 10 CFR 50.55a Request Number I3R-01, which requests an alternative to the requirements of ASME Section XI, Tables IWB-2500-1 and IWC-2500-1 (Examination Categories B-F, B-J, C-F-1 and C-F-2), which stipulate the selection and examination requirements for Class 1 and 2 piping welds. This alternative provides an acceptable level of quality and safety as required by 10 CFR 50.55a(a)(3)(i). The proposed alternative in this 10 CFR 50.55a request was previously approved by the NRC for Wolf Creek's second ten-year ISI interval in letter dated December 13, 2001 (TAC No. MB1206), from USNRC to O. L. Maynard, WCNOC.

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Attachment 2 provides 10 CFR 50.55a Request Number I3R-02, which requests an alternative to the ISI requirements of ASME Section XI, Tables IWB-2500-1, IWC-2500-1, and IWD-2500-1, for Class 1, 2, and 3 Vessel Welded Attachments. This alternative provides an acceptable level of quality and safety. The proposed alternative in this 10 CFR 50.55a Request was previously approved by the NRC for the Tennessee Valley Authority in NRC letter dated July 18, 2005 (TAC Nos. MC6437 and MC6438) for the remainder of their current interval or until such time that Code Case N-700 is approved for use in Regulatory Guide 1.147.

Pursuant to 10 CFR 50.55a(g)(5)(iii), Wolf Creek Nuclear Operating Corporation (WCNOC) hereby requests NRC approval of the following 10 CFR 50.55a Request (Attachment 3) for the Third Ten-Year Interval of WCNOC's ISI Program, which began on September 3, 2005.

Attachment 3 provides 10 CFR 50.55a Request Number I3R-04, which requests relief from the requirements of ASME Section XI, Table IWF-2500-1, Category F-A, Item Number F1.40 which requires that 100% of Class 1 supports, other than piping supports, be subject to a visual, VT-3 examination once every inspection interval. This relief is requested on the basis that compliance with the specified requirements is impractical. The proposed alternative in this 10 CFR 50.55a request was previously approved in NRC letter dated 10/24/1997 (TAC No. M93381), from USNRC to O. L. Maynard, WCNOC, for Wolf Creek's second ten-year ISI interval as Relief Request I2R-14.

WCNOC requests approval of the three (3) 10 CFR 50.55a requests included as attachments to this submittal by February 1, 2007.

There are no commitments contained within this letter. If you have any questions, please contact me at (620) 364-4084 or Mr. Kevin Moles at (620) 364-4126.

Sincerely,



Terry J. Garrett

TJG/rlt

Attachment 1: 10 CFR 50.55a Request Number I3R-01
Attachment 2: 10 CFR 50.55a Request Number I3R-02
Attachment 3: 10 CFR 50.55a Request Number I3R-04

Enclosure

cc: J. N. Donohew (NRC), w/a, w/e
W. B. Jones (NRC), w/a, w/e
B. S. Mallett (NRC), w/a, w/e
Senior Resident Inspector (NRC), w/a, w/e

Attachment 1 – 10 CFR 50.55a Request No. I3R-01

10 CFR 50.55a Request Number I3R-01

**Proposed Alternative
In Accordance with 10 CFR 50.55a(a)(3)(i)**

Alternative Provides Acceptable Level of Quality and Safety

1. ASME Code Components Affected

All Code Class 1 and 2 piping welds previously subject to the requirements of ASME Section XI, Table IWB-2500-1 (Examination Categories B-F and B-J) and Table IWC-2500-1 (Examination Categories C-F-1 and C-F-2).

2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI 1998 Edition through 2000 Addenda

3. Applicable Code Requirement

ASME Section XI, Tables IWB-2500-1 and IWC-2500-1 for Examination Categories B-F, B-J, C-F-1 and C-F-2 stipulate the selection and examination requirements for Class 1 and 2 piping welds.

4. Reason for Request

ASME Section XI Examination Categories B-F, B-J, C-F-1, and C-F-2 originally contained the requirements for the nondestructive examination of Class 1 and 2 piping welds. In 2001, a risk-informed (RI) methodology for the inservice inspection (ISI) of Class 1 and 2 piping welds was applied at the Wolf Creek Generating Station. The RI ISI process used in this application is described in Electric Power Research Institute (EPRI) Topical Report (TR) 112657, Rev. B-A, "Revised Risk-Informed Inservice Inspection Evaluation Procedure." The RI-ISI application was also conducted in a manner consistent with ASME Code Case N-578-1, "Risk-Informed Requirements for Class 1, 2, and 3 Piping, Method B."

This risk-informed application met the intent and principles of Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis" and Regulatory Guide 1.178, "An Approach for Plant-Specific Risk-Informed Decisionmaking Inservice Inspection of Piping."

The original RI-ISI template, "Risk-Informed Inservice Inspection Program Plan - Wolf Creek Generating Station (Revision 1)" was submitted to the NRC for approval per 10 CFR 50.55a(a)(3)(i) in Wolf Creek Nuclear Operating Corporation (WCNOC) Letter No. ET 01-0009, dated February 15, 2001, from R. A. Muench, WCNOC, to USNRC. Based upon the information provided in the RI-ISI template, the request to implement the RI-ISI methodology on Class 1 and 2 piping welds was approved by the NRC for Wolf Creek's second ten-year ISI interval in letter dated December 13, 2001 (TAC No. MB1206), from USNRC to O. L. Maynard, WCNOC. The purpose of this current request is for the continued application of the RI-ISI methodology on Class 1 and 2 piping welds during

the third ISI interval based on the alternative providing an acceptable level of quality and safety.

5. Proposed Alternative and Basis for Use

The proposed alternative is to continue applying the Risk-Informed ISI criteria of EPRI TR-112657 during the third ISI interval in lieu of the requirements of ASME Section XI, Table IWB-2500-1 (Examination Categories B-F and B-J) and Table IWC-2500-1 (Examination Categories C-F-1 and C-F-2).

When Wolf Creek submitted their initial RI-ISI application to the NRC for approval, the following standard clause was included in the template submittal:

“The RI-ISI program is a living program requiring feedback of new relevant information to ensure the appropriate identification of high safety significant piping locations. As a minimum, risk ranking of piping segments will be reviewed and adjusted on an ASME period basis. In addition, significant changes may require more frequent adjustment as directed by NRC Bulletin or Generic Letter requirements, or by industry and plant specific feedback.”

Most U.S. nuclear power plants have implemented RI-ISI Programs with this standard clause to perform periodic reviews and updates. To address this issue, NEI 04-05, “Living Program Guidance To Maintain Risk-Informed Inservice Inspection Programs For Nuclear Plant Piping Systems” has been developed. As part of the ISI Program Update for the third ISI interval at Wolf Creek, a RI-ISI Living Program Evaluation was performed in accordance with NEI 04-05. The objective of this evaluation was to review plant and industry activities that could impact the bases of the Wolf Creek RI-ISI application as it enters the third ISI interval.

In accordance with NEI 04-05, the following aspects were considered during the evaluation:

- Plant Examination Results
- Piping Failures
 - Plant Specific Failures
 - Industry Failures
- PRA Updates
- Plant Design Changes
 - Physical Changes
 - Programmatic Changes
 - Procedural Changes
- Changes in Postulated Conditions
 - Physical Conditions
 - Programmatic Conditions

The RI-ISI Living Program evaluation resulted in the following three issues being addressed in the RI-ISI application:

- The Class 2, 4" NPS (nominal pipe size) auxiliary feedwater lines from the outboard isolation valve to the connection to the main feedwater piping in all four trains were added to the RI-ISI Program. This resulted from a change in ASME Section XI Code criteria wherein Class 2, 4" NPS and smaller auxiliary feedwater piping is no longer exempt.
- The Conditional Core Damage Probability (CCDP) and Conditional Large Early Release Probability (CLERP) values for the Class 2, 4" auxiliary feedwater piping addressed above were higher than the upper bound values previously used in the risk impact analysis. New upper bound values of $1.44\text{E-}2$ and $1.44\text{E-}3$ were used in the updated risk impact analysis for CCDP and CLERP, respectively.
- Based on ongoing industry experience with Primary Water Stress Corrosion Cracking (PWSCC), Assumption No. 7 in the Degradation Mechanism Evaluation was deleted. This assumption had stated the following:

"Bi-metallic welds with Inconel buttering are not considered susceptible to the PWSCC degradation mechanism."

For the third interval, Wolf Creek will volumetrically examine all of the piping welds that are potentially susceptible to PWSCC. At Wolf Creek, this consists of 14 Examination Category B-F welds where piping attaches to the reactor pressure vessel and pressurizer.

During the update of the Wolf Creek ISI Program in preparation for their third ISI interval, other minor corrections were identified (e.g., correction of weld numbers) and were evaluated as part of the RI-ISI Living Program Update. These had no impact on the RI-ISI Program beyond requiring minor editorial corrections to the RI-ISI Program documents.

The RI-ISI Program was reevaluated for the three issues and other minor corrections using the applicable portions of the same risk-informed process that originally established the risk-informed inspection program. The reevaluation was performed by inserting the new information at the appropriate levels of the analysis. All of the cases that were evaluated in the risk impact analysis during the original RI-ISI application were reevaluated using the new information that was determined for the current application. Results of the risk impact reanalysis were that the overall plant risk as measured as a change in Core Damage Frequency and Large Early Release Frequency was further decreased as a result of the application of the new information. As such, the RI-ISI application on Class 1 and 2 piping welds still maintains an acceptable level of quality and safety.

A summary table of the welds in the RI-ISI Program along with any changes resulting from the issues addressed above is provided in Attachment 1.

6. Duration of Proposed Alternative

This 10 CFR 50.55a Request is being proposed for use during the third inspection interval that begins on September 3, 2005 and ends on September 2, 2015.

7. Precedents

The proposed alternative in this 10 CFR 50.55a Request was included in a second interval Relief Request for Wolf Creek. This Relief Request was submitted to the NRC for approval per 10 CFR 50.55a(a)(3)(i) in WCNOC Letter No. ET 01-0009, dated February 15, 2001, from R. A. Muench, WCNOC, to USNRC. Based upon the information provided in the RI-ISI template, the request to implement the RI-ISI methodology on Class 1 and 2 piping welds was approved by the NRC for Wolf Creek's second ten-year ISI interval in letter dated December 13, 2001 (TAC No. MB1206), from USNRC to O. L. Maynard, WCNOC.

Resubmittal of a RI-ISI application on Class 1 and 2 piping welds has been conducted by the V.C. Summer Nuclear Station for their third ISI interval in SCE&G Letter No. RC-04-0148, dated September 8, 2004. The NRC review of this V.C. Summer 10 CFR 50.55a Request is currently ongoing.

Attachment 1

Inspection Location Selection Comparison Between ASME Section XI Code and EPRI TR-112657 by Risk Category

System ⁽¹⁾	Risk		Consequence Rank	Failure Potential		Code Category	1 st Approved RI-ISI Interval			New RI-ISI Interval		
	Category	Rank		DMs	Rank		Weld Count	RI-ISI	Other ⁽²⁾	Weld Count	RI-ISI	Other ⁽²⁾
AB	6	Low	Medium	None	Low	C-F-2	154	0		155	0	
AE	2	High	High	TASCS	Medium	C-F-2	0 ⁽³⁾	0 ⁽³⁾		9 ⁽³⁾	6 ⁽³⁾	
AE	2	High	High	TT	Medium	C-F-2	0 ⁽³⁾	0 ⁽³⁾		8 ⁽³⁾	2 ⁽³⁾	
AE	4	Medium	High	None	Low	C-F-2	0 ⁽³⁾	0 ⁽³⁾		4 ⁽³⁾	1 ⁽³⁾	
AE	5 (3)	Medium (High)	Medium	TASCS, (FAC)	Medium (High)	C-F-2	16	2		16	2	
AE	6 (3)	Low (High)	Medium	None (FAC)	Low (High)	C-F-2	108	0		104	0	
AL	6	Low	Medium	None	Low	C-F-2	0 ⁽³⁾	0 ⁽³⁾		126 ⁽³⁾	0 ⁽³⁾	
BB	2	High	High	TASCS, TT	Medium	B-J	11	3		11	3	
BB	2	High	High	TASCS	Medium	B-J	6	2		6	2	
BB	2 (2)	High (High)	High	TT, (PWSCC)	Medium (Medium)	B-F	0 ⁽⁴⁾	0 ⁽⁴⁾		1 ⁽⁴⁾	0 ⁽⁴⁾	
BB	2	High	High	TT	Medium	B-F	1 ⁽⁴⁾	0 ⁽⁴⁾		0 ⁽⁴⁾	0 ⁽⁴⁾	
						B-J	20	6		20	6	
BB	4 (2)	Medium (High)	High	None, (PWSCC)	Low (Medium)	B-F	0 ⁽⁴⁾	0 ⁽⁴⁾		13 ⁽⁴⁾	5 ⁽⁴⁾	
BB	4	Medium	High	None	Low	B-F	13 ⁽⁴⁾	5 ⁽⁴⁾		0 ⁽⁴⁾	0 ⁽⁴⁾	
						B-J	268	21		268	24	
BB	6	Low	Medium	None	Low	B-J	18	0		18	0	
BG	2	High	High	TASCS	Medium	B-J	9	2		9	2	
BG	2	High	High	TT	Medium	B-J	9	3		9	3	
BG	4	Medium	High	None	Low	B-J	26	3		26	3	
						C-F-1	72	9		72	9	
BG	5	Medium	Medium	TT	Medium	B-J	7	2		7	2	
BG	6	Low	Medium	None	Low	B-J	12	0		12	0	
						C-F-1	39	0		39	0	
BG	7	Low	Low	None	Low	C-F-1	18	0		18	0	

Attachment 1

Inspection Location Selection Comparison Between ASME Section XI Code and EPRI TR-112657 by Risk Category

System ⁽¹⁾	Risk		Consequence Rank	Failure Potential		Code Category	1 st Approved RI-ISI Interval			New RI-ISI Interval		
	Category	Rank		DMs	Rank		Weld Count	RI-ISI	Other ⁽²⁾	Weld Count	RI-ISI	Other ⁽²⁾
BN	4	Medium	High	None	Low	C-F-1	3	0		3	0	
BN	6	Low	Medium	None	Low	C-F-1	122	0		121	0	
EF	6	Low	Medium	None	Low	C-F-2	26	0		26	0	
EJ	2	High	High	TASCS, TT	Medium	B-J	2	0		2	0	
EJ	2	High	High	TASCS	Medium	B-J	8	2		8	2	
EJ	2	High	High	TT	Medium	B-J	4	1		4	1	
						C-F-1	4	3		4	3	
EJ	4	Medium	High	None	Low	B-J	22	3		22	3	
						C-F-1	434	44		434	44	
EJ	6	Low	Medium	None	Low	B-J	2	0		2	0	
						C-F-1	1	0		1	0	
EJ	7	Low	Low	None	Low	C-F-1	47	0		47	0	
EM	2	High	High	TT	Medium	B-J	8	0		8	0	
EM	4	Medium	High	None	Low	B-J	20	3		20	3	
						C-F-1	2	0		2	0	
EM	5	Medium	Medium	IGSCC	Medium	B-J	20	2		20	2	
EM	6	Low	Medium	None	Low	B-J	104	0		104	0	
						C-F-1	205	0		205	0	
EM	7	Low	Low	None	Low	C-F-1	38	0		38	0	
EN	6	Low	Medium	None	Low	C-F-1	93	0		93	0	
EP	4	Medium	High	None	Low	B-J	20	2		20	2	
EP	5	Medium	Medium	IGSCC	Medium	B-J	12	2		12	2	
EP	6	Low	Medium	None	Low	B-J	83	0		83	0	

Attachment 1												
Inspection Location Selection Comparison Between ASME Section XI Code and EPRI TR-112657 by Risk Category												
System ⁽¹⁾	Risk		Consequence Rank	Failure Potential		Code Category	1 st Approved RI-ISI Interval			New RI-ISI Interval		
	Category	Rank		DMs	Rank		Weld Count	RI-ISI	Other ⁽²⁾	Weld Count	RI-ISI	Other ⁽²⁾
GS	7	Low	Low	None	Low	C-F-2	2	0		2	0	

Notes

- System designations are as follows:
 AB – Main Steam System
 AE – Main Feedwater System
 AL – Auxiliary Feedwater System
 BB – Reactor Coolant System
 BG – Chemical and Volume Control System
 BN – Borated Refueling Water Storage System
 EF – Essential Service Water System
 EJ – Residual Heat Removal System
 EM – High Pressure Coolant Injection System
 EN – Containment Spray System
 EP – Accumulator Safety Injection System
 GS – Containment Hydrogen Control System
- The column labeled "Other" is generally used to identify augmented inspection program locations that are credited beyond those locations selected per the RI-ISI process, as addressed in Section 3.6.5 of EPRI TR-112657. This option was not applicable for the Wolf Creek Generating Station RI-ISI application. The "Other" column has been retained in this table solely for uniformity purposes with other RI-ISI application submittals.
- Due to a change in ASME Section XI Code criteria, 4" NPS Class 2 auxiliary feedwater piping was added to the ISI Program, and therefore the RI-ISI Program, for the first time during the third ISI interval. This consisted of Class 2 piping from the outboard isolation valve to the first check valve (i.e., system "AL") and piping from the first check valve to the branch connection to feedwater (i.e., system "AE") in all four trains. This piping and its associated weldments were outside the scope of the original RI-ISI application.
- Changes to the information shown for former Code Category B-F welds reflect the implementation of MRP-139 as an augmented examination and mitigation program.

Attachment 2 - 10 CFR 50.55a Request No. I3R-02

10 CFR 50.55a Request Number I3R-02

**Proposed Alternative
In Accordance with 10 CFR 50.55a(a)(3)(i)**

Alternative Provides Acceptable Level of Quality and Safety

1. ASME Code Components Affected

All ASME Section XI Code Class 1, 2, and 3 Vessel Welded Attachments

2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI 1998 Edition through 2000 Addenda.

3. Applicable Code Requirement

Relief is requested from the requirements of:

Table IWB-2500-1, Examination Category B-K, Footnote 4;
Table IWC-2500-1, Examination Category C-C, Footnote 4; and
Table IWD-2500-1, Examination Category D-A, Footnote 3.

4. Reason for Request

This 10 CFR 50.55a Request addresses two issues. First, ASME Section XI, 1998 Edition through 2000 Addenda, Table IWB-2500-1, Examination Category B-K, Footnote 4; Table IWC-2500-1, Examination Category C-C, Footnote 4; and Table IWD-2500-1, Examination Category D-A, Footnote 3; do not include specific criteria for the selection of welded attachments in situations where a plant has multiple vessels of similar design, function and service. The requirements in these Footnotes do specify that "only one welded attachment of only one of the multiple vessels shall be selected for examination," but no additional criteria are provided for the selection of the appropriate welded attachment.

Second, these Footnotes do not provide any specific criteria for the selection of welded attachments on single vessels. The current wording under the "Extent of Examination" in Tables IWX-2500-1, Categories B-K, C-C and D-A can be interpreted to require that all welded attachments on a single vessel be examined. This wording has since been reconsidered by ASME Section XI and Code Case N-700 has been published to clarify the requirements for examining welded attachments on both multiple and single vessels.

One of the bases for Code Case N-700 was previously published Code Case N-509, "Alternative Rules for the Selection and Examination of Class 1, 2, and 3 Integrally Welded Attachments," which was incorporated into ASME Section XI in the 1995 Addenda. The technical basis of Code Case N-509 concluded that there have been very few welded attachment failures identified during normal Section XI examinations. Instead, failures have been identified when the connected support member has been found to be deformed due to operational transients or water hammer events. For this reason, Code Case N-509 and Section XI versions that include the 1995 and later

Addenda require welded attachments to be examined whenever component support deformation is identified. In addition, a sampling plan for welded attachments was maintained.

Although Code Case N-509 and ASME Section XI, beginning with the 1995 Addenda, represent an improvement to previously stated Code criteria for the examination of welded attachments, neither address the examination of welded attachments on a single vessel nor which welded attachment should be selected for examination. Code Case N-700 provides clarification for the selection of Class 1, 2, and 3 vessel welded attachments for examination, and was developed to address the selection criteria currently not included in Code Case N-509 and ASME Section XI, 1998 Edition through 2000 Addenda.

Code Case N-700 clarifies the requirements for the examination of welded attachment on vessels by stating the following criteria:

- 1) For multiple vessels of similar design, function and service, only one welded attachment of only one of the multiple vessels shall be selected for examination.
- 2) For single vessels, only one welded attachment shall be selected for examination.
- 3) The attachment selected for examination on one of the multiple vessels or the single vessel, as applicable, shall be an attachment under continuous load during normal system operation, or an attachment subject to a potential intermittent load (seismic, water hammer, etc.) during normal system operation if an attachment under continuous load does not exist.

Because the selection criteria provided by Code Case N-700 is supported by the same failure data that forms the basis for Code Case N-509 and also addresses scenarios in which Section XI is silent, the alternative requirements of N-700 are deemed to be a more complete and detailed set of rules for the selection of welded attachments on vessels. Accordingly, pursuant to 10CFR50.55a(a)(3)(i), relief is requested on the basis that the proposed alternative provides an acceptable level of quality and safety.

5. Proposed Alternative and Basis for Use

In lieu of implementing the requirements of Table IWB-2500-1, Examination Category B-K, Footnote 4; Table IWC-2500-1, Examination Category C-C, Footnote 4; and Table IWD-2500-1, Examination Category D-A, Footnote 3; it is proposed that the alternative requirements of Code Case N-700 be implemented at the Wolf Creek Generating Station.

6. Duration of Proposed Alternative

Selection of ASME Section XI Code Class 1, 2, and 3 Vessel Welded Attachments will be performed in accordance with Code Case N-700 during the third inspection interval that begins on September 3, 2005 and ends on September 2, 2015, or until such time that Code Case N-700 is approved for use by reference in Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1". Once accepted in Regulatory Guide 1.147 any conditions specified in Regulatory Guide 1.147 will be followed.

7. Precedents

By a letter dated March 11, 2005, the Tennessee Valley Authority requested relief from the ASME Section XI inservice inspection requirements on vessel welded attachments for Browns Ferry Units 2 and 3. In accordance with 10 CFR 50.55a(a)(3)(i), TVA requested the use of Code Case N-700 as an alternative. In a letter dated July 18, 2005 (TAC Nos. MC6437 and MC6438), the NRC authorized this 10 CFR 50.55a request for use for the remainder of the interval or until such time that Code Case N-700 is approved for use in Regulatory Guide 1.147.

Attachment 3 - 10 CFR 50.55a Request No. I3R-04

10 CFR 50.55a Request Number I3R-04

Relief Request In Accordance with 10 CFR 50.55a(g)(5)(iii)

Inservice Inspection Impracticability

1. ASME Code Components Affected

Reactor Vessel Supports, Component Numbers RBB01-01, RBB01-02, RBB01-03 and RBB01-04

2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through 2000 Addenda

3. Applicable Code Requirement

Relief is requested from the requirements of ASME Section XI, Table IWF-2500-1, Category F-A, Item Number F1.40 which requires that 100% of Class 1 supports, other than piping supports, be subject to a visual, VT-3 examination once every inspection interval.

4. Impracticability of Compliance

Pursuant to 10 CFR 50.55a(g)(5)(iii), relief is requested on the basis that compliance with the specified requirements is impractical. Conformance with the applicable inservice inspection requirements would necessitate a design modification to the Reactor Pressure Vessel supports and associated insulation/walkplate to allow 100% visual examination of the subject supports.

In addition, limited accessibility and high radiation levels in the area where these supports are located further reduces the percentage of the supports available for visual examination.

The Wolf Creek Reactor Vessel is supported by two cold leg nozzles and two hot leg nozzles. There is a support assembly at each of these nozzles that consists of a nozzle weld build up, shoe plate, air cooled box, and steel support structure embedded in the primary shield wall. Figures 1 and 2 depict these support assemblies. As shown in the Figures, only the nozzle weld build-up and shoe plate are completely accessible for a visual VT-3 examination. The majority of the air-cooled box and the entire steel support structure are located beneath a steel walk plate and only the top of the air-cooled box is directly accessible. An additional 20 to 30 percent of the air-cooled box and a very small percentage of the steel support structure would be made accessible if the steel walk plate and insulation were removed.

The Reactor Vessel supports are located in a confined space below the refueling pool permanent seal ring. The area can only be accessed through four seal ring hatches. In addition to difficult access, the radiation level in the area is between 1.5 and 2.0 man-rem per hour.

5. Burden Caused by Compliance

The large cost of a design modification to the Reactor Pressure Vessel supports and associated insulation/walkplate to allow 100% visual examination of the subject supports is deemed an undue burden. Further, it is estimated that the removal and re-installation of the walk plate and insulation in this confined space, combined with the performance of the visual VT-3 examination, would result in an exposure of approximately 36 man-rem. Removal of the walk plate and insulation, under these conditions, in order to increase the examination coverage of the air cooled box by approximately 20 to 30 percent and a very small percentage of the steel support structure is considered impractical without a commensurate increase in quality or safety.

6. Proposed Alternative and Basis for Use

In lieu of implementing the requirements of Table IWF-2500-1, Category F-A, Item No. F1.40, Wolf Creek Nuclear Operating Corporation (WCNOC) proposes to perform a limited VT-3 visual examination, with the walk plate and insulation installed, on the accessible NF portions of the Reactor Vessel support assemblies. If conditions are discovered during this limited VT-3 examination that do not meet the acceptance standards of IWF-3400, the walk plate or insulation will, if necessary, be removed in order to meet the requirements of IWF-3122.2 or IWF-3122.3, as applicable.

7. Duration of Proposed Alternative

This 10 CFR 50.55a request is being proposed for use during the third inspection interval that begins on September 3, 2005 and ends on September 2, 2015.

8. Precedents

The proposed alternative in this 10 CFR 50.55a request was included in second interval Relief Request I2R-14. This Relief Request was submitted to the NRC in an Attachment to WCNOC Letter Number WM 97-0006, dated 01/23/1997, from O. L. Maynard, WCNOC, to USNRC, and granted for use per letter from William H. Bateman, USNRC to Otto L. Maynard, WCNOC dated 10/24/1997 (TAC No. M93381).

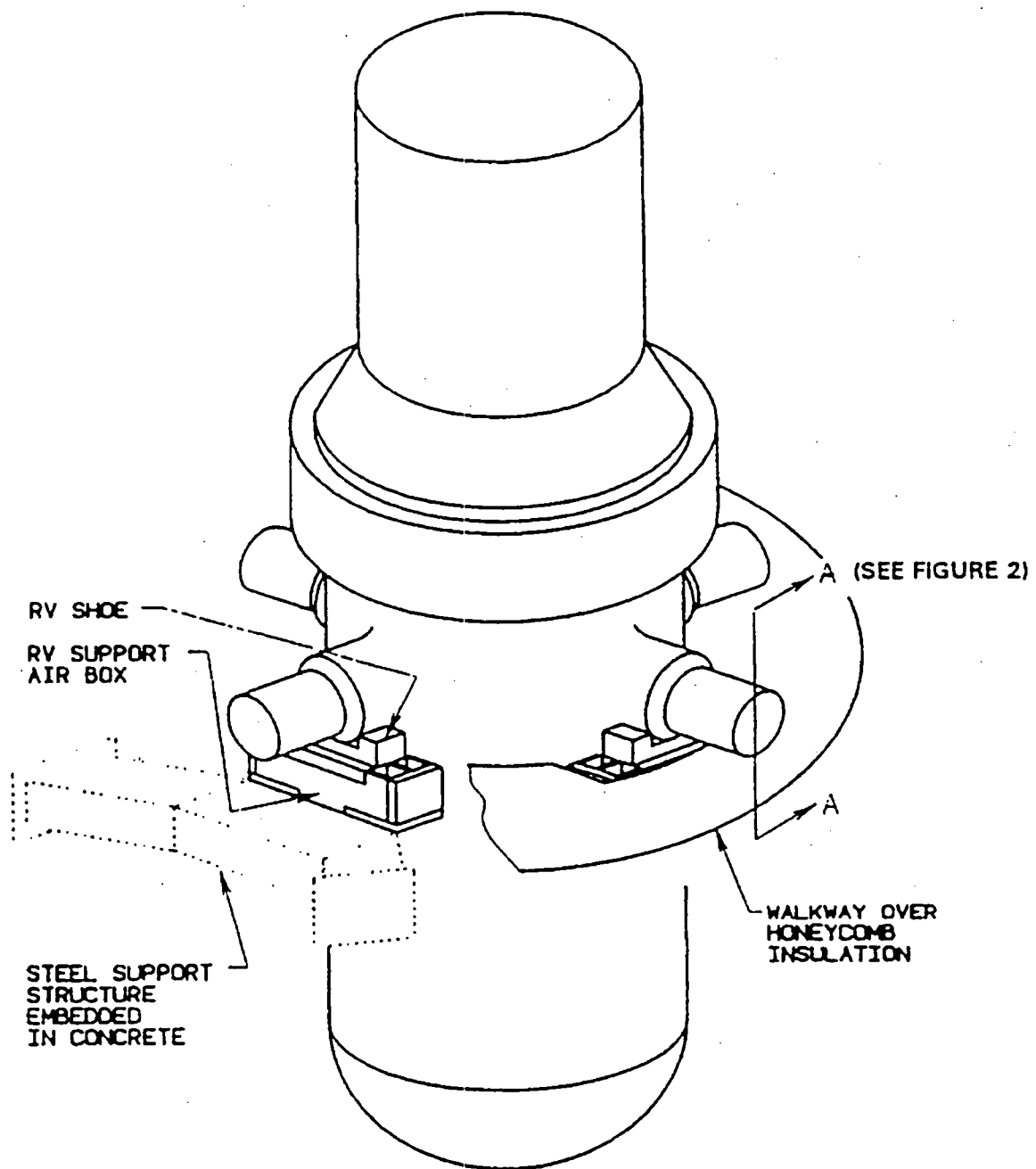


FIGURE 1

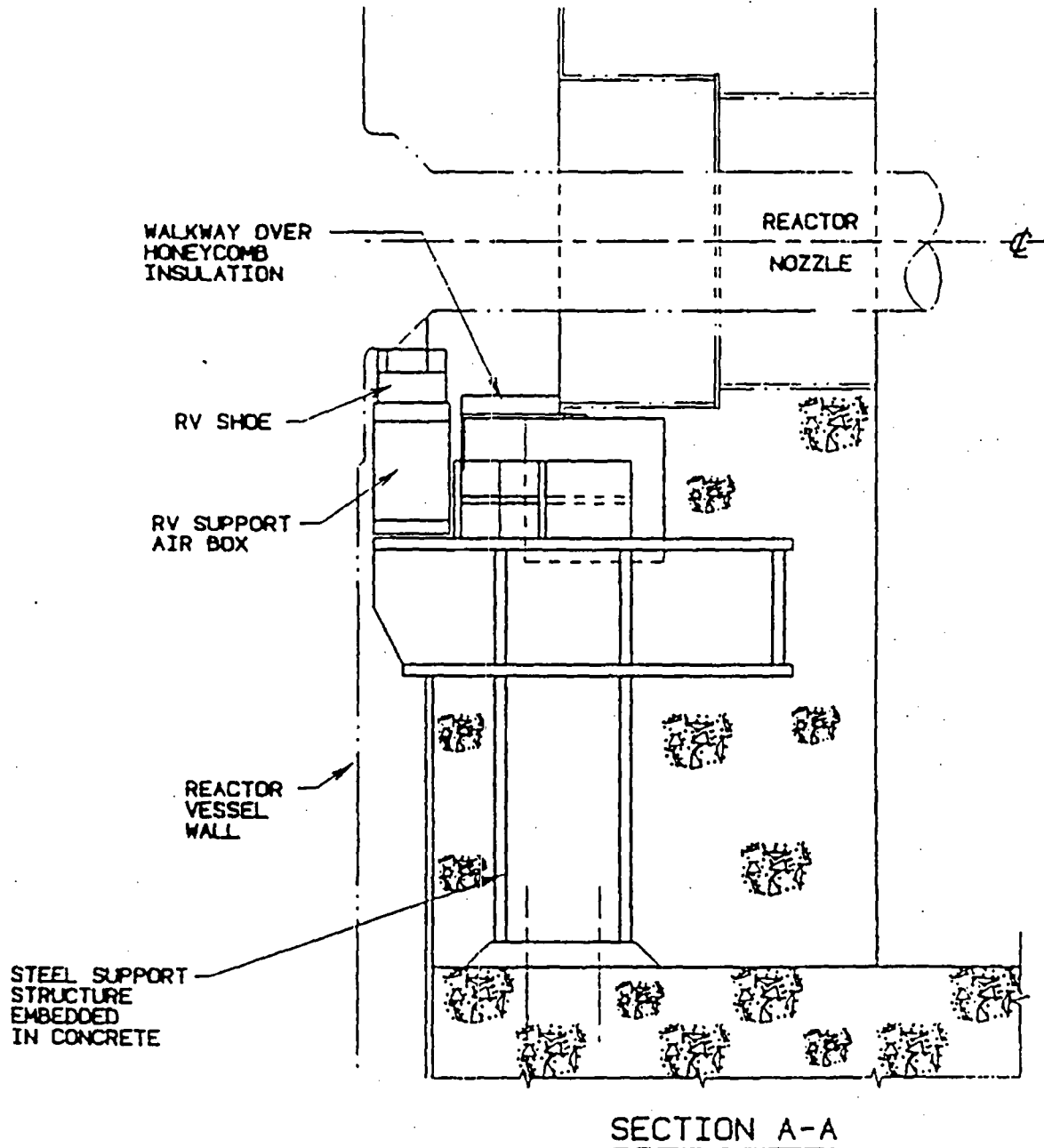


FIGURE 2



WCRE-16

REVISION 0

INSERVICE INSPECTION PROGRAM PLAN

WOLF CREEK GENERATING STATION

INTERVAL 3

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WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN

REVISION STATUS SHEET

REVISION

0

AFFECTED PAGES

All

DESCRIPTION/COMMENTS

Issued For Interval 3

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1.0 INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

This Inservice Inspection (ISI) Program Plan details the requirements for the examination and testing of ASME Class 1, 2, and 3 components and component supports at the Wolf Creek Generating Station (WCGS). The ISI Program Plan addresses those examinations and tests required by ASME Section XI and Augmented ISI commitments included in the WCGS Updated Safety Analysis Report (USAR), as well as other licensing commitments detailed in Section 3.2.

The ISI Program Plan was developed and controlled by Wolf Creek Administrative Procedure AP 29A-002 and is effective from September 3, 2005 through September 2, 2015, which represents Wolf Creek's Third ISI Interval.

This Inservice Inspection Program Plan does not include the requirements for the examination and testing of ASME Class CC and MC components and component supports. These requirements are included in WCRE-11, Containment Inservice Inspection Program, which was developed in accordance with Wolf Creek Administrative Procedure AP 29A-005.

1.2 BACKGROUND

A Construction Permit was obtained to build the Wolf Creek Generating Station on May 17, 1977. After satisfactory plant construction and pre-operational testing was completed, a full power operating license, NPF-42, was issued on June 4, 1985, and WCGS subsequently commenced commercial operation on September 3, 1985. The Docket Number assigned to WCGS is 050-482.

1.2.1 First Interval ISI Program

Pursuant to the Code of Federal Regulations, Title 10, Part 50, Section 55a, *Codes and standards*, (10 CFR 50.55a), WCGS was required to meet the requirements of paragraph (g), *Inservice inspection requirements*, of that section.

Specifically, paragraph (g)(4)(i) called for the inservice inspection requirements of the initial 120 month inspection interval to comply with the requirements of the latest edition and addenda of ASME Section XI referenced in paragraph (b) of 10 CFR 50.55a on the date 12 months prior the date of issuance of the operating license, subject to the limitations and modifications listed in paragraph (b) of 10 CFR 50.55a.

The version of 10CFR 50.55a in effect at that time referenced ASME Section XI, 1980 Edition with Addenda through the Winter 1981 Addenda (Section XI 80/W81) in paragraph (b)(2). The extent of the application of Section XI 80/W81 was limited by paragraph (2)(iv)(A) such that Section XI, 1974 Edition with Addenda through Summer 1975 Addenda (Section XI 74/S75) was required for ASME Code Class 2 pressure retaining welds in Residual Heat Removal Systems, Emergency Core Cooling Systems, and Containment Heat Removal Systems. Optionally, per paragraph (2)(iv)(B), plants with Construction Permits docketed prior to July 1, 1978, such as WCGS, were allowed to use Section XI 74/S75 to examine ASME Code Class 2 pressure retaining welds in systems other than those in paragraph (2)(iv)(A). WCGS elected to utilize this option.

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Based on these 10 CFR 50.55a mandatory and optional requirements, the WCGS Section XI ISI Program Plan for the initial ten year interval was developed by Nuclear Energy Services (NES) in WCRE-07, Wolf Creek Generating Station ISI Program Plan Document.

1.2.2 Second Interval ISI Program

Pursuant to the Code of Federal Regulations, Title 10, Part 50, Section 55a, *Codes and standards*, (10CFR 50.55a), WCGS was required to meet the requirements of paragraph (g)(4), *Inservice inspection requirements*, of that section.

Specifically, paragraph (g)(4)(ii) called for the inservice inspection requirements of the successive 120 month inspection interval to comply with the requirements of the latest edition and addenda of ASME Section XI referenced in paragraph (b) of 10 CFR 50.55a on the date 12 months prior to the start of the 120 month interval subject to the limitations and modifications listed in paragraph (b) of 10 CFR 50.55a.

The version of 10 CFR 50.55a in effect on September 3, 1994 referenced ASME Section XI, 1989 Edition in paragraph (b)(2). Optionally, per paragraph (b)(2)(ii), plants with Construction Permits docketed prior to July 1, 1978, such as WCGS, were allowed to use Section XI 74/S75 to examine ASME Code Class 1 pressure retaining welds. However, WCGS elected not to utilize this option.

Based on these 10 CFR 50.55a mandatory and optional requirements, the WCGS Section XI ISI Program Plan for the second ten year interval was developed by Vectra Technologies in WCRE-10, Wolf Creek Generating Station Second Interval ISI Program Plan.

During the second interval, WCGS implemented a Risk Informed ISI (RI-ISI) Program Plan for ASME Code Class 1 and 2 piping welds. The RI-ISI template submittal was approved by the NRC in the safety evaluation contained in a letter dated 12/13/01 from the USNRC to Otto Maynard (incoming correspondence 01-00965).

The scope of the RI-ISI program is limited to ASME Code Class 1 and 2 piping welds (i.e., Examination Categories B-F, B-J, C-F-1 and C-F-2 only). The RI-ISI program was developed in accordance with the methodology contained in the Electric Power Research Institute (EPRI) Topical Report (TR) EPRI TR-112657, Revision B-A. Application of the RI-ISI methodology is addressed in WCGS Basis Document No. WCRE-12.

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2.0 BASIS FOR INSERVICE INSPECTION PROGRAM PLAN

The following text provides a listing and overview of the documents (Code of Federal Regulations, ASME Boiler and Pressure Vessel Codes, and WCGS Procedures) that form the basis of the Third Interval ISI Program Plan. Specific implementation of the requirements in these documents is included in Sections 3 and 4 of this Program Plan.

2.1 Code of Federal Regulations Requirements

Code of Federal Regulations Final Rules that affect the WCGS Third Interval ISI Program Update include the Final Rule published September 26, 2002 (67FR187), the Final Rule published October 1, 2004 (69FR190) and the Final Rule published September 29, 2005 (70FR188). 67FR187 incorporated by reference ASME Section XI, 1998 Edition through 2000 Addenda in paragraph (b)(2) and was effective October 28, 2002. 69FR190 incorporated by reference ASME Section XI, 2001 Edition with 2003 Addenda in paragraph (b)(2) and was effective November 1, 2004. 70FR188 removed the mandatory modification in 10CFR50.55a(b)(2)(xxi)(C) and was effective October 31, 2005. Twenty seven (27) limitations and modifications are included in 10CFR50.55a(b)(2) and are numbered (i) to (xxvii). In addition, one (1) limitation and modification is included in 10CFR50.55a(b)(3)(v) and in 10CFR50.55a(g)(4)(iii), each. Each of these limitations and modifications was reviewed by WCGS personnel and implemented as discussed in Section 3.1.1.

2.1.1 Scope of ASME Section XI Program

Per 10 CFR 50.55a(g)(4), the specific components required to be included in an ISI Program per ASME Section XI are those components and component supports which are classified as ASME Code Class 1, 2, and 3. This requirement is reflected in WCGS Technical Requirement Manual 5.5.6. A detailed explanation of the components which are included the WCGS ASME Section XI Program is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

2.1.2 ASME Section XI Edition and Addenda

In accordance with 10 CFR 50.55a(g) WCNOG is required to update the ASME Section XI (the Code) ISI program for WCGS once every ten year interval. The ISI program is required to comply with the latest edition and addenda of the Code incorporated by reference in 10 CFR 50.55a one year prior to the start of the interval per 10 CFR 50.55a(g)(4)(ii). The Third ISI Interval is defined to be from September 3, 2005 to September 2, 2015. Accordingly, based on a "lock in" date of September 3, 2004, the 1998 Edition through 2000 Addenda of ASME Section XI is the version of Section XI that WCGS must meet for Third Interval.

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2.1.3 ASME Section XI Code Cases

Per 10 CFR 50.55a(g), ASME Code Cases that have been determined to be suitable for use in ISI Program Plans by the NRC are listed in Regulatory Guide 1.147 "Inservice Inspection Code Case Acceptability-ASME Section XI, Division 1". The use of other Code cases (than those listed in Regulatory Guide 1.147) may be authorized by the Director of the Office of Nuclear Reactor Regulation upon request pursuant to 10 CFR 50.55a(a)(3). The ASME Section XI Code Cases incorporated into the WCGS ISI Program Plan are listed and discussed in Section 3.3.

2.1.4 Requests For Relief and Requests For Alternatives

In cases where WCNOG has determined that ASME Section XI requirements are impractical to implement or has determined an alternative inspection approach to that specified in ASME Section XI would offer an acceptable (or equivalent) level of quality and safety, a 10 CFR 50.55a Request will be prepared and submitted to the NRC in accordance with 10 CFR 50.55a(g)(5), 10 CFR 50.55a(a)(3)(i) or 10 CFR 50.55a(a)(3)(ii), as applicable.

Guidance for the preparation of 10 CFR 50.55a Requests was taken from Nuclear Energy Institute (NEI) White Paper "*Standard Format for Requests from Commercial Reactor Licensees Pursuant to 10 CFR 50.55a*", Revision 1 dated June 2004. This document provides comprehensive information for the content, format and submittal of these requests to the NRC, and is utilized by WCNOG.

As detailed in the NEI White Paper, when ASME Section XI requirements for inservice inspection are considered impractical, the licensee shall notify the NRC and submit information to support the determination, as required by 10 CFR 50.55a(g)(5)(iii). The submittal of this information will be referred to in this document as a Request for Relief.

The NEI White paper also provides guidance for cases where a licensee proposes alternatives to the ASME Section XI requirements that would provide an acceptable level of quality and safety or where the licensee proposes alternatives in cases where compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, as allowed by 10 CFR 50.55a(a)(3)(i) and 10 CFR 50.55a(a)(3)(ii), respectively. The submittal of this information will be referred to in this document as a Request for Alternative.

Per 10 CFR 50.55a paragraphs (a)(3) and (g)(6)(i), the Director of the Office of Nuclear Reactor Regulation will evaluate Requests for Relief and Requests for Alternatives per Paragraph (g)(5) and "...may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility".

Interval 3 Requests for Relief and Requests for Alternatives are included in Section 3.4.

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2.2 Augmented ISI Requirements

Per 10 CFR 50.55a(g)(6)(ii), the NRC may require a licensee to follow an augmented inservice inspection program for systems and components for which they deem an added assurance of structural reliability is necessary.

Typically, the NRC imposes augmented ISI requirements on licensees by way of the Safety Analysis Report (SAR) approval process. Based on the particular design of a facility, SAR commitments are made to NRC Regulatory Guides and Branch Technical Positions which are in effect at the time of the SAR review. The Regulatory Guides and Branch Technical Positions, in some cases, include inspection and testing requirements.

Another avenue by which the NRC imposes augmented ISI requirements is by way of periodically issued documents such as Generic Letters and Inspection and Enforcement (IE) Bulletins or an NRC Order. These documents may require facilities holding a construction permit or operating license to perform inspections and tests as a result of problems or potential problems identified by the NRC Staff at other facilities.

Augmented examinations may also be performed as deemed necessary by the utility. This may be as a result of industry experience, a Performance Improvement Request (PIR) evaluation for special conditions, or similar situation in which Wolf Creek Generating Station believes there is a need for an augmented examination.

The augmented ISI requirements may include one-time or limited time period examinations, as well as examinations which are to be performed for the entire life of the plant. The augmented ISI examination requirements specific to WCGS are detailed in Section 3.2.

2.3 Risk-Informed ISI Program Plan

Provided below is a general description of the Risk-Informed Inservice Inspection (RI-ISI) Program at Wolf Creek and description of the RI-ISI "Living Program" update. The application of the RI-ISI Program for Interval 3 is addressed by Request for Alternative No. IR3-01.

2.3.1 Initial RI-ISI Application

ASME Section XI Examination Categories B-F, B-J, C-F-1, and C-F-2 originally contained the requirements for the nondestructive examination (NDE) of Class 1 and 2 piping welds. In 2001, a risk-informed methodology for the inservice inspection of Class 1 and 2 piping welds was applied at the Wolf Creek Generating Station. The risk-informed inservice inspection process used in this application is described in Electric Power Research Institute (EPRI) Topical Report (TR) 112657, Rev. B-A "Revised Risk-Informed Inservice Inspection Evaluation Procedure." The RI-ISI application was also conducted in a manner consistent with ASME Code Case N-578, "Risk-Informed Requirements for Class 1, 2, and 3 Piping, Method B."

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This risk-informed application met the intent and principles of Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis" and Regulatory Guide 1.178, "An Approach for Plant-Specific Risk-Informed Decisionmaking Inservice Inspection of Piping".

The original RI-ISI template, "Risk-Informed Inservice Inspection Program Plan - Wolf Creek Generating Station (Revision 1)" was submitted to the NRC for approval per 10CFR50.55a(a)(3)(i) in Letter No. ET 01-0009, dated February 15, 2001. Based upon the information provided in the RI-ISI template, the request to implement the RI-ISI methodology on Class 1 and 2 piping welds was approved by the NRC in Letter No. 01-00965, dated December 13, 2001 (TAC No. MB1206). Approval was based on the alternative providing an acceptable level of quality and safety.

Other non-related portions of the ASME Section XI Code were unaffected by the RI-ISI application. EPRI TR-112657 provides the requirements for defining the relationship between the RI-ISI program and the remaining unaffected portions of ASME Section XI.

This Section (2.3.1) of the ISI Program Plan provides an overview of the EPRI RI-ISI methodology and explains the application.

The tasks involved in the RI-ISI application were as follows:

- Task 1: Scope and Exemption Determination
- Task 2: Consequence Evaluation
- Task 3: Degradation Mechanism Assessment
- Task 4: Service History Review
- Task 5: Segment Risk Ranking
- Task 6: Element Selection
- Task 7: Risk Impact Evaluation
- Task 8: Program Submittal/ Risk-Informed Template

Details on performance of these RI-ISI tasks are provided in the following paragraphs.

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Task 1: Scope and Exemption Determination

Per EPRI TR-112657 and ASME Code Case N-578, the EPRI risk-informed methodology may be applied to piping welds in Class 1, 2, 3, and non-classed systems, to individual Classes or combination of Classes, or to individual systems. For the Wolf Creek Generating Station, the RI-ISI methodology was applied to piping welds in Class 1 and 2 systems. This corresponded to ASME Section XI Examination Categories B-F, B-J, C-F-1, and C-F-2. Classification boundaries were not changed or otherwise affected by the RI-ISI application. In addition, the ASME Section XI exemption criteria, as addressed in IWB-1220 and IWC-1220, were not affected. Therefore, piping that was previously exempted per ASME Section XI remained exempt in the RI-ISI application.

Task 2: Consequence Evaluation

Calculations were prepared documenting the pipe rupture consequence evaluation, and indicating the consequence category assigned to each piping segment, as well as the technical basis for those assignments. The consequence evaluation used insights from the plant's Individual Plant Examination (IPE) and Individual Plant Examination External Events (IPEEE) submittals. Pipe breaks at various locations were postulated to cause an initiating event, reduce or disable plant mitigating ability, effect containment performance, or any combination of the above effects. Potential spatial effects (e.g., steam spray, flooding, etc.) were also evaluated for the postulated pipe breaks. The consequence rank was based on these effects and on their impact on the plant core damage frequency (CDF) or large early release frequency (LERF). Results of the consequence evaluation were ultimately summarized in the risk ranking tables that are discussed in Task 5.

Task 3: Degradation Mechanism Assessment

Detailed calculations were prepared documenting the evaluation of each piping segment with respect to the EPRI criteria for susceptibility to the various potential degradation mechanisms, and identifying specifically which degradation mechanisms are or are not applicable to each piping segment. The degradation mechanisms identified in the EPRI methodology as being applicable to nuclear plant piping are shown in Table 2.3-1. Specific criteria for susceptibility to these degradation mechanisms are spelled out in EPRI TR-112657. Once the degradation mechanisms were assigned to each piping segment in accordance with the EPRI criteria, the pipe rupture potential was established using the criteria shown in Table 2.3-1. The degradation mechanism evaluation was conducted in the form of a checklist for each system or portion of system included in the scope of the program. The results were documented in an engineering calculation. Results of the degradation mechanism assessment were ultimately summarized in the risk ranking tables that are discussed in Task 5.

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**TABLE 2.3-1
DEGRADATION MECHANISM CATEGORIES**

Pipe Rupture Potential	Expected Leak Conditions	Degradation Mechanisms To Which The Segment is Susceptible
HIGH	Large	Flow Accelerated Corrosion (FAC) Water Hammer ⁽¹⁾
MEDIUM	Small	Thermal Fatigue (TASCS, Thermal Transients) Stress Corrosion Cracking (IGSCC, TGSCC, PWSCC, ECSCC) Localized Corrosion (MIC, Crevice Corrosion and Pitting) Erosion-Cavitation
LOW	None	No Degradation Mechanisms Present

(1) Water hammer in concert with any of the degradation mechanisms listed under "Medium" Pipe Rupture Potential.

Task 4: Service History Review

To supplement the degradation mechanism assessment performed under Task 3, a service history and susceptibility review was performed. This entailed a review of databases (plant and industry) and station documents to characterize operating experience with respect to piping pressure boundary degradation. This review also included an appraisal of previous water hammer events. Various plant documents were reviewed as part of this effort including Outage Summary Reports, Licensee Event Reports (LERs), and corrective action documents.

Task 5: Segment Risk Ranking

Once the degradation mechanism assessment and consequence evaluation were completed, the results were used to perform a risk ranking of the piping segments within the scope of the RI-ISI effort. The piping segments were classified in accordance with the RI-ISI Risk Matrix (see Table 2.3-2), with the highest risk elements in the upper right hand corner of the matrix, and the lowest risk elements in the lower left hand corner.

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**TABLE 2.3-2
RI-ISI RISK MATRIX**

Consequence Assessment Failure Potential Assessment		CONSEQUENCE CATEGORY CCDP and CLERP Potential			
		NONE	LOW	MEDIUM	HIGH
DEGRADATION CATEGORY Pipe Rupture Potential	HIGH	LOW (Cat. 7)	MEDIUM (Cat. 5)	HIGH (Cat. 3)	HIGH (Cat. 1)
	MEDIUM	LOW (Cat. 7)	LOW (Cat. 6)	MEDIUM (Cat. 5)	HIGH (Cat. 2)
	LOW	LOW (Cat. 7)	LOW (Cat. 7)	LOW (Cat. 6)	MEDIUM (Cat. 4)

The resulting risk ranking, along with the applicable input from the consequence evaluation and degradation mechanism assessment, were documented in risk ranking tables that included a summary table, matrix table, and report table.

Task 6: Element Selection

Once the above tasks were completed, the project team convened an element selection meeting during which specific piping elements (generally welds) were selected for RI-ISI examination. The objective of this meeting was to select inspection locations in a way that minimized risk, cost, and radiation exposures. Examination element selections were conducted such that:

- 25% of the elements in the high risk region (i.e., risk categories 1, 2 and 3) were chosen for inspection.
- 10% of the elements in the medium risk region (i.e., risk categories 4 and 5) were chosen for inspection,
- No elements are required to be selected in the low risk region (i.e., risk categories 6 and 7), but all locations regardless of risk category will continue to receive pressure/leakage testing.

Important considerations in the element selection process were inspectability, distribution of inspections among systems and segments, plant-specific inspection results, and radiation exposure. Elements that were selected for examination were indicated as such by underlining them in the risk ranking report table.

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Task 7: Risk Impact Evaluation

Once the element selection under Task 6 was completed, the new set of locations that will be inspected under the RI-ISI program were compared to the locations that were inspected per ASME Section XI prior to the application of the RI-ISI methodology. A risk comparison was performed to ensure that the changes due to the new program resulted in either a reduction in risk, or at worst a negligible increase in risk, in accordance with applicable regulatory guidelines (Regulatory Guides 1.174 and 1.178). This was achieved by verifying that the cumulative impacts of all changes due to the inspection program result in either negligible increases in Core Damage Frequency and Large Early Release Frequency or actual decreases in the risk measurements. The risk impact evaluation was performed using a simplified risk quantification method as described in EPRI TR-112657, which has been accepted by the NRC. Results of the evaluation, which indicated a decrease in total risk, were documented in a risk impact analysis.

Task 8: Program Submittal/Risk-Informed Template

Utilizing the results of the foregoing tasks, a plant-specific request for acceptable alternative inspection was generated in accordance with regulatory requirements. The request provided the background, justification and inspection recommendations as determined by the RI-ISI application, and was prepared in accordance with a template for risk-informed inservice inspection program submittals. This template was developed by industry, NEI and the NRC to streamline the RI-ISI submittal and NRC review process. The risk-informed inservice inspection template was submitted to and approved by the NRC.

2.3.2 Nondestructive Examination Requirements

For the risk-informed process, examination requirements shall be in accordance with EPRI Topical Report No. TR-112657. In some cases, the examination volumes required in the Topical Report are different than those required by ASME Section XI. For example, the examination volume required to look for thermal fatigue is expanded per the Topical Report to ensure that the potential degradation mechanism is detected, if it exists. The Wolf Creek Generating Station will perform RI-ISI examinations in accordance with the Topical Report for Class 1 and 2 piping welds.

2.3.3 Examination Categories and Code Item Numbers

As previously discussed, the requirements of EPRI Topical Report No. TR-112657 supersede those of ASME Section XI for Class 1 and 2 piping welds in the risk-informed ISI application. Accordingly, the Examination Categories and Item Numbers provided by ASME Section XI (i.e., Examination Categories B-F, B-J, C-F-1, and C-F-2) have been superseded. Since TR-112657 does not provide new Examination Category and Code Item Numbers, the format from ASME Section XI Code Case N-578-1 is utilized for the assignment of these new numbers. As such, Class 1 and 2 piping welds have been reassigned to Examination Category R-A and Code Item Nos. R1.10 through R1.20, as applicable

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2.3.4 Risk-Informed Inservice Inspection "Living Program" Evaluation

When Wolf Creek submitted their initial RI-ISI application to the NRC for approval, the following standard clause was included in the template submittal:

"The RI-ISI program is a living program requiring feedback of new relevant information to ensure the appropriate identification of high safety significant piping locations. As a minimum, risk ranking of piping segments will be reviewed and adjusted on an ASME period basis. In addition, significant changes may require more frequent adjustment as directed by NRC Bulletin or Generic Letter requirements, or by industry and plant specific feedback."

Most U.S. nuclear power plants have implemented RI-ISI Programs with this standard clause to perform periodic reviews and updates. To address this issue, NEI 04-05, "Living Program Guidance To Maintain Risk-Informed Inservice Inspection Programs For Nuclear Plant Piping Systems" was developed. As part of the ISI Program Update for Interval 3 at Wolf Creek, a RI-ISI Living Program Evaluation was performed in accordance with NEI 04-05. The objective of this evaluation was to review plant and industry activities that could impact the bases of the Wolf Creek RI-ISI application as it enters Interval 3. Any changes to the original RI-ISI parameters were evaluated to determine their impact on the RI-ISI application.

In accordance with NEI 04-05, the following aspects were considered during the evaluation:

- Plant Examination Results
- Piping Failures
 - Plant Specific Failures
 - Industry Failures
- PRA Updates
- Plant Design Changes
 - Physical Changes
 - Programmatic Changes
 - Procedural Changes
- Changes in Postulated Conditions
 - Physical Conditions
 - Programmatic Conditions

The RI-ISI Living Program evaluation resulted in the following three issues being addressed in the RI-ISI application:

- The Class 2, 4" NPS auxiliary feedwater lines from the outboard isolation valve to the connection to the main feedwater piping in all four trains were added to the RI-ISI Program. This resulted from a change in ASME Section XI Code criteria wherein Class 2, 4" NPS and smaller auxiliary feedwater piping is no longer exempt.
- The Conditional Core Damage Probability (CCDP) and Conditional Large Early Release Probability (CLERP) values for the Class 2, 4" auxiliary feedwater piping

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addressed above were higher than the upper bound values previously used in the risk impact analysis. New upper bound values of $1.44\text{E-}2$ and $1.44\text{E-}3$ were used in the updated risk impact analysis for CCDP and CLERP, respectively.

- Based on ongoing industry experience with Primary Water Stress Corrosion Cracking (PWSCC), Assumption No. 7 in the Degradation Mechanism Evaluation was deleted. This assumption had stated the following:

“Bi-metallic welds with Inconel buttering are not considered susceptible to the PWSCC degradation mechanism.”

For the third interval, Wolf Creek will comply with the criteria of MRP-139 for welds that are potentially susceptible to PWSCC. At Wolf Creek, this consists of 14 welds where piping attaches to the reactor pressure vessel and pressurizer. MRP-139 is independent from the RI-ISI Program, yet these 14 welds are in the scope of both programs. From both a technical and administrative standpoint, precedence for the examination of the 14 welds that are potentially susceptible to PWSCC will be taken from how RI-ISI Programs at BWRs interface with the NRC mandated program to examine welds that are potentially susceptible to Intergranular Stress Corrosion Cracking (IGSCC).

During the update of the Wolf Creek ISI Program in preparation for their third ISI interval, other minor corrections were identified (e.g., correction of weld numbers) and were evaluated as part of the RI-ISI Living Program Update. These had no impact on the RI-ISI Program beyond requiring minor editorial corrections to the RI-ISI Program documents.

The RI-ISI Program was reevaluated for the three issues and other minor corrections using the applicable portions of the same risk-informed process that originally established the risk-informed inspection program. The reevaluation was performed by inserting the new information at the appropriate levels of the analysis. All of the cases that were evaluated in the risk impact analysis during the original RI-ISI application were reevaluated using the new information that was determined for the current application. Results of the risk impact reanalysis were that the overall plant risk as measured as a change in Core Damage Frequency and Large Early Release Frequency was further decreased as a result of the application of the new information. As such, the RI-ISI application on Class 1 and 2 piping welds still maintains an acceptable level of quality and safety.

2.3.4.1 RI-ISI Program Ongoing Commitment

In the response to an RAI to the initial RI-ISI application, Wolf Creek committed to resubmit the RI-ISI program to the NRC prior to the end of any 10-year interval if there is some deviation from the RI-ISI methodology described in the initial submittal or if industry experience determines that there is a need for significant revision to the program as described in the original submittal for that interval. The same commitment also stated that Wolf Creek would initiate tracking documents to ensure that risk ranking of piping segments would be reviewed and adjusted on an ASME period basis as a minimum. This is considered an ongoing commitment and is tracked in the Regulatory Commitment Management System (RCMS) as Commitment 2001-027.

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2.4 Examination Methods and Examination Procedures

The three types of examination utilized for Inservice Inspection are visual, surface and volumetric. Within these types of examinations, different methods may be permitted. This allows the owner to select the most effective examination methodology based on factors such as component accessibility, radiation levels and component material of construction.

Visual Examination

Visual examination is divided into three different methods: VT-1, VT-2, and VT-3.

The VT-1 examination is conducted to detect discontinuities and imperfections on the surfaces of components, including such conditions as cracks, wear, corrosion or erosion.

The VT-2 examination is conducted to detect evidence of leakage from pressure retaining components, with or without leakage detection systems, as required during the conduct of a system pressure test.

The VT-3 examination is conducted to determine the general mechanical and structural condition of components and their supports, by verifying parameters such as clearances, settings, physical displacements; and to detect discontinuities and imperfections such as loss of integrity at bolted or welded connections, loose or missing parts, debris, corrosion, wear, or erosion. VT-3 includes examinations for conditions that could affect operability or functional adequacy of snubbers and constant load and spring type supports.

All Visual examinations are conducted per Article 9 of ASME Section V and the additional requirements of IWA-2210.

Surface Examination

A surface examination indicates the presence of surface discontinuities. It may be conducted by a magnetic particle (MT), liquid penetrant (PT) or eddy current method. For surface examinations of carbon steel components, either a PT or MT may be performed. The ISI Program Plan Tables indicate the preferred technique, but either is acceptable.

Magnetic particle examinations are conducted per Article 7 of ASME Section V, as required by ASME Section XI, paragraph IWA-2221. The examination of coated materials is conducted in accordance with Appendix I of Article 7 of ASME Section V.

Liquid penetrant examinations are conducted per Article 6 of ASME Section V, as required by ASME Section XI, paragraph IWA-2222.

Eddy current examinations are conducted per Appendix IV, as required by ASME Section XI, paragraph IWA-2223.

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Volumetric Examination

A volumetric examination indicates the presence of discontinuities throughout the volume of material and may be conducted from either the inside or outside surface of a component.

The ultrasonic pulse echo examination is the volumetric examination method employed to determine the presence of subsurface discontinuities. The stipulated volume of metal beneath the surface is examined by this method. Ultrasonic examinations are conducted in accordance with ASME Section XI, Appendix I per paragraph IWA-2232.

For welds in the RI-ISI program, the volume inspected shall be per the recommendations of EPRI TR-112657 Rev. B-A for the degradation mechanism identified for that weld. For welds with no degradation mechanism identified, the default volume to be inspected is that for thermal fatigue.

Radiographic examination may be employed in cases where clearances make 100% weld examination impossible.

Examination Procedures

The inservice inspection examination procedures employed at WCGS are listed in Table 2.4-1. The Procedures with identifiers that begin with "QCP" indicate that these procedures are owned by the Manager, Quality, and as such, are used by the WCGS Quality Control NDE personnel. Also listed are the generic PDI procedures for the examination of components subject to Appendix VIII. Other procedures may be added to the list as contracts are awarded to specific vendors and WCGS has approved the vendor procedures.

**TABLE 2.4-1
EXAMINATION PROCEDURES**

<u>Procedure Number</u>	<u>Procedure Title</u>
QCP 20-501	Solvent Removable Visible Dye Liquid Penetrant Examination
QCP 20-502	Magnetic Particle Examination AC/DC Yoke and AC Coil Techniques
QCP 20-504	Ultrasonic Exam For Flaw Detection
QCP 20-508	Radiographic Exam of Welds and Components
QCP 20-510	Ultrasonic Instrument Linearity Verification
QCP 20-520	Pressure Test Examination
QCP 20-522	Ultrasonic Examination of Ferritic Piping Welds
QCP 20-523	Ultrasonic Examination of Austenitic Piping Welds
QCP 20-540	VT-1 Visual Examination

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**TABLE 2.4-1 (Continued)
EXAMINATION PROCEDURES**

<u>Procedure Number</u>	<u>Procedure Title</u>
QCP 20-541	VT-3 Visual Examination
PDI-UT-1, Rev C	PDI Generic Procedure for the Ultrasonic Examination of Ferritic Pipe Welds
PDI-UT-2, Rev C	PDI Generic Procedure for the Ultrasonic Examination of Austenitic Pipe Welds
PDI-UT-3, Rev C	PDI Generic Procedure for Ultrasonic Through Wall Sizing in Pipe Welds
PDI-UT-4, Rev C	PDI Generic Procedure for Ultrasonic Examination of Studs and Bolts From the Bore
PDI-UT-5, Rev C	PDI Generic Procedure for Straight Beam Ultrasonic Examination of Bolts and Studs
PDI-UT-6, Rev F	PDI Generic Procedure for the Ultrasonic Examination of Reactor Pressure Vessel Welds
PDI-UT-7, Rev F	PDI Generic Procedure for the Manual Ultrasonic Through Wall and Length Sizing of Ultrasonic Indications in Reactor Pressure Vessel Welds
PDI-UT-8, Rev D	PDI Generic Procedure for the Ultrasonic Examination of Weld Overlaid Austenitic Piping Welds
PDI-UT-10, Rev B	PDI Generic Procedure for the Ultrasonic Examination of Dissimilar Metal Welds
PDI-UT-11, Rev B	PDI Generic Procedure for the Ultrasonic Detection and Sizing of Reactor Pressure Vessel Nozzle to Shell Welds and Nozzle Inner Radius

2.5 Personnel Qualification Requirements

Personnel performing nondestructive (NDE) examinations shall be qualified and certified using a written practice prepared in accordance with ANSI/ASNT CP-189, dated 1995, as required by IWA-2300 of Section XI and as modified by 10 CFR50.55a(b)(2)(xviii).

Personnel performing Appendix VIII ultrasonic examinations per 10CFR50.55a(g)(6)(ii)(C), shall meet the qualification requirements of Appendix VIII, as modified by 10CFR50.55a(b)(2)(xiv).

Personnel performing visual examinations or using other NDE methods not addressed in ANSI/ASNT CP-189, shall be qualified as defined in ANSI/ASNT CP-189 or the ASNT Central Certification Program (ACCP) and the Employer's written practice.

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2.6 Inspection Intervals and Inspection Scheduling

Inspection Intervals

Per IWA-2430 of ASME Section XI, the inservice examinations and system pressure tests required by IWB, IWC, IWD and the examinations and tests of IWF shall be completed during each of the inspection intervals for the service lifetime of the power unit. The inspections shall be performed in accordance with the schedule of Inspection Program A of IWA-2431 or optionally, Inspection Program B of IWA-2432. Because the Code of Federal Regulations, 10 CFR 50.55a(g)(4)(ii) specifies 120 month inspection intervals for inservice inspections, Inspection Program B must be employed.

Per IWA-2430(d), for components inspected under Program B, each of the inspection intervals may be extended or decreased by as much as one year. Adjustments shall not cause successive intervals to be altered by more than one year from the original pattern of intervals.

Per IWA-2430(e), in addition to the interval adjustment allowed per IWA-2430(d), for power units that are out of service continuously for 6 months or more, the inspection interval during which the outage occurred may be extended for a period equivalent to the outage and the original pattern of intervals extended accordingly for successive intervals.

Inspection Schedule

Per IWA-2420, inspection plans shall be prepared for the first inservice interval and subsequent inspection intervals. Per IWA-2420(b), an implementation schedule for performance of examinations and tests shall be prepared for each inspection plan.

Subarticles IWB-2400, IWC-2400, IWD-2400, and IWF-2400, include the requirements for the scheduling of examination and tests for Class 1 components, Class 2 components, Class 3 components, and Class 1, 2, and 3 component supports, respectively.

Per IWB-2410, inservice examinations and system pressure tests of Class 1 components may be performed during plant outages such as refueling shutdowns or maintenance shutdowns. The term "may" allows the examinations and system pressure tests to be performed during system operation. Per IWC-2410, IWD-2410, and IWF-2410, inservice examinations and system pressure tests of Class 2, Class 3 and Class 1, 2, and 3 component supports, respectively may be performed during either system operation or plant outages.

Specific scheduling criteria is included in IWB-2412, IWC-2412, IWD-2412, and IWF-2410-2 for plants which are employing Inspection Program B. These paragraphs reference Tables IWB-2412-1, IWC-2412-1, IWD-2412-1, and IWF-2410-2, which include minimum and maximum percentages of examinations required to be completed by inspection period. Table 2.6-1 summarizes this information for Interval 3 at Wolf Creek.

Per IWB-2412, examinations listed in IWB-2412(a)(1) to (5) as specified in Table IWB-2500-1 are not required to meet the criteria in Table IWB-2412-1.

In the event that a Category includes less than three components or items, the components or items may be examined in any two periods; or if in any one period if there is only one item or component in lieu of the requirements of Table IWB-2412-1.

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**TABLE 2.6-1
INSPECTION PROGRAM B
COMPONENT/COMPONENT SUPPORT SCHEDULING**

INSPECTION INTERVAL	INSPECTION PERIOD, CALENDAR YEARS OF PLANT SERVICE	MINIMUM EXAMINATIONS COMPLETED, %	MAXIMUM EXAMINATIONS COMPLETED, % ¹
3	23	16	50
3	27	50 ¹	75
3	30	100	100

¹ If the first period completion percentage for any examination category exceeds 34%, at least 16% of the required examinations shall be performed in the second period.

2.7 Component and Component Support Selection Criteria

Class 1, 2, and 3 components and component supports were selected for examination per the requirements of the 1998 Edition through 2000 Addenda of Section XI, Tables IWB-2500-1, IWC-2500-1, IWD-2500-1 and IWF-2500-1, respectively, except for Categories B-F, B-J, C-F-1, and C-F-2 welds which were selected per the RI-ISI Program. The basis for selection of RI-ISI welds is documented in 10 CFR 50.55a Request Number I3R-01.

2.8 Examination Evaluation Criteria

Evaluation of reportable indications detected during the inservice inspection of WCGS components shall be in accordance with Article IWA-3000 of ASME Section XI, 1998 Edition through 2000 Addenda. Indications detected may be evaluated by other nondestructive methods, where practical, to assist in the determination of flaw characteristics (e.g. size, shape, location, orientation, etc.) before final disposition is made.

2.9 Repair/Replacement Activities

Repair/Replacement activities will be performed in accordance with Article IWA-4000 of ASME Section XI, 1998 Edition through 2000 Addenda and are implemented by WCGS Procedure AP 16A-003, "ASME Section XI Repair/Replacement Program".

2.10 Records and Reports

The preparation and retention of records and reports detailing ISI plans and schedules, examinations, tests, replacements, and repairs will be in accordance with Article IWA-6000 of ASME Section XI, 1998 Edition through 2000 Addenda and Code Case N-532-1.

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3.0 INSERVICE INSPECTION PROGRAM DESCRIPTION

The WCGS Inservice Inspection Program consists of those examination and testing requirements mandated by ASME Section XI and Augmented ISI requirements mandated by plant licensing commitments or other WCGS commitments.

The following text includes a detailed description of the ASME Section XI ISI Program in Section 3.1 and the Augmented ISI Program in Section 3.2. These sections provide a comprehensive summary of the ISI Program Plan. Sections 3.3 and 3.4 include supporting details for ASME Section XI Code Cases and Requests for Relief and Requests for Alternatives Requests From ASME Section XI Requirements, respectively. Sections 3.5 through 3.11 provide additional information that describe and support this ISI Program Plan.

3.1 ASME Section XI Requirements

Based on an ASME Section XI Code of Record "lock-in" date of September 3, 2004 (one year prior to the 3rd Interval start date) and 10CFR50.55a requirements in effect at that time, this ISI Program Plan was developed in accordance with the requirements in the 1998 Edition through 2000 Addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Subsections IWA, IWB, IWC, IWD, IWF, Mandatory Appendices, and Inspection Program B of IWA-2432, except as follows:

NOTE: As delineated in AP 29A-002, the requirements for implementation of ASME Section XI, Subsections IWE and IWL in accordance with the amendment of 10 CFR 50.55a which became effective September 9, 1996, have been included in a separate inservice inspection program plan, WCRE-11, Containment Inservice Inspection Program Plan.

3.1.1 Code of Federal Regulations Modifications and Limitations

The following mandatory and optional Code of Federal Regulations Limitations and Modifications are included in 10CFR50.55a as of September 29, 2005. Only those 10CFR50.55a Limitations and Modifications applicable to the 1998 Edition through 2000 Addenda of Section XI are listed. Note that mandatory modification 10CFR50.55a(b)(2)(xxi)(C) was removed by the Final Rule dated September 29, 2005 (70FR188), effective on October 31, 2005. These Limitations and Modifications were reviewed for inclusion in the ISI Program and dispositioned as follows:

3.1.1.1 WCGS will not utilize the option in 10CFR50.55a(b)(2)(ii) to examine Class 1 piping per ASME Section XI, 1974 Edition with the Summer 1975 Addenda.

3.1.1.2 As allowed by 10CFR50.55a(b)(2)(iii), WCGS Steam Generator tubing will be examined in accordance with plant Technical Specifications and the plant Steam Generator Program in lieu of Article IWB-2000.

3.1.1.3 WCGS will not utilize the option in 10CFR50.55a(b)(2)(iv), to examine Class 2 piping per ASME Section XI, 1974 Edition with the Summer 1975 Addenda and the 1983 Edition through the Summer 1983 Addenda.

3.1.1.4 As required by 10CFR50.55a(b)(2)(x), WCGS will apply the station 10CFR50 Appendix B Quality Assurance Program to Section XI activities.

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3.1.1.5 As required by 10CFR50.55a(b)(2)(xi), WCGS will apply the rules in IWB-1220, "Components Exempt from Examination," of Section XI, 1989 Edition in lieu of the IWB-1220 requirements in Section XI, 1998 Edition through 2000 Addenda.

3.1.1.6 The requirements of 10CFR50.55a(b)(2)(xii), are complied with by WCGS procedure AP 16A-003.

3.1.1.7 As allowed by 10CFR50.55a(b)(2)(xiv), WCGS will use the annual practice requirements in VII-4240 of Appendix VII of Section XI in place of the 8 hours of annual hands-on training discussed in the first sentence of 10CFR50.55a(b)(2)(xiv). The annual practice requirements at WCGS will be performed on material or welds that contain cracks, or by analyzing prerecorded data from material or welds that contain cracks. This training will be completed no earlier than 6 months prior to performing ultrasonic examinations.

3.1.1.8 As allowed by 10CFR50.55a(b)(2)(xv), WCGS will implement the optional Appendix VIII specimen set and qualification provisions in paragraphs (b)(2)(xv)(A) to (b)(2)(xv)(M).

3.1.1.9 As required by 10CFR50.55a(b)(2)(xvi)(A) and 10CFR50.55a(b)(2)(xvi)(B), WCGS examinations performed from one side of a ferritic vessel weld and examinations performed from one side of a ferritic or stainless steel pipe will be conducted with equipment, procedures, and personnel that have demonstrated proficiency with single side examinations.

3.1.1.10 As required by 10CFR50.55a(b)(2)(xviii)(A), Level I and II nondestructive examination personnel at WCGS will be recertified on a 3-year interval in lieu of the 5-year interval specified in IWA-2314(a) and IWA-2314(b) of the 1998 Edition through 2000 Addenda.

3.1.1.11 The requirements of 10CFR50.55a(b)(2)(xviii)(B) specify that paragraph IWA-2316 of the 1998 Edition through 2000 Addenda will only be used to qualify personnel that observe for leakage during system leakage and hydrostatic tests conducted in accordance with IWA-5211(a) and (b). WCGS does not utilize these alternatives qualifications.

3.1.1.12 The requirements of 10CFR50.55a(b)(2)(xviii)(C), specify that when qualifying visual examination personnel for VT-3 visual examinations under paragraph IWA-2317 of the 1998 Edition through 2000 Addenda the proficiency of the training will be demonstrated by administering an initial qualification examination and administering subsequent examinations on a 3-year interval. WCGS does not utilize these alternatives qualifications.

3.1.1.13 As required by 10CFR50.55a(b)(2)(xix), the provisions in IWA-2240 and IWA-4520(c) of the 1998 Edition through 2000 Addenda will not be used by WCGS.

3.1.1.14 As required by 10CFR50.55a(b)(2)(xx), when performing system leakage tests in accordance IWA-5213(a), per the 1998 Edition through 2000 Addenda, a 10-minute hold time after attaining test pressure is required for Class 2 and Class 3

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components that are not in use during normal operating conditions, and no hold time is required for the remaining Class 2 and Class 3 components provided that the system has been in operation for at least 4 hours for insulated components or 10 minutes for uninsulated components.

3.1.1.15 As required by 10CFR50.55a(b)(2)(xxi)(A), the provisions of Table IWB-2500-1, Examination Category B-D, Full Penetration Welded Nozzles in Vessels, Items Nos. B3.120, Pressurizer Nozzle Inside Radius Section, and B3.140, Steam Generator Nozzle Inside Radius Section, of Inspection Program B in the 1998 Edition will be applied by WCGS. As allowed by 10CFR50.55a(b)(2)(xxi)(A), a visual examination with enhanced magnification that has a resolution sensitivity to detect a 1-mil width wire or crack, utilizing the allowable flaw length criteria in Table IWB-3512-1, 1998 Edition through 2000 Addenda may be performed in place of an ultrasonic examination.

3.1.1.16 The requirements of 10CFR50.55a(b)(2)(xxi)(B) for Table IWB-2500-1, Examination Category B-G-2, Item B7.80, Pressure Retaining CRD Housing Bolting are not applicable to the WCGS. This type of bolting is not included in the plant design.

3.1.1.17 WCGS will not utilize the option in 10CFR50.55a(b)(3)(v) to implement Subsection ISTD, "Inservice Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Power Plants," ASME OM Code, 1995 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(3), in place of the requirements for snubbers in Section XI, IWF-5200(a) and (b) and IWF-5300(a) and (b). Snubbers will be examined and tested at WCGS in accordance with the Technical Requirements Manual (TRM), see Relief Request I3R-03 for details.

3.1.1.18 WCGS will not implement the option in 10CFR50.55a(g)(4)(iii) to perform surface examination of High Pressure Safety Injection System welds specified in Table IWB-2500-1, Examination Category B-J, Item Numbers B9.20, B9.21, and B9.22. Examination of these welds is being performed in accordance with the Risk-Informed ISI Program described in Section 2.3 of this Program Plan.

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3.1.2 ASME Section XI Code Cases Incorporated

Alternatives to ASME Section XI that are provided in Code Cases may be incorporated into the ISI Program as described below.

**3.1.2.1 Section XI Code Cases Approved and Conditionally Approved in
Regulatory Guide 1.147**

Code Cases that have been approved or conditionally approved by the NRC in Regulatory Guide 1.147 may be incorporated into the ISI Program via reference in this ISI Program Plan. Those Code Cases being directly incorporated by WCGS during the third interval are listed in Section 3.3.

3.1.2.2 Section XI Code Cases Pending Approval or Conditional Approval

Code Cases that have not been approved or conditionally approved by the NRC in Regulatory Guide 1.147 may be incorporated into the ISI Program via a Request for Alternative submitted to the NRC in accordance with 10CFR50.55a(a)(3). Code Cases being incorporated by WCGS during the third interval via Request for Alternatives are addressed in Section 3.4.

3.1.3 Requests For Relief and Requests For Alternatives

Alternatives to ASME Section XI may be incorporated into the ISI Program via a Request for Alternative or Request for Relief submitted to the NRC in accordance with 10CFR50.55a(a)(3) or 10CFR50.55a(g)(5), respectively. Those alternatives being incorporated by WCGS during the third interval via a 10CFR50.55a Request are addressed in Section 3.4.

3.2 Augmented ISI Requirements

Augmented inservice inspection programs address examinations that go beyond what is required by ASME Section XI. In some instances, augmented programs may require examinations on components that are not normally subject to ISI per ASME Section XI. In other instances, the augmented programs may stipulate supplemental examination criteria on components that are already addressed by ASME Section XI. Described below are the augmented ISI commitments at WCGS for the third interval.

3.2.1 USAR Augmented ISI Requirements

The following augmented inservice inspection requirements, which are specified by the WCGS Updated Safety Analysis Report (USAR) are also included in the WCGS ISI Program Plan.

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3.2.1.1 WCGS USAR Sections 3.6.1, Postulated Piping Failures In Fluid Systems Inside and Outside Containment and 3.6.2, Determination Of Break Locations and Dynamic Effects Associated With The Postulated Rupture Of Piping

These USAR Sections describe that WCGS complies with either USNRC Branch Technical Position MEB 3-1, or as required per the Risk-Informed process for piping as outlined in EPRI Report 1006937, for welds within the "no break zone" associated with high energy piping in containment penetration areas. The "no break zone" is an area where pipe breaks were not postulated due to the stress levels being within limits specified in USAR Section 3.6.2. The applicable welds are shown on the Main Steam (AB), Feedwater (AE), Reactor Coolant (BB), Chemical and Volume Control (BG), Steam Generator Blowdown (BM), and Auxiliary Feedwater Pump Turbine (FC) System Isometrics listed in Sections 4.1.1, 4.1.2, 4.1.4, 4.1.5, 4.1.6, and 4.1.14, respectively, within the "No Break Zone" and included in the respective Component and Component Support Selected/Scheduled for Examination Tables with Category "USAR" and Item No. "3.6.2".

Wolf Creek has implemented a Risk-Informed High Energy Line Break Program. This program is maintained in WCRE-14, Risk Informed High Energy Line Break (RI-HELB) Basis Document.

3.2.1.2 USNRC Regulatory Guide 1.14, Revision 1-Reactor Coolant Pump Flywheel Integrity

This Regulatory Guide includes inspection requirements for Reactor Coolant Pump flywheels in Section 4. WCGS has committed to these inspections per USAR Appendix 3A. The Reactor Coolant Pump flywheels are included in the Reactor Coolant (BB) System Component and Component Support Selected/Scheduled for Examination Tables BB-1, BB-2 and BB-3 with Category "USAR" and Item No. "RG 1.14". The requirements of Reactor Coolant Pump Flywheel inspection are reflected in Technical Specification 5.5.7.

3.2.1.3 USNRC Regulatory Guide 1.65, Revision 0-Materials and Inspections for Reactor Vessel Closure Studs

This Regulatory Guide includes inspection requirements for the Reactor Vessel Closure Studs in Section C.4. WCGS addresses Regulatory Guide 1.65 in USAR Appendix 3A which focuses on design criteria rather than specifically committing to the inspection requirements of Section C.4 of the Regulatory Guide. Alternatively, it references Section 5.2.4 of the USAR which in turn references the inservice inspection requirements of ASME Section XI or an approved alternative (e.g., approved Code Case or Request for Alternative). For the third interval, examinations on the Reactor Vessel Closure Studs will be conducted in accordance with Code Case N-652, Examination Category B-G-1, Code Item No. B6.20. Individual components are included in the Reactor Coolant (BB) System Component and Component Support Selected/Scheduled for Examination Tables BB-1, BB-2 and BB-3.

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3.2.1.4 USNRC Regulatory Guide 1.137, Revision 0 - Fuel-Oil Systems for Standby Diesel Generators

This Regulatory Guide includes pressure testing requirements for fuel oil systems of standby diesel generators. WCGS has committed to this testing per USAR Appendix 3A and Section 9.5.4. These requirements are satisfied by the implementation of the testing and VT-2 examinations required by Articles IWD-2000 and IWD-5000 of ASME Section XI, 1998 Edition with 2000 Addenda.

3.2.1.5 USNRC Regulatory Guide 1.150, Revision 1-Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examinations

This Regulatory Guide includes inspection requirements for the ultrasonic examination of Reactor Vessel Welds during Preservice and Inservice Examinations. WCGS committed to these inspections per USAR Appendix 3A and Section 5.2.4. The examination criteria of Regulatory Guide 1.150 supplements the requirements of ASME Section XI. However, 10 CFR 50.55a requires that, with the exception of the shell-to-flange weld and the head-to-flange weld, that examination of the Reactor Vessel Welds be conducted in accordance with Appendix VIII, 1998 Edition with 2000 Addenda. The prescriptive guidance in Regulatory Guide 1.150 is not in total agreement with the Appendix VIII requirements; therefore, Regulatory Guide 1.150 remains applicable only for the examination of the reactor components that are not examined in accordance with Appendix VIII per 10 CFR 50.55a.

3.2.2 WCGS Augmented ISI Requirements

The following augmented inservice inspection requirements are those resulting from WCGS commitments other than those in the USAR and may include commitments resulting from a plant specific problem or a generic issue identified in an NRC Order.

3.2.2.1 MRP-139

For the third interval, Wolf Creek will comply with the criteria of MRP-139, "Material Reliability Program: Primary System Piping Butt Weld Inspection and Evaluation Guideline" for welds that are potentially susceptible to Primary Water Stress Corrosion Cracking (PWSCC). At Wolf Creek, this consists of 14 welds where piping attaches to the reactor pressure vessel and pressurizer. MRP-139 is independent from the RI-ISI Program, yet these 14 welds are in the scope of both programs. From both a technical and administrative standpoint, precedence for the examination of the 14 welds that are potentially susceptible to PWSCC will be taken from how RI-ISI Programs at BWRs interface with the NRC mandated program to examine welds that are potentially susceptible to Intergranular Stress Corrosion Cracking (IGSCC).

3.2.2.2 NRC Order EA-03-009

The NRC issued Order EA-03-009 to mandate inspections of the RPV head. Each refueling outage visual examinations are performed to identify potential boric acid leaks from pressure retaining components above the RPV head. The actions of a Bare Metal Visual (BMV) of 100% of the RPV head surface and

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NDE of each RPV head penetration nozzle will be under the ISI program and are scheduled as follows:

1) BMV examination of 100% of the RPV head surface (including 360° around each RPV head penetration nozzle) to be performed every third refueling outage or five years, whichever comes first. Wolf Creek performed its first BMV examination in RF12, April 2002. Subsequent BMV examinations are scheduled accordingly.

2) NDE of each RPV head penetration nozzle, either

i) a UT from two inches above the J-groove weld to the bottom of the nozzle and an assessment to determine if leakage has occurred into the interference fit zone, or

ii) eddy current testing or dye penetrant testing of the wetted surface of the J-groove weld and RPV head penetration nozzle base material to at least 2 inches above the J-groove weld.

The first NDE exam is due within 5 years of the Order (Feb. 2008) and thereafter at least every fourth refueling outage or seven years, whichever comes first. The first NDE exam is scheduled for RF15, October 2006.

3.3 ASME Section XI Code Cases Incorporated Into The ISI Program

The use of ASME Section XI Code Cases is in accordance with 10CFR50.55a. ASME Code Cases that have been determined to be suitable for use in ISI Program Plans by the NRC are listed in Regulatory Guide 1.147, Revision 14 "Inservice Inspection Code Case Acceptability-ASME Section XI, Division 1".

Table 3.3-1 lists the ASME Section XI Code Cases which have been incorporated into the ISI Program Plan. Code Cases that are approved or conditionally approved in Regulatory Guide 1.147 are shown with a status of "Approved" or "Conditionally Approved" in the table.

Code Cases not endorsed in the current revision of Regulatory Guide 1.147 are shown with a status of either "Pending" or "Unapproved" and a corresponding Request For Alternative has been prepared to employ the Case (see Table 3.4-1 for status of the Request for Alternative). The use of Code Cases (other than those listed in Regulatory Guide 1.147) may be authorized by the Director of the Office of Nuclear Reactor Regulation upon request pursuant to 10 CFR 50.55a(a)(3) via acceptance of the associated Request for Alternative.

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**TABLE 3.3-1
CODE CASES INCORPORATED INTO THE ISI PROGRAM**

Code Case	Title	Regulatory Guide 1.147 Status/ Request for Alternative	Extent of Use
N-460	Alternative Examination Coverage for Class 1 and Class 2 Welds	Acceptable	To be used on Class 1 and 2 welds as applicable and allowed in the Code Case
N-498-4	Alternative Requirements for 10-Year System Hydrostatic Testing for Class 1, 2 and 3 Systems	Conditionally Acceptable	Extent defined within the Program Plan
N-513-1	Evaluation Criteria For Temporary Acceptance of Flaws in Class 2 or 3 Piping	Conditionally Acceptable	To be used as needed for temporary acceptance of flaws on moderate energy Class 2 or Class 3 piping
N-526	Alternative Requirements for Successive Inspections of Class 1 and 2 Vessels	Acceptable	To be used as an alternative to the re-examination requirements of IWB-2420(b) and IWC-2420(b) for vessel volumes containing subsurface flaws
N-532-1	Alternative Requirements to Repair and Replacement Documentation Requirements and Inservice Summary Report Preparation and Submission	Conditionally Acceptable	Extent defined within the Program Plan
N-533-1	Alternative Requirements for VT-2 Visual Examination of Class 1, 2, and 3 Insulated Pressure Retaining Bolted Connections	Conditionally Acceptable	Extent defined within the Program Plan
N-552	Alternative Methods - Qualification for Nozzle Inside Radius Section from the Outside Surface	Conditionally Acceptable	To be used as described in PDI generic procedure PDI-UT-11
N-566-2	Corrective Action for Leakage Identified at Bolted Connections	Acceptable	To be used when needed as an alternative to the requirements of IWA-5250(a)(2)
N-586	Alternative Additional Examination Requirements for Class 1, 2, and 3 Piping, Components, and Supports	Conditionally Acceptable	To be used as an alternative to the requirements of IWB-2430(a), IWC-2430(a), IWD-2430(a), IWF-2430(a)
N-597-1	Requirements for Analytical Evaluation of Pipe Wall Thinning	Conditionally Acceptable	To be used if needed for the analytical evaluation of Class 1, 2, and 3 piping items subjected to internal or external wall thinning.

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TABLE 3.3-1 (Continued)
CODE CASES INCORPORATED INTO THE ISI PROGRAM

Code Case	Title	Regulatory Guide 1.147 Status/ Request for Alternative	Extent of Use
N-613-1	Ultrasonic Examination of Full Penetration Nozzles in Vessels, Examination Category B-D, Item No's B3.10 and B3.90, Reactor Nozzle-to-Vessel Welds, Figures IWB-2500-7(a), (b), and (c)	Acceptable	Extent defined within the Program Plan
N-616	Alternative Requirements for VT-2 Visual Examination of Classes 1, 2, and 3 Insulated Pressure-Retaining Bolted Connections	Conditionally Acceptable	Extent defined within the Program Plan
N-623	Deferral of Inspections of Shell-to-Flange and Head-to-Flange Welds of a Reactor Vessel	Acceptable	Extent defined within the Program Plan
N-624	Successive Inspections	Acceptable	To be used when needed as an alternative to the requirements of IWB-2420(a), IWC-2420(a), IWD-2420(a), IWF-2420(a)
N-639	Alternative Calibration Block Material	Conditionally Acceptable	To be used if needed as an alternative to the requirements of Appendix I, Supplement 1 and Section V, Article 4
N-648-1	Alternative Requirements for Inner Radius Examinations of Class 1 Reactor Vessel Nozzles	Conditionally Acceptable	Extent defined within the Program Plan
N-652	Alternative Requirements to Categories B-G-1, B-G-2, and C-D Bolting Examination Methods and Selection Criteria	Acceptable	Extent defined within the Program Plan
N-695	Qualification Requirements for Dissimilar Metal Piping Welds	Acceptable	To be used when needed as an alternative to the qualification requirements of Appendix VIII, Supplement 10 for the qualification requirements of dissimilar metal piping welds
N-700	Alternative Rules for Selection of Classes 1, 2, and 3 Vessel Welded Attachments for Examination	Pending	(Request For Alternative I3R-02)

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3.4 Requests For Relief and Requests For Alternatives From ASME Section XI Requirements

Table 3.4-1 contains an index of Requests For Alternatives and Requests For Relief written in accordance with 10CFR50.55a (a)(3) and (g)(5) when specific ASME Section XI requirements for inservice inspection are considered impractical or pose an undue burden on the licensee. If examination requirements are determined to be impractical, or result in hardship or unusual difficulty without a compensating increase in the level of quality and safety during the course of the interval, additional or modified Requests For Alternatives and Requests For Relief will be submitted in accordance with 10CFR50.55a(a)(3) and (g)(5). The status of each Request For Alternatives and Request For Relief (Submitted, Granted, or Denied) is also included in Table 3.4-1.

**TABLE 3.4-1
REQUESTS FOR RELIEF AND REQUESTS FOR ALTERNATIVES
FROM ASME SECTION XI REQUIREMENTS**

Relief Request	Summary	Status
I3R-01	Request to Continue Implementation of the Risk-Informed Inservice Inspection Application on Class 1 and 2 Piping Welds	To be submitted with the ISI Program Plan
I3R-02	Request to Utilize The Alternative Requirements of Code Case N-700, Alternative Rules for Selection of Classes 1, 2, and 3 Vessel Welded Attachments for Examination	To be submitted with the ISI Program Plan
I3R-03	10 CFR 50.55a Request To Utilize The Alternative Requirements of The WCGS Technical Requirements Manual (TRM) for the Examination and Testing of Snubbers	Submitted
I3R-04	Request to Perform a Limited VT-3 Examination of the Reactor Vessel Supports	To be submitted with the ISI Program Plan

3.5 WCGS Systems and Components Subject To Examination

The systems and components included in the WCGS Inservice Inspection Program Plan are those designed per ASME Section III, Class 1, 2, and 3 and shown on the Piping and Instrumentation Diagrams (P&IDs), except those components which have been optionally upgraded to Code Class as discussed in IWA-1320(e) and those components which were designed per ASME Section III and are no longer required for safe plant operation, (i.e. retired in place). A detailed explanation of the scope of components which are included the WCGS ASME Section XI Program is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

3.6 WCGS Nonexempt ASME Class Components and Component Supports

The WCGS ASME Class 1, 2, and 3 components which are not exempt from the examination per Section XI, IWB-1220, IWC-1220, and IWD-1220 are listed in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3". This document

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provides a cross-reference to the applicable ISI Isometric or ISI Equipment Drawing. An index of the WCGS ISI Isometrics and Equipment Drawings is included in Section 3.11. A list of applicable Isometrics and Equipment Drawings is also included in each of the System Program Plans of Section 4.1.

The supports of nonexempt components are subject to examination per Section XI, IWF-1200. Nonexempt component supports are shown on the ISI Isometrics and ISI Equipment Drawings listed in Section 3.11.

3.7 ISI Isometrics and Equipment Drawings

The ISI Isometrics and ISI Equipment Drawings were developed to detail the ASME Code Class 1, 2, and 3 components (welds, bolting, etc.) and component supports which are subject to examination per ASME Section XI. An index of these isometrics and equipment drawings is included on Inservice Inspection Drawing Cross Reference, ISI-REF, Sheets 1 and 2. The identification system employed on these drawings for welds, hangers and valves is included on ISI-REF Sheets 3 and 4. Each component and component support shown on the ISI Isometrics and Equipment Drawings is included in the ISI Database. The ISI-REF Sheets, Isometrics and Equipment Drawings are stand alone drawings. They are listed as M-189-50 series of drawings. A list of these drawings is included in subsection 3.11. A list of the applicable Isometrics and Equipment Drawings is also included in each System Program Plan of Section 4.1. The current revision level will be maintained by the ISI Coordinator.

3.8 Exempt ASME Class Components and Component Supports

The WCGS ASME Class 1, 2, and 3 components which are exempt from examination are those which meet the criteria of Section XI, subarticles IWB-1220, IWC-1220, and IWD-1220. Component supports which meet the criteria of IWF-1230 are also exempt from examination. Exempt components are listed in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3". This document details the specific exemption criteria applicable to each component.

3.9 System Pressure Testing

System Pressure Testing activities at WCGS are performed in accordance with Wolf Creek Administrative Procedure AP 29A-004.

System Pressure Testing of ASME Class 1, 2, and 3 components will be performed per the requirements of Section XI, IWA-5000, IWB-5000, IWC-5000, and IWD-5000, as modified by Code Case N-498-4 (applicable to IWD-5000 only), Code Case N-533-1 and Code Case N-616 (with the conditions specified in Regulatory Guide 1.147).

Specific implementation of System Pressure Testing is included in Sections 4.1, 4.2, and 4.3 of this Program Plan. A listing of the System Pressure Testing procedures is included in Table 4.2-1.

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3.10 Calibration Blocks

Table 3.10-1 lists the calibration blocks required for the ultrasonic (UT) examinations scheduled in this program plan. The calibration block design and material selection is in accordance with ASME Section XI.

**TABLE 3.10-1
WCGS CALIBRATION BLOCKS**

BLOCK NUMBER	DESCRIPTION/TITLE	DRAWING NUMBER	APPLICABLE SYSTEM(S)
SAP-01	31.0" ID SA351 CF8A	-	BB
SAP-07	27.5" ID SA351 CF8A	-	BB
101	WC-03-PS-03.000-SA533-GR.A-CL-2-CSCL-101	80C4192	BB
102	WC-03-SG-03.000-SA533-GR.A-CL-2-CS-102	80C4193	BB
104	WC-5.0-SG-05.035-SA216-WCCA-CSCL-104	80C4195	BB
105	WC-29-XXX-02.33-SA351-CF8A-CCSS-105	80D4896	BB
106	WC-27 1/2-XXX-02.21-SA351-CF8A-CCSS-106	80D4895	BB
112	WC-03-160-00.438-SA312-TP304-SS-112	80D4894	BG
114	WC-04-160-00.531-SA312-TP304-SS-114	80C4891	BB
117	WC-06-160-00.719-SA312-TP304-SS-117	80C4891	EJ,EP,EM,BB
122	WC-10-140-01.000-SA358-TP304-CL.1-SS-122	80C4891	EJ,EP
126	WC-12-140-01.125-SA376-TP304-SS-126	80D4892	EJ
127	WC-14-120-01.094-SA508-CL.1-CS-127	80D4892	AE
128	WC-12-80S-00.500-SA312-TP304-SS-128	80C4891	EJ

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**TABLE 3.10-1 (Continued)
WCGS CALIBRATION STANDARDS**

BLOCK NUMBER	DESCRIPTION/TITLE	DRAWING NUMBER	APPLICABLE SYSTEM(S)
130	WC-14-160-01.406-SA376-TP316-SS-130	80D4892	BB
131	WC-16-080-00.844-SA106-GR.B-CS-131	80C4891	AE
132	WC-28-01.500-SA106-GR.B-CS-132	80D4892	AB
140	WC-N-7.0-7.99-SA540-GR.B24-CL.3-CS-140	80D4903	BB
144	WC-2.0-HPCI-02.000-SA240-TP304-SS-144	80D4915	EM
156	WC-02-160-00.344-SA312-TP304-SS-156	80D4897	BB
159	WC-04-080-00.337-SA106-GR.B-CS-159	80D4893	AB, AE, FC
169	WC-NSE-04-160-SA508-CL.2-04-160-SA182-F316L-BI-169	80E4918	BB
170	WC-NSE-06-160-SA508-CL.2-06-160-SA182-F316L-BI-170	80E4922	BB
171	WC-NSE-14-160-SA508-CL.2-14-160-SA182-F316L-BI-171	80E4923	BB
172	WC-00.875-RHR-00.750-SA240-TP304-SS-172	80D4917	EJ
175	WC-11-RPV-11-SA533-GR.B-CL.1-ASCL-175	80D8410	BB
176	WC-9-RPV-9-SA533-GR.B-CL.1-ASCL-176	80D8411	BB
177	WC-7-RPV-7-SA533-GR.B-CL.1-ASCL-177	80D8412	BB
178	WC-F-XX-33-SA533-GR.B-CL.1-ASCL-178	80D8413	BB
179 (Note 1)	WC-NSE-XXX-3-SA182-GR316-CL.XX-XXX-3-SA508-GR.XX-CL2-BI-179	5D64166	BB

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**TABLE 3.10-1 (Continued)
WCGS CALIBRATION STANDARDS**

BLOCK NUMBER	DESCRIPTION/TITLE	DRAWING NUMBER	APPLICABLE SYSTEM(S)
183	WC-12-STD-00.375-SA312-TP304-SS-183	80C4891	EJ
192	WC-14-40S-00.438-SA358-TP304-CL.1-192	80C4891	BN,EN
193	WC-S-2.5-14-SA193-GR.B7-CS-193	80C8415	AB
194	WC-S-4.5-37.5-SA540-GR.B24-CL.4-CS-194	<i>future use</i> Note 2	BB
195	WC-S-7.0-58-SA540-GR.B24-CL.3-CS-195	<i>future use</i> Note 3	BB
203	WC-08-40S-00.322-SA312-TP304-SS-203	M-189-10203	EJ
204	WC-10-40S-00.365-SA312-TP304-SS-204	M-189-10204	EJ
8747	Alternate ASME Calibration Block A516-70 Steel	Note 4	Note 5
8748	Alternate ASME Calibration Type 316 Stainless Steel	Note 4	Note 6
8749	Alternate ASME Calibration Type 304 Stainless Steel	Note 4	Note 7
8750	Alternate ASME Calibration Block A516-70 Steel	Note 4	Note 5
8751	Alternate ASME Calibration Type 316 Stainless Steel	Note 4	Note 6
8752	Alternate ASME Calibration Type 304 Stainless Steel	Note 4	Note 7

NOTES:

- Note 1: Block 179 was modified by Westinghouse in 1996. The drawing number referenced is the Westinghouse document number.
- Note 2: Previous examinations were conducted utilizing either block 141 or Callaway block 93. The Interval 3 examinations will utilize block 194, or an equivalent RCP stud cal block meeting Section XI requirements.
- Note 3: Previous examinations were conducted utilizing either block 155 or Callaway block 95. The Interval 3 examinations will utilize block 195, or an equivalent RV stud cal block meeting Section XI requirements.

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- IMAGED 01/25/2006
- Note 4: The Alternate ASME Calibration Block is depicted on Figure 4 of PDI-UT-1, Rev. C and PDI-UT-2, Rev. C.
- Note 5: The Alternate Calibration Blocks numbered 8747 and 8750 may be utilized in lieu of carbon steel calibration blocks after approval by WCNOG Level III QC, ISI Engineering, and review by the ANII.
- Note 6: The Alternate Calibration Blocks numbered 8748 and 8751 may be utilized in lieu of Type 316 stainless steel calibration blocks after approval by WCNOG Level III QC, ISI Engineering, and review by the ANII.
- Note 7: The Alternate Calibration Blocks numbered 8749 and 8752 may be utilized in lieu of Type 304 stainless steel calibration blocks after approval by WCNOG Level III QC, ISI Engineering, and review by the ANII.

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3.11 Inservice Inspection Drawing Index

M-189-50 Series List

Reference Drawings	M-189-50ISI-REF SHEET 1 of 4 M-189-50ISI-REF SHEET 2 of 4 M-189-50ISI-REF SHEET 3 of 4 M-189-50ISI-REF SHEET 4 of 4
AB System	M-189-50AB-01-01 SHEET 1 of 1 M-189-50AB-02-01 SHEET 1 of 1 M-189-50AB-03-01 SHEET 1 of 1 M-189-50AB-04-01 SHEET 1 of 1
AE System	M-189-50AE-01-04 SHEET 1 of 1 M-189-50AE-02-04 SHEET 1 of 1 M-189-50AE-03-05 SHEET 1 of 1 M-189-50AE-04-05 SHEET 1 of 1
AL System	M-189-50AL-01-01 SHEET 1 of 2 M-189-50AL-01-01 SHEET 2 of 2 M-189-50AL-01-02 SHEET 1 of 1 M-189-50AL-02-03 SHEET 1 of 1 M-189-50AL-03-04 SHEET 1 of 1 M-189-50AL-04-02 SHEET 1 of 1 M-189-50AL-05-03 SHEET 1 of 1 M-189-50AL-06-04 SHEET 1 of 1
BB System	M-189-50BB-00-01 SHEET 1 of 1 M-189-50BB-01-01 SHEET 1 of 1 M-189-50BB-01-02 SHEET 1 of 1 M-189-50BB-01-04 SHEET 1 of 2 M-189-50BB-01-04 SHEET 2 of 2 M-189-50BB-01-08 SHEET 1 of 1 M-189-50BB-02-01 SHEET 1 of 1 M-189-50BB-02-02 SHEET 1 of 1 M-189-50BB-02-11 SHEET 1 of 1 M-189-50BB-03-01 SHEET 1 of 1 M-189-50BB-03-09 SHEET 1 of 1 M-189-50BB-04-01 SHEET 1 of 1 M-189-50BB-04-07 SHEET 1 of 1 M-189-50BB-05-01 SHEET 1 of 1 M-189-50BB-06-01 SHEET 1 of 1

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BG System	M-189-50BG-01-01 SHEET 1 of 1
	M-189-50BG-01-21 SHEET 1 of 1
	M-189-50BG-02-22 SHEET 1 of 2
	M-189-50BG-02-22 SHEET 2 of 2
	M-189-50BG-03-23 SHEET 1 of 1
	M-189-50BG-04-09 SHEET 1 of 1
	M-189-50BG-05-24 SHEET 1 of 1
	M-189-50BG-06-02 SHEET 1 of 2
	M-189-50BG-06-02 SHEET 2 of 2
	M-189-50BG-06-10 SHEET 1 of 1
BM System	M-189-50BM-01-01 SHEET 1 of 1
	M-189-50BM-01-02 SHEET 1 of 1
BN System	M-189-50BN-01-01 SHEET 1 of 3
	M-189-50BN-01-01 SHEET 2 of 3
	M-189-50BN-01-01 SHEET 3 of 3
EF System	M-189-50EF-01-01 SHEET 1 of 2
	M-189-50EF-01-01 SHEET 2 of 2
	M-189-50EF-01-02 SHEET 1 of 2
	M-189-50EF-01-02 SHEET 2 of 2
	M-189-50EF-01-03 SHEET 1 of 2
	M-189-50EF-01-03 SHEET 2 of 2
	M-189-50EF-01-07 SHEET 1 of 1
	M-189-50EF-01-08 SHEET 1 of 1
	M-189-50EF-01-09 SHEET 1 of 1
	M-189-50EF-01-10 SHEET 1 of 1
	M-189-50EF-02-01 SHEET 1 of 3
	M-189-50EF-02-01 SHEET 2 of 3
	M-189-50EF-02-01 SHEET 3 of 3
	M-189-50EF-02-04 SHEET 1 of 1
	M-189-50EF-02-05 SHEET 1 of 2
	M-189-50EF-02-05 SHEET 2 of 2
	M-189-50EF-02-06 SHEET 1 of 1
	M-189-50EF-02-08 SHEET 1 of 2
	M-189-50EF-02-08 SHEET 2 of 2
	M-189-50EF-02-09 SHEET 1 of 1
	M-189-50EF-02-10 SHEET 1 of 1

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EG System

M-189-50EG-01-01 SHEET 1 of 1
M-189-50EG-01-02 SHEET 1 of 2
M-189-50EG-01-02 SHEET 2 of 2
M-189-50EG-02-03 SHEET 1 of 2
M-189-50EG-02-03 SHEET 2 of 2
M-189-50EG-02-05 SHEET 1 of 2
M-189-50EG-02-05 SHEET 2 of 2
M-189-50EG-03-06 SHEET 1 of 1
M-189-50EG-03-07 SHEET 1 of 1
M-189-50EG-04-01 SHEET 1 of 2
M-189-50EG-04-01 SHEET 2 of 2
M-189-50EG-05-06 SHEET 1 of 2
M-189-50EG-05-06 SHEET 2 of 2
M-189-50EG-06-09 SHEET 1 of 2
M-189-50EG-06-09 SHEET 2 of 2

EJ System

M-189-50EJ-01-01 SHEET 1 of 5
M-189-50EJ-01-01 SHEET 2 of 5
M-189-50EJ-01-01 SHEET 3 of 5
M-189-50EJ-01-01 SHEET 4 of 5
M-189-50EJ-01-01 SHEET 5 of 5
M-189-50EJ-01-04 SHEET 1 of 1
M-189-50EJ-02-02 SHEET 1 of 5
M-189-50EJ-02-02 SHEET 2 of 5
M-189-50EJ-02-02 SHEET 3 of 5
M-189-50EJ-02-02 SHEET 4 of 5
M-189-50EJ-02-02 SHEET 5 of 5
M-189-50EJ-02-04 SHEET 1 of 3
M-189-50EJ-02-04 SHEET 2 of 3
M-189-50EJ-02-04 SHEET 3 of 3

EM System

M-189-50EM-01-01 SHEET 1 of 1
M-189-50EM-02-01 SHEET 1 of 1
M-189-50EM-03-05 SHEET 1 of 1
M-189-50EM-04-03 SHEET 1 of 1
M-189-50EM-05-01 SHEET 1 of 2
M-189-50EM-05-01 SHEET 2 of 2
M-189-50EM-06-02 SHEET 1 of 2
M-189-50EM-06-02 SHEET 2 of 2
M-189-50EM-06-03 SHEET 1 of 1

EN System

M-189-50EN-01-01 SHEET 1 of 2
M-189-50EN-01-01 SHEET 2 of 2
M-189-50EN-02-02 SHEET 1 of 2
M-189-50EN-02-02 SHEET 2 of 2

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EP System	M-189-50EP-01-01 SHEET 1 of 1
	M-189-50EP-02-02 SHEET 1 of 1
	M-189-50EP-03-02 SHEET 1 of 1
	M-189-50EP-04-01 SHEET 1 of 1
FC System	M-189-50FC-01-01 SHEET 1 of 1
GN System	M-189-50GN-01-01 SHEET 1 of 4
	M-189-50GN-01-01 SHEET 2 of 4
	M-189-50GN-01-01 SHEET 3 of 4
	M-189-50GN-01-01 SHEET 4 of 4
	M-189-50GN-02-02 SHEET 1 of 4
	M-189-50GN-02-02 SHEET 2 of 4
	M-189-50GN-02-02 SHEET 3 of 4
	M-189-50GN-02-02 SHEET 4 of 4
KJ System	M-189-50KJ-01-01 SHEET 1 of 4
	M-189-50KJ-01-01 SHEET 2 of 4
	M-189-50KJ-01-01 SHEET 3 of 4
	M-189-50KJ-01-01 SHEET 4 of 4
	M-189-50KJ-02-04 SHEET 1 of 4
	M-189-50KJ-02-04 SHEET 2 of 4
	M-189-50KJ-02-04 SHEET 3 of 4
	M-189-50KJ-02-04 SHEET 4 of 4
Equipment Drawings	M-189-50ISI-RBB01 SHEET 1 of 3
	M-189-50ISI-RBB01 SHEET 2 of 3
	M-189-50ISI-RBB01 SHEET 3 of 3
	M-189-50ISI-TBB03 SHEET 1 of 2
	M-189-50ISI-TBB03 SHEET 2 of 2
	M-189-50ISI-EBB01A SHEET 1 of 1
	M-189-50ISI-EBB01B SHEET 1 of 1
	M-189-50ISI-EBB01C SHEET 1 of 1
	M-189-50ISI-EBB01D SHEET 1 of 1
	M-189-50ISI-EEJ01A SHEET 1 of 1
	M-189-50ISI-EEJ01B SHEET 1 of 1
	M-189-50ISI-PUMPS SHEET 1 of 1

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4.0 WCGS SYSTEM INSERVICE INSPECTION PROGRAM PLANS

This Section includes system specific ISI Program Plans which detail the examinations and tests scheduled for each WCGS system included in the ISI Program. Section 4.0 has been subdivided into three subsections:

Subsection 4.1 includes systems which are subject to Section XI NDE or Augmented NDE. NDE is defined as Volumetric, Surface, Visual VT-1, and Visual VT-3 examinations. The systems in subsection 4.1 are also subject to Visual VT-2 examinations during system pressure testing.

Subsection 4.2 includes systems which are subject to ASME Section XI System Pressure Testing only. These systems or portions of these systems include exempt Class 1, Class 2, and Class 3 components (per IWB-1220, IWC-1220, or IWD-1220) only.

Subsection 4.3 includes Class 2 components which are exempt Section XI NDE and Augmented NDE and are also excluded from periodic system pressure testing per IWA-5110(c): piping that penetrates a containment vessel where the piping and isolation valves perform a containment function and the balance of the piping system is outside the scope of Section XI.

Note that Section 4.3 includes GS System piping across penetration P-65, line 25-HBB-6". As noted in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3", this line cannot be exempted per the criteria of IWC-1222. As a result, this line, which includes two (2) piping welds, was evaluated in the Risk Informed ISI Program and determined to be Low Risk with no Damage Mechanism. Because of this determination, no examinations were planned for this piping during Interval 3, and the GS System is not included in Section 4.1.

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IMAGED
01/25/2006

4.1 WCGS SYSTEMS SUBJECT TO SECTION XI NDE OR AUGMENTED NDE

WOLF CREEK GENERATING STATION THIRD INTERVAL ISI PROGRAM PLAN

4.1.1 Main Steam System (AB)

A. Applicable System Piping and Instrument Drawings

1. M-12AB01-Main Steam System
2. M-12AB02-Main Steam System

B. Classification Of Components

Details of the classification of the Main Steam System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class Components are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Main Steam System. These drawings are part of the M-189-50 series.

- | | | |
|----|------------------|---------------------------|
| 1. | M-189-50AB-01-01 | Sheet 1 Main Steam Loop 1 |
| 2. | M-189-50AB-02-01 | Sheet 1 Main Steam Loop 2 |
| 3. | M-189-50AB-03-01 | Sheet 1 Main Steam Loop 3 |
| 4. | M-189-50AB-04-01 | Sheet 1 Main Steam Loop 4 |

**WOLF CREEK GENERATING STATION
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4.1.1 Main Steam System (AB)

F. Augmented ISI Requirements

The following Augmented ISI requirements apply to the Main Steam System:

1. WCGS USAR Sections 3.6.1, Postulated Piping Failures In Fluid Systems Inside and Outside Containment and 3.6.2, Determination Of Break Locations and Dynamic Effects Associated With The Postulated Rupture Of Piping- WCGS has implemented a Risk Informed-High Energy Line Break program as an alternative to the examination methodology of USNRC Branch Technical Position MEB 3-1. This program is maintained in WCRE-14 and is applicable to the piping within the "no break zone" associated with high energy piping in containment penetration areas. The "no break zone" is an area where pipe breaks were not postulated due to the stress levels being within limits specified in USAR Section 3.6.2. The applicable welds are shown on the Main Steam Isometrics within the "No Break Zone" and included in Tables AB-1, AB-2, and AB-3 with Category "USAR" and Item No. "3.6.2".

When a specific degradation mechanism (DM) exists at a selected location, then the volume to be examined shall be as recommended in Section 4 of EPRI TR-112657 Rev. B-A. Welds subject to a DM are identified by a note in the Table. Welds selected that have no associated DM shall have the volume examined as shown in Figures 4.1-4 of TR-112657 Rev. B-A.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Main Steam System will receive a system leakage test per IWC-5220 each inspection period.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

A Risk Informed Inservice Inspection (RI-ISI) Program has been applied to Code Class 1 and 2 piping welds at WCGS. This program is described in detail in Section 2.3. Since the EPRI methodology used for the RI-ISI Program does not prescribe Code Examination Category and Item Numbers, the assignment of these designators is the same as utilized in Code Case N-578-1. No welds in the Main Steam System were selected for examination in the RI-ISI program.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table AB-1 (Period 1 Examinations), Table AB-2 (Period 2 Examinations), and Table AB-3 (Period 3 Examinations). The following Notes apply to the tables:

1. These welds have been selected per the RI-HELB Program. The requirements for examination of these welds are discussed in Paragraph F above.
2. Examination of Pressure Retaining Bolting is performed in accordance with Code Case N-652. The examination may be performed on the bolting in place under load or upon disassembly of the connection. The examination of bolting for valves may be conducted on one valve among a group of valves that are similar in design, size, function, and service. See Code Case N-652, Category C-D, Note 3.

**WOLF CREEK GENERATING STATION
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TABLE AB-1

Period 1 Examinations

System: AB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
AB-01-HV-14-b	AB-01-01	VALVE HV-14 BONNET BOLTING	2.5	NA	UT	C-D	C4.40	193	2
AB-01-C002	AB-01-01	PIPING SUPPORT	28		VT-3	F-A	F1.20		
AB-01-H010	AB-02-01	PIPING SUPPORT	28		VT-3	F-A	F1.20		
AB-01-F007	AB-01-01	28" MAIN STEAM HEADER TO FLUED HEAD (P-2)	28	1.5	UT	USAR	3.6.2	132	1
AB-01-F074	AB-04-01	28" MAIN STEAM HEADER TO FLUED HEAD (P-1)	28	1.5	UT	USAR	3.6.2	132	1

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TABLE AB-2

Period 2 Examinations

System: AB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request	
								Cal Block	or Notes
AB-01-R010	AB-02-01	PIPING INTEGRAL ATTACHMENTS	28		MT	C-C	C3.20		
AB-01-R001	AB-04-01	PIPING SUPPORT	28		VT-3	F-A	F1.20		
AB-01-R003	AB-03-01	PIPING SUPPORT	28		VT-3	F-A	F1.20		
AB-01-F026	AB-02-01	28" MAIN STEAM HEADER TO FLUED HEAD (P-3)	28	1.5	UT	USAR	3.6.2	132	1

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WOLF CREEK GENERATING STATION THIRD INTERVAL ISI PROGRAM PLAN

4.1.2 Feedwater System (AE)

A. Applicable System Piping and Instrument Drawings

1. M-12AE02-Feedwater System

B. Classification Of Components

Details of the classification of the Feedwater System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class Components are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Feedwater System. These drawings are included in the M-189-50 series.

- | | | | |
|----|------------------|---------|-----------------------|
| 1. | M-189-50AE-01-04 | Sheet 1 | Main Feedwater Loop 1 |
| 2. | M-189-50AE-02-04 | Sheet 1 | Main Feedwater Loop 2 |
| 3. | M-189-50AE-03-05 | Sheet 1 | Main Feedwater Loop 3 |
| 4. | M-189-50AE-04-05 | Sheet 1 | Main Feedwater Loop 4 |

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.2 Feedwater System (AE)

E. Summary Of Components Subject To Section XI and Augmented NDE/Scheduled For Examination

Table 1 is a summary of the components and items subject to NDE per ASME Section XI or per Augmented requirements. A detailed listing of these components and items is maintained in the ISI Database.

<p align="center">TABLE 1 SECTION XI AND AUGMENTED COMPONENT SUMMARY AND SCHEDULE</p>									
<u>COMPONENT OR ITEM DESCRIPTION</u>	<u>CODE CATEGORY</u>	<u>CODE ITEM NO.</u>	<u>AUG CATEGORY</u>	<u>AUG ITEM NO.</u>	<u>TOTAL IN SYSTEM</u>	<u>EXAMS BY PERIOD & INTERVAL</u>			
						<u>P1</u>	<u>P2</u>	<u>P3</u>	<u>INTERVAL</u>
PIPING INTEGRAL ATTACHMENTS	C-C	C3.20	-	-	12	1	1	0	2
PIPING WELDS SUBJECT TO THERMAL FATIGUE	R-A Note 1	R1.11 Note 1	-	-	16	2	0	0	2
PIPING WELDS SUBJECT TO THERMAL FATIGUE AND HELB REQUIREMENTS	R-A Note 1	R1.11 Note 1	USAR	3.6.2	17	4	3	2	9
PIPING WELDS NOT SUBJECT TO A DAMAGE MECHANISM	R-A Note 1	R1.20 Note 1			54	0	0	0	0
PIPING WELDS NOT SUBJECT TO A DAMAGE MECHANISM. AND SUBJECT TO HELB REQUIREMENTS	R-A Note 1	R1.20 Note 1	USAR	3.6.2	55	0	0	1	1
PIPING COMPONENT SUPPORTS	F-A	F1.20	-	-	44	3	3	3	9
PIPING WELDS SUBJECT TO HELB REQUIREMENTS.	-	-	USAR	3.6.2	8	0	0	0	0

Note 1: See Section H for an explanation of Category R-A and Item R1.xx nomenclature.

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.2 Feedwater System (AE)

F. Augmented ISI Requirements

The following Augmented ISI requirements apply to the Feedwater System:

1. WCGS USAR Sections 3.6.1, Postulated Piping Failures In Fluid Systems Inside and Outside Containment and 3.6.2, Determination Of Break Locations and Dynamic Effects Associated With The Postulated Rupture Of Piping- WCGS has implemented a Risk Informed-High Energy Line Break program as an alternative to the examination methodology of USNRC Branch Technical Position MEB 3-1. This program is maintained in WCRE-14 and is applicable to the piping within the "no break zone" associated with high energy piping in containment penetration areas. The "no break zone" is an area where pipe breaks were not postulated due to the stress levels being within limits specified in USAR Section 3.6.2. The applicable welds are shown on the Feedwater System Isometrics within the "No Break Zone" and included in Tables AE-1, AE-2, and AE-3 with Category "USAR" and Item No. "3.6.2". For welds selected to be examined under the RI-HELB program, the examination volume shall be the same as described for RI-ISI, given in paragraph H below.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Feedwater System will receive a system leakage test per IWC-5220 each inspection period.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI

A Risk Informed Inservice Inspection (RI-ISI) Program has been applied to Code Class 1 and 2 piping welds at WCGS. This program is described in detail in Section 2.3. Feedwater System welds selected for examination per the RI-ISI program are listed in Tables AE-1, AE-2 and AE-3. Since the EPRI methodology used for the RI-ISI Program does not prescribe Code Examination Category and Item Numbers, guidance was taken from Code Case N-578-1 for the assignment of these designators.

Much of the AE system has flow accelerated corrosion (FAC) identified as a degradation mechanism. Because the WCNOG augmented inspection program for FAC is relied upon to manage this DM, no examination under the RI-ISI program is required.

When a specific degradation mechanism (DM) exists at a selected location, then the volume to be examined shall be as recommended in Section 4 of EPRI TR-112657 Rev. B-A. Welds subject to a DM are identified by a note in the Table. Welds selected that have no associated DM shall have the volume examined as shown in Figures 4.1-4 of TR-112657 Rev. B-A.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table AE-1 (Period 1 Examinations), Table AE-2 (Period 2 Examinations), and Table AE-3 (Period 3 Examinations). The following Notes apply to the tables:

1. These welds have been selected for examination per the RI-ISI Program. The requirements for examination of these welds are included in Paragraph H above.

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2. These welds have been selected for examination per the RI-HELB Program. The requirements for examination of these welds are included in Paragraph F above.
3. These welds have Thermal Fatigue identified as the degradation mechanism.

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TABLE AE-1

Period 1 Examinations

System: AE

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
AE-04-R007	AE-01-04	PIPING INTEGRAL ATTACHMENTS	14		MT	C-C	C3.20		
AE-04-R007	AE-01-04	PIPING SUPPORT	14		VT-3	F-A	F1.20		
AE-04-R023	AE-01-04	PIPING SUPPORT	14		VT-3	F-A	F1.20		
AE-05-R011	AE-03-05	PIPING SUPPORT	14		VT-3	F-A	F1.20		
AE-04-F015	AE-01-04	16" PIPE TO S.G.A. INLET NOZZLE	16	0.844	UT	R-A	R1.11	131	1,3
AE-04-S010-C	AE-01-04	16"X14" REDUCER TO 16" PIPE	16	0.844	UT	R-A	R1.11	131	1,3
AE-04-S025-A	AE-01-04	4" PIPE TO 4" ELBOW	4	0.337	UT	R-A	R1.11	159	1,2,3
AE-04-S025-A	AE-01-04	4" PIPE TO 4" ELBOW	4	0.337	UT	USAR	3.6.2	159	1,2,3
AE-04-S025-B	AE-01-04	4" ELBOW TO 4" PIPE	4	0.337	UT	R-A	R1.11	159	1,2,3
AE-04-S025-B	AE-01-04	4" ELBOW TO 4" PIPE	4	0.337	UT	USAR	3.6.2	159	1,2,3
AE-04-S025-C	AE-01-04	4" PIPE TO 4" ELBOW	4	0.337	UT	R-A	R1.20	159	1,2,
AE-04-S025-C	AE-01-04	4" PIPE TO 4" ELBOW	4	0.337	UT	USAR	3.6.2	159	1,2,
AE-05-F038	AE-04-05	4" WELDOLET TO 4" PIPE	4	0.337	UT	R-A	R1.11	159	1,2,3
AE-05-F038	AE-04-05	4" WELDOLET TO 4" PIPE	4	0.337	UT	USAR	3.6.2	159	1,2,3

**WOLF CREEK GENERATING STATION
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TABLE AE-3
Period 3 Examinations
System: AE

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
AE-04-R016	AE-02-04	PIPING SUPPORT	14		VT-3	F-A	F1.20		
AE-04-H001	AE-02-04	PIPING SUPPORT	14		VT-3	F-A	F1.20		
AE-05-R017	AE-03-05	PIPING SUPPORT	14		VT-3	F-A	F1.20		
AE-05-F033	AE-03-05	4" PIPE TO VALVE V127	4	0.337	UT	R-A	R1.11	159	1,2,3
AE-05-F033	AE-03-05	4" PIPE TO VALVE V127	4	0.337	UT	USAR	3.6.2	159	1,2,3
AE-05-FW900	AE-03-05	4" ELBOW TO 4" PIPE	4	0.337	UT	R-A	R1.11	159	1,2,3
AE-05-FW900	AE-03-05	4" ELBOW TO 4" PIPE	4	0.337	UT	USAR	3.6.2	159	1,2,3
AE-05-F016	AE-03-05	14" ELBOW TO TORSIONAL RESTRAINT	14	0.938	UT	USAR	3.6.2	127	2

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.3 Auxiliary Feedwater System (AL)

A. Applicable System Piping and Instrument Drawings

1. M-12AL01-Auxiliary Feedwater System

B. Classification Of Components

Details of the classification of the Auxiliary Feedwater System Components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class Components are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics detail the nonexempt components and items subject to NDE in the Auxiliary Feedwater System. These drawings are part of the M-189-50 series.

1.	M-189-50AL-01-01	Sheet 1	Auxiliary Feedwater Turbine Driven Pump Suction Piping
2.	M-189-50AL-01-01	Sheet 2	Auxiliary Feedwater Pump Motor Driven Pump Suction Piping
3.	M-189-50AL-01-02	Sheet 1	Motor Driven Auxiliary Feedwater Pump "A" Discharge Piping
4.	M-189-50AL-02-03	Sheet 1	Motor Driven Auxiliary Feedwater Pump "B" Discharge Piping
5.	M-189-50AL-03-04	Sheet 1	Turbine Driven Auxiliary Feedwater Pump Suction Piping
6.	M-189-50AL-04-02	Sheet 1	Motor Driven Auxiliary Feedwater Pump "A" Discharge Piping
7.	M-189-50AL-05-03	Sheet 1	Motor Driven Auxiliary Feedwater Pump "B" Discharge Piping
8.	M-189-50AL-06-04	Sheet 1	Turbine Driven Auxiliary Feedwater Pump Discharge Piping

**WOLF CREEK GENERATING STATION
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4.1.3 Auxiliary Feedwater (AL)

F. Augmented ISI Requirements

No Augmented ISI requirements apply to the Auxiliary Feedwater System.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Auxiliary Feedwater System will receive a system leakage test per IWC-5220 each inspection period.

In accordance with Section XI, IWA-5000 and IWD-5000, the Class 3 pressure retaining components within the Auxiliary Feedwater System will receive a system leakage test per IWD-5221 every period and a system hydrostatic test per IWD-5222 at or near the end of the interval. As allowed by Code Case N-498-4, alternative rules may be employed in lieu of the system hydrostatic test of IWD-5222.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

A Risk Informed Inservice Inspection (RI-ISI) Program has been applied to Code Class 1 and 2 piping welds at WCGS. This program is described in detail in Section 2.3. Since the EPRI methodology used for the RI-ISI Program does not prescribe Code Examination Category and Item Numbers, guidance was taken from Code Case N-578-1 for the assignment of these designators. No welds in the Auxiliary Feedwater System were selected for examination in the RI-ISI program.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table AL-1 (Period 1 Examinations), Table AL-2 (Period 2 Examinations), and Table AL-3 (Period 3 Examinations).

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TABLE AL-1

Period 1 Examinations

System: AL

Component Name	Drawing Number	Component	Size	Thickness	NDE Method	Category	Item	Relief Request	Notes
AL-04-C013	AL-06-04	PIPING INTEGRAL ATTACHMENT	4		PT	C-C	C3.20		
AL-03-R011	AL-05-03	PIPING SUPPORT	4		VT-3	F-A	F1.20		
AL-04-C013	AL-06-04	PIPING SUPPORT	4		VT-3	F-A	F1.20		
AL-03-R010	AL-02-03	PIPING SUPPORT	6		VT-3	F-A	F1.30		

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TABLE AL-3

Period 3 Examinations

System: AL

Component Name	Drawing Number	Component	Size	Thickness	NDE Method	Category	Item	Relief Request	Notes
AL-03-A001	AL-02-03	PIPING INTEGRAL ATTACHMENTS	6		VT-1	D-A	D1.20		
AL-04-R014	AL-06-04	PIPING SUPPORT	4		VT-3	F-A	F1.20		
AL-02-R011	AL-04-02	PIPING SUPPORT	4		VT-3	F-A	F1.20		
AL-02-C003	AL-01-02	PIPING SUPPORT	6		VT-3	F-A	F1.30		
AL-03-A001	AL-02-03	PIPING SUPPORT	6		VT-3	F-A	F1.30		

**WOLF CREEK GENERATING STATION
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4.1.4 Reactor Coolant System (BB)

A. Applicable System Piping and Instrument Drawings

1. M-12BB01-Reactor Coolant System
2. M-12BB02-Reactor Coolant System*
3. M-12BB03-Reactor Coolant System

* Except for ASME Class 2 components listed in Section 4.3

B. Classification Of Components

Details of the classification of the Reactor Coolant System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Reactor Coolant System. These drawings are part of the M-189-50 series.

- | | | | |
|----|------------------|---------|----------------------------------------------------|
| 1. | M-189-50BB-00-01 | Sheet 1 | Reactor Coolant System Primary Loop General Layout |
| 2. | M-189-50BB-01-01 | Sheet 1 | Reactor Coolant Loop 1 |
| 3. | M-189-50BB-01-02 | Sheet 1 | Reactor Coolant Pressurizer Relief Header |
| 4. | M-189-50BB-01-04 | Sheet 1 | Reactor Coolant Pressurizer Spray Line |
| 5. | M-189-50BB-01-04 | Sheet 2 | Reactor Coolant Pressurizer Spray Line |
| 6. | M-189-50BB-01-08 | Sheet 1 | Reactor Coolant Pump "A" Seal Water Injection Line |
| 7. | M-189-50BB-02-01 | Sheet 1 | Reactor Coolant Loop 2 |
| 8. | M-189-50BB-02-02 | Sheet 1 | Reactor Coolant Pressurizer Safety Valve Lines |
| 9. | M-189-50BB-02-11 | Sheet 1 | Reactor Coolant Pump "B" Seal Water Injection Line |

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D. Applicable ISI Isometrics and ISI Equipment Drawings (Cont'd)			
10.	M-189-50BB-03-01	Sheet 1	Reactor Coolant Loop 3
11.	M-189-50BB-03-09	Sheet 1	Reactor Coolant Pump "C" Seal Water Injection Line
12.	M-189-50BB-04-01	Sheet 1	Reactor Coolant Loop 4
13.	M-189-50BB-04-07	Sheet 1	Reactor Coolant Pump "D" Seal Water Injection Line
14.	M-189-50BB-05-01	Sheet 1	Reactor Coolant Pressurizer Surge Line
15.	M-189-50BB-06-01	Sheet 1	Reactor Coolant Loop Drain To Reactor Coolant Drain Tank
16.	M-189-50ISI-RBB01	Sheet 1	Reactor Vessel
17.	M-189-50ISI-RBB01	Sheet 2	Reactor Vessel
18.	M-189-50ISI-RBB01	Sheet 3	Reactor Vessel
19.	M-189-50ISI-TBB01	Sheet 1	Pressurizer Vessel
20.	M-189-50ISI-TBB01	Sheet 2	Pressurizer Vessel
21.	M-189-50ISI-EBB01A	Sheet 1	Steam Generator EBB01A
22.	M-189-50ISI-EBB01B	Sheet 1	Steam Generator EBB01B
23.	M-189-50ISI-EBB01C	Sheet 1	Steam Generator EBB01C
24.	M-189-50ISI-EBB01D	Sheet 1	Steam Generator EBB01D
25.	M-189-50ISI-PUMPS	Sheet 1	ISI Pumps

WOLF CREEK GENERATING STATION THIRD INTERVAL ISI PROGRAM PLAN

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COMPONENT OR ITEM DESCRIPTION	CODE CATEGORY	CODE ITEM NO.	AUG. CATEGORY	AUG ITEM NO.	TOTAL IN SYSTEM	EXAMS BY PERIOD & INTERVAL			
						P1	P2	P3	INTERVAL
Reactor Vessel Head Vent Penetrations UT Exam	B-E	B4.11	EA-03-009	EA-03-009UT	1	1	0	1	2 Note 5
Reactor Vessel Head CRDM Penetrations UT Exam	B-E	B4.12	EA-03-009	EA-03-009UT	78	78	0	78	156 Note 5
Reactor Vessel Head Vent Penetrations BMV Exam	B-E	B4.11	EA-03-009	EA-03-009BMV	1	1	1	0	2 Note 5
Reactor Vessel Head CRDM Penetrations BMV Exam	B-E	B4.12	EA-03-009	EA-03-009BMV	78	78	78	0	156 Note 5
Piping Butt Welds Subject To PWSCC-Pressurizer UT Exam	R-A	R1.20	MRP-139	MRP139D1	6	6	6	6	18 Note 3
Piping Butt Welds Subject To PWSCC-RC Hot Leg UT Exam	R-A	R1.20	MRP-139	MRP139D2	4	0	4	4	8 Note 3
Piping Butt Welds Subject To PWSCC-RC Cold Leg UT Exam	R-A	R1.20	MRP-139	MRP139E	4	0	4	4	8 Note 3
Piping Butt Welds Subject To PWSCC-Pressurizer and RC Hot Leg BMV Exam	R-A	R1.20	MRP-139	MRP139J	10	10	10	10	30
Piping Butt Welds Subject To PWSCC-RC Cold Leg BMV Exam	R-A	R1.20	MRP-139	MRP139K	4	0	4	0	4

Note 2: Examination of Pressure Retaining Bolting is performed in accordance with Code Case N-652. See Notes 1-6 in Paragraph I for selection and scheduling criteria.

Note 4: Examination of Reactor Vessel Shell-to-Flange and Head-to-Flange welds are performed in accordance with Code Case N-623.

Note 6: See Section H for an explanation of Category R-A and Item R1.xx nomenclature.

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4.1.4 Reactor Coolant (BB)

F. Augmented ISI Requirements

The following Augmented ISI requirements apply to the Reactor Coolant System:

1. WCGS USAR Sections 3.6.1, Postulated Piping Failures In Fluid Systems Inside and Outside Containment and 3.6.2, Determination Of Break Locations and Dynamic Effects Associated With The Postulated Rupture Of Piping- WCGS has implemented a Risk Informed-High Energy Line Break program as an alternative to the examination methodology of USNRC Branch Technical Position MEB 3-1. This program is maintained in WCRE-14 and is applicable to the piping within the "no break zone" associated with high energy piping in containment penetration areas. The "no break zone" is an area where pipe breaks were not postulated due to the stress levels being within limits specified in USAR Section 3.6.2. The applicable welds are shown on the Reactor Coolant Steam Isometrics within the "No Break Zone". No BB system welds were selected for examination in the RI-HELB program.
2. USNRC Regulatory Guide 1.14, Revision 1, Reactor Coolant Pump Flywheel Integrity-This Regulatory Guide includes inspection requirements for Reactor Coolant Pump flywheels in Section 4. WCNOG has committed to these inspections per USAR Appendix 3A and Technical Specification 5.5.7. The Reactor Coolant Pump flywheel inspections are included in Table BB-3 with Category "USAR" and Item No. "RG 1.14" but may be performed at anytime during the inspection interval.
3. USNRC Regulatory Guide 1.65, Revision 0, Materials and Inspections for Reactor Vessel Closure Studs-This Regulatory Guide includes inspection requirements for the Reactor Vessel Closure Studs in Section 4. WCNOG has not committed to these inspections in USAR Appendix 3A; however, on page 3A-26, paragraph b. discusses the inservice inspection of the reactor vessel studs (as well as nuts and washers) performed per Section 5.2.4 of the USAR. Because Section 5.2.4 of the USAR specifically references the ASME Section XI ISI Program, the volumetric examination requirements for the reactor vessel studs in Code Case N-652 are understood to satisfy the WCNOG commitment to Regulatory Guide 1.65. These examinations are included in Tables BB-1, BB-2, and BB-3, see the listings for Category B-G-1 Item Number B6.20.
4. USNRC Regulatory Guide 1.150, Revision 1, Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examinations -This Regulatory Guide includes inspection requirements for the ultrasonic examination of Reactor Vessel Welds during Preservice and Inservice Examinations. WCNOG has committed to these inspections per USAR Appendix 3A and Section 5.2.4.
5. MRP-139, Final Version dated July 14, 2005 Material Reliability Program: Primary System Piping Butt Weld Inspection and Evaluation Guideline-This document provides inspection and evaluation guidelines for butt weld locations susceptible to primary water stress corrosion cracking (PWSCC). The WCGS Reactor Coolant System butt weld locations determined to be affected by PWSCC have been identified with Category = MRP-139 and Item Number MRP139D1 (Pressurizer), Item Number MRP139D2 (RC Hot Leg welds) and Category = MRP-139 and Item Number MRP139E (RC Cold Leg welds). The Item Number MRP-139D welds (Category D per MRP-139) require a volumetric examination every five years for hot legs and once per period for pressurizer, as well as a bare metal visual (BMV) examination in outages when a volumetric examination is not being performed. The BMV examination has been identified with Category = MRP-139 and Item Number MRP139J. The Item Number MRP-139E welds (Category E per MRP-139) require a volumetric examination every six years for cold legs, as well as a bare metal visual (BMV) examination once every 3 RFOs (not counting RFOs when the weld is examined volumetrically as one of the three). The BMV examination has been identified with Category = MRP-139 and Item Number MRP139K.
6. NRC Order EA-03-009-The NRC issued Order EA-03-009 to mandate inspections of the RPV head. Each refueling outage, visual inspections are performed to identify potential boric acid leaks from pressure retaining components above the RPV head. These inspections are performed under Wolf Creek's Boric Acid Corrosion Inspection (BACINS) Program. This NRC Order also requires a Bare Metal Visual (BMV) of 100% of the RPV head surface and NDE of each RPV head penetration nozzle on a specified frequency. In order to track these examinations, this requirement has been included in the ISI Database as a Category B-E, Item No. B4.12 augmented examination (Category EA-03-009, and Item Nos. EA-03-009UT and EA-03-009BMV). Note that Category B-E, Item Nos. B4.11 and B4.12 have been eliminated

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from ASME Section XI, 1998 Edition with 2000 Addenda; so the Section XI requirements are no longer applicable and Section XI examinations will not be scheduled. The applicable welds and surfaces are listed in Tables BB-1, BB-2, and BB-3 with Note 15.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWB-5000, the Class 1 pressure retaining components within the Reactor Coolant System will receive a system leakage test per IWB-5220 prior to plant startup following each refueling outage.

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Reactor Coolant System will receive a system leakage test per IWC-5220 each inspection period.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI

A Risk Informed Inservice Inspection (RI-ISI) Program has been applied to Code Class 1 and 2 piping welds at WCGS. This program is described in detail in Section 2.3. Reactor Coolant System welds selected for examination per the RI-ISI program are listed in Tables BB-1, BB-2 and BB-3. Since the EPRI methodology used for the RI-ISI Program does not prescribe Code Examination Category and Item Numbers, guidance was taken from Code Case N-578-1 for the assignment of these designators.

When a specific degradation mechanism (DM) exists at a selected location, then the volume to be examined shall be as recommended in Section 4 of EPRI TR-112657 Rev. B-A. Welds subject to a DM are identified by a note in the Table. Welds selected that have no associated DM shall have the volume examined as shown in Figures 4.1-4 of TR-112657 Rev. B-A.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table BB-1 (Period 1 Examinations), Table BB-2 (Period 2 Examinations), and Table BB-3 (Period 3 Examinations). The following Notes apply to the tables:

1. Bolting is required to be examined only when a connection is disassembled or bolting is removed. The examination of flange bolting in piping systems may be limited to one bolted connection among a group of bolted connections that are similar in design, size, function, and service. Examination of bolted connection is required only once during the interval. See Code Case N-652, B-G-2, Notes 1 and 3.
2. Bolting is required to be examined only when a connection is disassembled or bolting is removed. For valves, examination of bolting is required only when the component is examined under Examination Category B-M-2. Examination of bolted connection is required only once during the interval. See Code Case N-652, Category B-G-2, Notes 1 and 2.
3. Examination may be alternatively performed on the bolts or studs in pump PBB01B, PBB01C, or PBB01D. See Code Case N-652, Category B-G-1, Note 4.
4. Examination of the pump flange will be performed when connection is disassembled for maintenance. Examination may be alternatively performed on the pump flange of PBB01B, PBB01C, or PBB01D. See Code Case N-652, Category B-G-1, Notes 4 and 5.
5. Examination of the pump nuts, bushings and washers may be alternatively performed on the pump nuts, bushings and washers of PBB01B, PBB01C, or PBB01D. See Code Case N-652, Category B-G-1, Notes 4 and 5.
6. Examination of the steam generator hotleg and coldleg manway bolting may be alternatively performed on the bolting of EBB01A, EBB01E, or EBB01D. See Code Case N-652, Category B-G-1, Notes 4 and 5.

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7. Examination of the pump internal surface is required only when a pump is disassembled for maintenance, repair, or volumetric examination. Examination will be performed only once during the inspection interval and is limited to one pump within a group of pumps which performs a similar function in the system. Examination may be alternatively performed on another pump within the group. Examination is deferrable to the end of the interval, thus may be performed anytime during the interval.

8. Examination of the valve internal surface is required only when a valve is disassembled for maintenance, repair, or volumetric examination. To aide in scheduling, the valve has been included in each inspection period. However, examination will be performed only once during the inspection interval and is limited to one valve within a group of valves that are the same size, constructional design, and manufacturing methods and which performs a similar function in the system. Examination may be alternatively performed on another valve within the group. If a valve has not been disassembled, examination is deferrable to subsequent periods. (Reference PIR 97-2539)

9. Reactor Coolant Pump motor flywheel examinations are prescribed by Technical Specification 5.5.7. Technical Specification 5.5.7 requires that each flywheel be inspected in accordance with Regulatory Position C.4.b(2) of Regulatory Guide 1.14 and/or the specified exceptions approved through Amendment 106 of the Technical Specifications. One of the following examinations shall be completed on each flywheel at an interval not to exceed 20 years: 1) a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle of one-half the outer radius, or 2) a surface examination (MT and/or PT) of exposed surfaces of the removed flywheel. It is intended that the flywheels be examined during motor refurbishment, which generally occurs at 12-14 year intervals. It is not allowable for the frequency of examination of a flywheel to exceed 20 years. Failure to examine all flywheels within the First 10-Year Inservice Inspection Interval resulted in an NRC Violation

10. Steam Generator (SG) Tubing, Category B-Q, Item B16.20, is examined in accordance with the WCNO Technical Specifications. The examination acceptance criteria is governed by the Technical Specifications. Administrative Procedure AP 29A-003, "Steam Generator Management," provides details of SG tubing inspection activities.

11. The 4 Pressurizer Seismic Supports (Code Item F1.40 of Category F-A) and 4 integral attachment Lugs (Code Item B10.10 of Category B-K) are considered single components (i.e., the four lugs make up one component). Each support and lug is listed in the ISI Database with unique component names and descriptions for traceability purposes. In addition, 10CFR50.55a Request For Alternatives 13R-02 has been submitted to the NRC. 13R-02 requests approval to utilize the alternative requirements of Code Case N-700, which would allow WCNO to eliminate the examination of the seismic lugs, currently scheduled for Period 3. Until the alternative requirements of 13R-02 are authorized for use by the NRC, the Period 3 scheduling of the lug examination will remain in this ISI Program Plan.

12. These welds have been selected per the RI-ISI Program. The requirements for examination of these welds are included in Paragraph H above.

13. These welds have Thermal Fatigue identified as the degradation mechanism.

14. These welds have been selected in accordance with the Augmented ISI requirements of MRP-139.

15. These surfaces and welds have been selected in accordance with the Augmented ISI requirements of NRC Order EA-03-009. These examinations shall utilize approved calibration blocks as required by the demonstrated procedure.

16. An enhanced VT-1 examination may be performed in lieu of the UT examination per 10CFR50.55a(b)(2)(xxi)(A).

17. Examination of the Reactor Nozzle-to-Vessel welds is performed in accordance with Code Case N-613-1, which allows an alternative examination volume to be utilized.

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18. Examination of the Reactor Nozzle-to-Vessel inner radius areaa is performed in accordance with Code Case N-648-1, and the conditions specified in Revision 14 of Regulatory Guide 1.147.

19. These locations are subject to PWSCC. This examination may be performed at the same time as the MRP-139 exam.

IMAGED
01/25/2006

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TABLE BB-1

Period 1 Examinations

System: BB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
CH-112-207-22	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 22	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-207-23	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 23	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-207-24	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 24	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-207-25	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 25	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-207-26	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 26	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-207-27	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 27	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-207-28	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 28	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-207-29	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 29	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-208-30	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 30	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-208-31	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 31	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-208-32	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 32	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-208-33	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 33	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-208-34	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 34	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-208-35	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 35	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-208-36	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 36	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-208-37	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 37	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-209-38	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 38	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-209-39	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 39	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-209-40	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 40	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-209-41	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 41	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-210-42	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 42	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-210-43	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 43	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-210-44	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 44	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-210-45	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 45	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-210-46	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 46	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-210-47	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 47	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-210-48	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 48	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-210-49	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 49	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-211-50	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 50	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-211-51	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 51	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-211-52	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 52	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-211-53	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 53	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-212-54	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 54	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-212-55	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 55	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-212-56	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 56	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-212-57	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 57	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-212-58	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 58	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-212-59	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 59	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-212-60	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 60	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-212-61	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 61	NA	NA	UT/BMV	B-E	B4.12		15
CH-112-213-62	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 62	NA	NA	UT/BMV	B-E	B4.12		15

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4.1.4 Reactor Coolant System (BB)

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Period 1 Examinations	
System: BB	

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WOLF CREEK GENERATING STATION THIRD INTERVAL ISI PROGRAM PLAN

TABLE BB-1
Period 1 Examinations
System: BB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
BB-02-8010C-b	BB-02-02	VALVE 8010C BONNET BOLTING			VT-1	B-G-2	B7.70		2
TBB03-SKIRT-W	ISI-TBB03 SHT. 1	SUPPORT SKIRT INTEGRAL ATTACHMENT			PT	B-K	B10.10		13R-02
BB-02-8010A-SURF	BB-02-02	VALVE 8010A INTERNAL PRESSURE SURFACE			VT-3	B-M-2	B12.50		8
RV-INTERIOR	ISI-RBB01 SHT. 1	REACTOR VESSEL INTERIOR			VT-3	B-N-1	B13.10		
CH-214-112-B	ISI-RBB01 SHT. 1	PENETRATION 67 CRDM HOUSING WELD			PT	B-O	B14.10		
CH-214-112-E	ISI-RBB01 SHT. 1	PENETRATION 70 CRDM HOUSING WELD			PT	B-O	B14.10		
CH-214-112-G	ISI-RBB01 SHT. 1	PENETRATION 72 CRDM HOUSING WELD			PT	B-O	B14.10		
CH-215-112-B	ISI-RBB01 SHT. 1	PENETRATION 75 CRDM HOUSING WELD			PT	B-O	B14.10		
EBB01A-SEAM-3-W	ISI-EBB01A SHT. 1	STUB BARREL TO SHELL SECTION A	NA	3.0	UT	C-A	C1.10	102	
EBB01A-SEAM-6-W	ISI-EBB01A SHT. 1	TRANSITION CONE TO SHELL SECTION C	NA	3.76	UT	C-A	C1.10	102	
EBB01A-SEAM-2-W	ISI-EBB01A SHT. 1	TUBESHEET TO STUB BARREL	NA	3.0	UT	C-A	C1.30	102	
EBB01A-11-W	ISI-EBB01A SHT. 1	FEEDWATER NOZZLE WELD	NA	3.76	UT/MT	C-B	C2.21	102	
EBB01A-11-IR	ISI-EBB01A SHT. 1	FEEDWATER NOZZLE INNER RADIUS	NA	3.76	UT	C-B	C2.22	102	
BB-02-R011	BB-01-02	PIPING SUPPORT	6		VT-3	F-A	F1.10		
BB-02-R015	BB-01-02	PIPING SUPPORT	3		VT-3	F-A	F1.10		
BB-04-R009	BB-01-04 SHT. 1	PIPING SUPPORT	4		VT-3	F-A	F1.10		
BB-04-H009	BB-01-04 SHT. 2	PIPING SUPPORT	4		VT-3	F-A	F1.10		
BB-04-R033	BB-01-04 SHT. 2	PIPING SUPPORT	4		VT-3	F-A	F1.10		
CRDMPL-SUP-1	M-717-0028	CRDM Upper Seismic Support			VT-3	F-A	F1.40		
CRDMPL-SUP-2	M-717-0028	CRDM Upper Seismic Support			VT-3	F-A	F1.40		

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Period 1 Examinations

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Period 2 Examinations

System: BB

Relief Request or

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Cal Block	Notes
CH-101-104-B	ISI-RBB01 SHT. 1	RV CLOSURE HEAD MERIDIONAL WELD	NA	8.25	UT	B-A	B1.22	177	
CH-101-104-C	ISI-RBB01 SHT. 1	RV CLOSURE HEAD MERIDIONAL WELD	NA	8.25	UT	B-A	B1.22	177	
TBB03-CIRCUM-1-W	ISI-TBB03 SHT. 1	SHELL TO UPPER HEAD WELD	NA	1.90	UT	B-B	B2.11	101	
TBB03-SEAM-4-W	ISI-TBB03 SHT. 1	SHELL TO UPPER HEAD LONGITUDINAL WELD	NA	1.90	UT	B-B	B2.12	101	
TBB03-10B-C-W	ISI-TBB03 SHT. 1	SAFETY NOZZLE C TO TOP HEAD WELD	NA	1.90	UT	B-D	B3.110	101	
TBB03-10B-D-W	ISI-TBB03 SHT. 1	RELIEF NOZZLE D TO TOP HEAD WELD	NA	1.90	UT	B-D	B3.110	101	
TBB03-10B-C-IR	ISI-TBB03 SHT. 1	SAFETY NOZZLE C INNER RADIUS	NA	1.90	UT	B-D	B3.120	101	16
TBB03-10B-D-IR	ISI-TBB03 SHT. 1	RELIEF NOZZLE D INNER RADIUS	NA	1.90	UT	B-D	B3.120	101	16
EBB01C-1-A-IR	ISI-EBB01C SHT. 1	PRIMARY INLET NOZZLE INNER RADIUS	NA	5.00	UT	B-D	B3.140	104	16
EBB01B-1-A-IR	ISI-EBB01B SHT. 1	PRIMARY INLET NOZZLE INNER RADIUS	NA	5.00	UT	B-D	B3.140	104	16
EBB01B-1-B-IR	ISI-EBB01B SHT. 1	PRIMARY OUTLET NOZZLE INNER RADIUS	NA	5.00	UT	B-D	B3.140	104	16
CH-107-101	ISI-RBB01 SHT. 1	RV VENT PENETRATION			BMV	B-E	B4.12		15
CH-112-201	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 1			BMV	B-E	B4.12		15
CH-112-202-2	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 2			BMV	B-E	B4.12		15
CH-112-202-3	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 3			BMV	B-E	B4.12		15
CH-112-202-4	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 4			BMV	B-E	B4.12		15
CH-112-202-5	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 5			BMV	B-E	B4.12		15
CH-112-203-6	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 6			BMV	B-E	B4.12		15
CH-112-203-7	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 7			BMV	B-E	B4.12		15
CH-112-203-8	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 8			BMV	B-E	B4.12		15
CH-112-203-9	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 9			BMV	B-E	B4.12		15
CH-112-204-10	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 10			BMV	B-E	B4.12		15
CH-112-204-11	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 11			BMV	B-E	B4.12		15
CH-112-204-12	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 12			BMV	B-E	B4.12		15
CH-112-204-13	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 13			BMV	B-E	B4.12		15
CH-112-205-14	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 14			BMV	B-E	B4.12		15
CH-112-205-15	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 15			BMV	B-E	B4.12		15
CH-112-205-16	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 16			BMV	B-E	B4.12		15
CH-112-205-17	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 17			BMV	B-E	B4.12		15
CH-112-206-18	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 18			BMV	B-E	B4.12		15

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4.1.4 Reactor Coolant System (BB)

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WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN

TABLE BB-2

Period 2 Examinations

System: BB

Relief Request or

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Cal Block	Notes
CH-112-212-61	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 61			BMV	B-E	B4.12		15
CH-112-213-62	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 62			BMV	B-E	B4.12		15
CH-112-213-63	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 63			BMV	B-E	B4.12		15
CH-112-213-64	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 64			BMV	B-E	B4.12		15
CH-112-213-65	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 65			BMV	B-E	B4.12		15
CH-112-214-66	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 66			BMV	B-E	B4.12		15
CH-112-214-67	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 67			BMV	B-E	B4.12		15
CH-112-214-68	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 68			BMV	B-E	B4.12		15
CH-112-214-69	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 69			BMV	B-E	B4.12		15
CH-112-214-70	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 70			BMV	B-E	B4.12		15
CH-112-214-71	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 71			BMV	B-E	B4.12		15
CH-112-214-72	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 72			BMV	B-E	B4.12		15
CH-112-214-73	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 73			BMV	B-E	B4.12		15
CH-112-215-74	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 74			BMV	B-E	B4.12		15
CH-112-215-75	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 75			BMV	B-E	B4.12		15
CH-112-215-76	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 76			BMV	B-E	B4.12		15
CH-112-215-77	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 77			BMV	B-E	B4.12		15
CH-112-215-78	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 78			BMV	B-E	B4.12		15
CH-NUT-19	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 19			VT-1	B-G-1	B6.10		
CH-NUT-20	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 20			VT-1	B-G-1	B6.10		
CH-NUT-21	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 21			VT-1	B-G-1	B6.10		
CH-NUT-22	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 22			VT-1	B-G-1	B6.10		
CH-NUT-23	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 23			VT-1	B-G-1	B6.10		
CH-NUT-24	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 24			VT-1	B-G-1	B6.10		
CH-NUT-25	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 25			VT-1	B-G-1	B6.10		
CH-NUT-26	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 26			VT-1	B-G-1	B6.10		
CH-NUT-27	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 27			VT-1	B-G-1	B6.10		
CH-NUT-28	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 28			VT-1	B-G-1	B6.10		
CH-NUT-29	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 29			VT-1	B-G-1	B6.10		
CH-NUT-30	ISI-RBB01 SHT. 1	REACTOR VESSEL NUT 30			VT-1	B-G-1	B6.10		

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4.1.4 Reactor Coolant System (BB)

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WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN

TABLE BB-2

Period 2 Examinations

System: BB

Relief Request or

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Cal Block	Notes
RV-INTERIOR	ISI-RBB01 SHT. 1	REACTOR VESSEL INTERIOR			VT-3	B-N-1	B13.10		
EBB01A-SEAM-5-W	ISI-EBB01A SHT. 1	SHELL SECTION B TO TRANSITION CONE	NA	3.00	UT	C-A	C1.10	102	
EBB01A-SEAM-8-W	ISI-EBB01A SHT. 1	SHELL SECTION D TO TOP HEAD	NA	3.95	UT	C-A	C1.20	102	
BB-04-R012	BB-01-04 SHT. 1	PIPING SUPPORT	4		VT-3	F-A	F1.10		
BB-04-R017	BB-01-04 SHT. 1	PIPING SUPPORT	6		VT-3	F-A	F1.10		
BB-04-R021	BB-01-04 SHT. 1	PIPING SUPPORT	4		VT-3	F-A	F1.10		
BB-04-C006	BB-01-04 SHT. 2	PIPING SUPPORT	4		VT-3	F-A	F1.10		
BB-04-C010	BB-01-04 SHT. 2	PIPING SUPPORT	4		VT-3	F-A	F1.10		
BB-04-H001	BB-01-04 SHT. 2	PIPING SUPPORT	4		VT-3	F-A	F1.10		
BB-04-H005	BB-01-04 SHT. 2	PIPING SUPPORT	4		VT-3	F-A	F1.10		
BB-02-H001	BB-02-02	PIPING SUPPORT	6		VT-3	F-A	F1.10		
BB-01-H001	BB-05-01	PIPING SUPPORT	14		VT-3	F-A	F1.10		
HB-24-R015	BB-06-01	PIPING SUPPORT	2		VT-3	F-A	F1.10		
CRDMPL-SUP-3	M-717-0028	CRDM Upper Seismic Support			VT-3	F-A	F1.40		
CRDMPL-SUP-4	M-717-0028	CRDM Upper Seismic Support			VT-3	F-A	F1.40		
EBB01A-02 231	M-717-00002	SG A LOWER COLUMN SUPPORT			VT-3	F-A	F1.40		
EBB01A-06 231	M-717-00009	SG A LOWER LATERAL SUPPORT			VT-3	F-A	F1.40		
EBB01A-07 231	M-717-00009	SG A LOWER LATERAL SUPPORT			VT-3	F-A	F1.40		
EBB01A-08 231	M-717-00010	SG A UPPER LATERAL SUPPORT			VT-3	F-A	F1.40		
EBB01A-UP-2	M-717-00015	SG A UPPER LATERAL SUPPORT			VT-3	F-A	F1.40		
EBB01A-UP-3	M-717-00015	SG A UPPER LATERAL SUPPORT			VT-3	F-A	F1.40		

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

TABLE BB-3

Period 3 Examinations

System: BB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
TBB03-SEAM-1-W	ISI-TBB03 SHT. 1	SHELL TO BOTTOM HEAD LONGITUDINAL WELD	NA	3.75	UT	B-B	B2.12	101	
EBB01D-SEAM-1-W	ISI-EBB01D SHT. 1	BOTTOM HEAD TO TUBESHEET	NA	5.00	UT	B-B	B2.40	104	
RV-105-121-A	ISI-RBB01 SHT. 1	INLET NOZZLE B TO VESSEL WELD	NA	11.75	UT	B-D	B3.90	175, 178	
RV-105-121-B	ISI-RBB01 SHT. 1	INLET NOZZLE C TO VESSEL WELD	NA	11.75	UT	B-D	B3.90	175, 178	
RV-105-121-C	ISI-RBB01 SHT. 1	INLET NOZZLE F TO VESSEL WELD	NA	11.75	UT	B-D	B3.90	175, 178	
RV-105-121-D	ISI-RBB01 SHT. 1	INLET NOZZLE G TO VESSEL WELD	NA	11.75	UT	B-D	B3.90	175, 178	
RV-105-121-A-IR	ISI-RBB01 SHT. 1	INLET NOZZLE B INNER RADIUS AND BORE			VT-1	B-D	B3.100		18
RV-105-121-B-IR	ISI-RBB01 SHT. 1	INLET NOZZLE C INNER RADIUS AND BORE			VT-1	B-D	B3.100		18
RV-105-121-C-IR	ISI-RBB01 SHT. 1	INLET NOZZLE F INNER RADIUS AND BORE			VT-1	B-D	B3.100		18
RV-105-121-D-IR	ISI-RBB01 SHT. 1	INLET NOZZLE G INNER RADIUS AND BORE			VT-1	B-D	B3.100		18
RV-107-121-A	ISI-RBB01 SHT. 1	OUTLET NOZZLE A TO VESSEL WELD	NA	11.75	UT	B-D	B3.90	175, 178	
RV-107-121-B	ISI-RBB01 SHT. 1	OUTLET NOZZLE D TO VESSEL WELD	NA	11.75	UT	B-D	B3.90	175, 178	
RV-107-121-C	ISI-RBB01 SHT. 1	OUTLET NOZZLE E TO VESSEL WELD	NA	11.75	UT	B-D	B3.90	175, 178	
RV-107-121-D	ISI-RBB01 SHT. 1	OUTLET NOZZLE H TO VESSEL WELD	NA	11.75	UT	B-D	B3.90	175, 178	
RV-107-121-A-IR	ISI-RBB01 SHT. 1	OUTLET NOZZLE A INNER RADIUS AND BORE			VT-1	B-D	B3.100		18
RV-107-121-B-IR	ISI-RBB01 SHT. 1	OUTLET NOZZLE D INNER RADIUS AND BORE			VT-1	B-D	B3.100		18
RV-107-121-C-IR	ISI-RBB01 SHT. 1	OUTLET NOZZLE C INNER RADIUS AND BORE			VT-1	B-D	B3.100		18
RV-107-121-D-IR	ISI-RBB01 SHT. 1	OUTLET NOZZLE D INNER RADIUS AND BORE			VT-1	B-D	B3.100		18
TBB03-10A-W	ISI-TBB03 SHT. 1	SURGE NOZZLE TO BOTTOM HEAD WELD	NA	2.55	UT	B-D	B3.110	101	
TBB03-10C-W	ISI-TBB03 SHT. 1	SPRAY NOZZLE C TO TOP HEAD WELD	NA	1.90	UT	B-D	B3.110	101	
TBB03-10A-IR	ISI-TBB03 SHT. 1	SURGE NOZZLE INNER RADIUS	NA	2.55	UT	B-D	B3.120	101	16

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Period 3 Examinations

System: BB

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WOLF CREEK GENERATING STATION THIRD INTERVAL ISI PROGRAM PLAN

TABLE BB-3

Period 3 Examinations

System: BB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
CH-112-208-36	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 36	NA	NA	UT	B-E	B4.12		15
CH-112-208-37	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 37	NA	NA	UT	B-E	B4.12		15
CH-112-209-38	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 38	NA	NA	UT	B-E	B4.12		15
CH-112-209-39	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 39	NA	NA	UT	B-E	B4.12		15
CH-112-209-40	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 40	NA	NA	UT	B-E	B4.12		15
CH-112-209-41	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 41	NA	NA	UT	B-E	B4.12		15
CH-112-210-42	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 42	NA	NA	UT	B-E	B4.12		15
CH-112-210-43	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 43	NA	NA	UT	B-E	B4.12		15
CH-112-210-44	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 44	NA	NA	UT	B-E	B4.12		15
CH-112-210-45	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 45	NA	NA	UT	B-E	B4.12		15
CH-112-210-46	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 46	NA	NA	UT	B-E	B4.12		15
CH-112-210-47	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 47	NA	NA	UT	B-E	B4.12		15
CH-112-210-48	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 48	NA	NA	UT	B-E	B4.12		15
CH-112-210-49	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 49	NA	NA	UT	B-E	B4.12		15
CH-112-211-50	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 50	NA	NA	UT	B-E	B4.12		15
CH-112-211-51	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 51	NA	NA	UT	B-E	B4.12		15
CH-112-211-52	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 52	NA	NA	UT	B-E	B4.12		15
CH-112-211-53	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 53	NA	NA	UT	B-E	B4.12		15
CH-112-212-54	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 54	NA	NA	UT	B-E	B4.12		15
CH-112-212-55	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 55	NA	NA	UT	B-E	B4.12		15
CH-112-212-56	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 56	NA	NA	UT	B-E	B4.12		15
CH-112-212-57	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 57	NA	NA	UT	B-E	B4.12		15
CH-112-212-58	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 58	NA	NA	UT	B-E	B4.12		15
CH-112-212-59	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 59	NA	NA	UT	B-E	B4.12		15
CH-112-212-60	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 60	NA	NA	UT	B-E	B4.12		15
CH-112-212-61	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 61	NA	NA	UT	B-E	B4.12		15
CH-112-213-62	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 62	NA	NA	UT	B-E	B4.12		15
CH-112-213-63	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 63	NA	NA	UT	B-E	B4.12		15
CH-112-213-64	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 64	NA	NA	UT	B-E	B4.12		15
CH-112-213-65	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 65	NA	NA	UT	B-E	B4.12		15
CH-112-214-66	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 66	NA	NA	UT	B-E	B4.12		15
CH-112-214-67	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 67	NA	NA	UT	B-E	B4.12		15
CH-112-214-68	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 68	NA	NA	UT	B-E	B4.12		15
CH-112-214-69	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 69	NA	NA	UT	B-E	B4.12		15
CH-112-214-70	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 70	NA	NA	UT	B-E	B4.12		15
CH-112-214-71	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 71	NA	NA	UT	B-E	B4.12		15
CH-112-214-72	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 72	NA	NA	UT	B-E	B4.12		15
CH-112-214-73	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 73	NA	NA	UT	B-E	B4.12		15
CH-112-215-74	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 74	NA	NA	UT	B-E	B4.12		15
CH-112-215-75	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 75	NA	NA	UT	B-E	B4.12		15
CH-112-215-76	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 76	NA	NA	UT	B-E	B4.12		15
CH-112-215-77	ISI-RBB01 SHT. 1	RV CRDM PENETRATION 77	NA	NA	UT	B-E	B4.12		15

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

TABLE BB-3

Period 3 Examinations

System: BB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
CH-STUD-39	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 39	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-40	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 40	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-41	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 41	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-42	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 42	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-43	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 43	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-44	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 44	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-45	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 45	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-46	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 46	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-47	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 47	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-48	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 48	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-49	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 49	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-50	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 50	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-51	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 51	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-52	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 52	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-53	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 53	NA	NA	UT	B-G-1	B6.20	195	
CH-STUD-54	ISI-RBB01 SHT. 1	REACTOR VESSEL STUD 54	NA	NA	UT	B-G-1	B6.20	195	
RV-LIG-37	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 37	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-38	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 38	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-39	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 39	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-40	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 40	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-41	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 41	NA	NA	UT	B-G-1	B6.40	140	

WOLF CREEK GENERATING STATION THIRD INTERVAL ISI PROGRAM PLAN

TABLE 8B-3

Period 3 Examinations

System: BB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
RV-LIG-42	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 42	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-43	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 43	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-44	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 44	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-45	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 45	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-46	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 46	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-47	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 47	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-48	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 48	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-49	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 49	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-50	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 50	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-51	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 51	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-52	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 52	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-53	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 53	NA	NA	UT	B-G-1	B6.40	140	
RV-LIG-54	ISI-RBB01 SHT. 1	REACTOR VESSEL THREAD IN FLANGE 54	NA	NA	UT	B-G-1	B6.40	140	
CH-WASH-37	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 37			VT-1	B-G-1	B6.50		
CH-WASH-38	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 38			VT-1	B-G-1	B6.50		
CH-WASH-39	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 39			VT-1	B-G-1	B6.50		
CH-WASH-40	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 40			VT-1	B-G-1	B6.50		
CH-WASH-41	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 41			VT-1	B-G-1	B6.50		
CH-WASH-42	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 42			VT-1	B-G-1	B6.50		
CH-WASH-43	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 43			VT-1	B-G-1	B6.50		
CH-WASH-44	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 44			VT-1	B-G-1	B6.50		

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

TABLE BB-3

Period 3 Examinations

System: BB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
CH-WASH-45	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 45			VT-1	B-G-1	B6.50		
CH-WASH-46	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 46			VT-1	B-G-1	B6.50		
CH-WASH-47	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 47			VT-1	B-G-1	B6.50		
CH-WASH-48	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 48			VT-1	B-G-1	B6.50		
CH-WASH-49	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 49			VT-1	B-G-1	B6.50		
CH-WASH-50	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 50			VT-1	B-G-1	B6.50		
CH-WASH-51	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 51			VT-1	B-G-1	B6.50		
CH-WASH-52	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 52			VT-1	B-G-1	B6.50		
CH-WASH-53	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 53			VT-1	B-G-1	B6.50		
CH-WASH-54	ISI-RBB01 SHT. 1	REACTOR VESSEL WASHER AND BUSHING 54			VT-1	B-G-1	B6.50		
PBB01A-STUDS	M-712-00057	PBB01A PUMP MAIN BOLTS / STUDS (24)	NA	NA	UT	B-G-1	B6.180		3
PBB01A-FLANGE	ISI-PUMPS	PBB01A FLANGE SURFACE			VT-1	B-G-1	B6.190		4
PBB01A-WASHERS/NUTS	M-712-00057	PBB01A PUMP MAIN NUTS, BUSHINGS, WASHERS (24)			VT-1	B-G-1	B6.200		5
EBB01D-2-A-b	ISI-EBB01D SHT. 1	EBB01D HOTLEG MANWAY BOLTING			VT-1	B-G-2	B7.30		6
EBB01D-2-B-b	ISI-EBB01D SHT. 1	EBB01D COLDLEG MANWAY BOLTING			VT-1	B-G-2	B7.30		6
PBB01A-SEALBOLT	M-712-00058	RCP A #1 SEAL HOUSING BOLTS/STUDS & NUTS	2		VT-1	B-G-2	B7.60		3
TBB03-LUG-A-W	ISI-TBB03 SHT. 1	SEISMIC LUG INTEGRAL ATTACHMENT			PT	B-K	B10.10		I3R-02, 11
TBB03-LUG-B-W	ISI-TBB03 SHT. 1	SEISMIC LUG INTEGRAL ATTACHMENT			PT	B-K	B10.10		I3R-02, 11
TBB03-LUG-C-W	ISI-TBB03 SHT. 1	SEISMIC LUG INTEGRAL ATTACHMENT			PT	B-K	B10.10		I3R-02, 11
TBB03-LUG-D-W	ISI-TBB03 SHT. 1	SEISMIC LUG INTEGRAL ATTACHMENT			PT	B-K	B10.10		I3R-02, 11
PBB01A-SURF	ISI-PUMPS	PBB01A INTERNAL PRESSURE SURFACE			VT-3	B-L-21	B12.20		7

WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN

TABLE BB-3

Period 3 Examinations

System: BB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
PBB01A-SUP-3	ISI-PUMPS	RCP A TIE ROD SUPPORT			VT-3	F-A	F1.40		
PBB01A-SUP-3A	ISI-PUMPS	RCP A COLUMN SUPPORT			VT-3	F-A	F1.40		
RBB-01-04	ISI-RBB01 SHT. 1	RV SUPPORT PAD 4			VT-3	F-A	F1.40		I3R-04
TBB03-LUG-A-W	ISI-TBB03 SHT. 1	SEISMIC SUPPORT			VT-3	F-A	F1.40		I3R-02,11
TBB03-LUG-B-W	ISI-TBB03 SHT. 1	SEISMIC SUPPORT			VT-3	F-A	F1.40		I3R-02,11
TBB03-LUG-C-W	ISI-TBB03 SHT. 1	SEISMIC SUPPORT			VT-3	F-A	F1.40		I3R-02,11
TBB03-LUG-D-W	ISI-TBB03 SHT. 1	SEISMIC SUPPORT			VT-3	F-A	F1.40		I3R-02,11
BB-01-S301-09	BB-03-01	3" NOZZLE TO 3" X 1.5" REDUCER	3	0.438	UT	R-A	R1.11	112	12,13
BB-01-S401-10	BB-04-01	3" NOZZLE TO 3" X 1 1/2" REDUCER	3	0.438	UT	R-A	R1.11	112	12,13
BB-01-S001-6	BB-05-01	14" PIPE TO 14" ELBOW	14	1.25	UT	R-A	R1.11	130	12,13
BB-01-F102	BB-01-01	27 1/2" ELBOW-LOOP #1 RPV INLET SAFE-END	27.5	2.5	UT	R-A	R1.20	SAP-07, 106	12
BB-01-F202	BB-02-01	27 1/2" ELBOW-LOOP #2 RPV INLET SAFE-END	27.5	2.5	UT	R-A	R1.20	SAP-07, 106	12
BB-01-F103	BB-01-01	SAFE END TO 29" I.D. PIPE	29	2.5	UT	R-A	R1.20	SAP-01, 105	12
BB-01-F203	BB-02-01	SAFE END TO 29" ID PIPE	29	2.5	UT	R-A	R1.20	SAP-07, 106	12
BB-01-F303	BB-03-01	SAFE END TO 29" ID PIPE	29	2.5	UT	R-A	R1.20	SAP-07, 106	12
BB-04-S002-E	BB-01-04 SHT. 2	6"X4" EXPANDER TO 6" PIPE	6	0.719	UT	R-A	R1.20	117	12
BB-06-F001	BB-02-01	3" PIPE TO 3" NOZZLE ON 036-BCA-31"	3	0.438	UT	R-A	R1.20	112	12, 13
BB-06-PW6000	BB-02-01	3" PIPE TO CAP (B.W.)	3	0.438	UT	R-A	R1.20	112	12
HB-24-W501	BB-06-01	2" PIPE TO 2" ELBOW	2	0.344	UT	R-A	R1.20	156	12
RV-301-121-A	ISI-RBB01 SHT. 1	LOOP #1 RPV OUTLET NOZZLE TO SAFE-END	29	2.5	UT	R-A	R1.20	179	12, 19
RV-302-121-A	ISI-RBB01 SHT. 1	SAFE-END TO LOOP #1 RPV INLET NOZZLE	27.5	2.5	UT	R-A	R1.20	179	12, 19

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

TABLE BB-3

Period 3 Examinations

System: BB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
RV-302-121-D	ISI-RBB01 SHT. 1	SAFE-END TO LOOP #4 RPV INLET NOZZLE	27.5	2.5	UT	R-A	R1.20	179	12, 19
PBB01A-FLYWHEEL	ISI-PUMPS	PUMP FLYWHEEL	NA	NA	UT/PT/MT	USAR	RG1.14		9
PBB01B-FLYWHEEL	ISI-PUMPS	PUMP FLYWHEEL	NA	NA	UT/PT/MT	USAR	RG1.14		9
PBB01C-FLYWHEEL	ISI-PUMPS	PUMP FLYWHEEL	NA	NA	UT/PT/MT	USAR	RG1.14		9
PBB01D-FLYWHEEL	ISI-PUMPS	PUMP FLYWHEEL	NA	NA	UT/PT/MT	USAR	RG1.14		9
RV-301-121-A	ISI-RBB01 SHT. 1	LOOP #1 RPV OUTLET NOZZLE TO SAFE-END	29	2.92	UT	MRP-139	MRP-139D2	179	14
RV-301-121-A	ISI-RBB01 SHT. 1	LOOP #1 RPV OUTLET NOZZLE TO SAFE-END	29	2.92	BMV	MRP-139	MRP-139J		14
RV-301-121-B	ISI-RBB01 SHT. 1	LOOP #2 RPV OUTLET NOZZLE TO SAFE-END	29	2.92	UT	MRP-139	MRP-139D2	179	14
RV-301-121-B	ISI-RBB01 SHT. 1	LOOP #2 RPV OUTLET NOZZLE TO SAFE-END	29	2.92	BMV	MRP-139	MRP-139J		14
RV-301-121-C	ISI-RBB01 SHT. 1	LOOP #3 RPV OUTLET NOZZLE TO SAFE-END	29	2.92	UT	MRP-139	MRP-139D2	179	14
RV-301-121-C	ISI-RBB01 SHT. 1	LOOP #3 RPV OUTLET NOZZLE TO SAFE-END	29	2.92	BMV	MRP-139	MRP-139J		14
RV-301-121-D	ISI-RBB01 SHT. 1	LOOP #4 RPV OUTLET NOZZLE TO SAFE-END	29	2.92	UT	MRP-139	MRP-139D2	179	14
RV-301-121-D	ISI-RBB01 SHT. 1	LOOP #4 RPV OUTLET NOZZLE TO SAFE-END	29	2.92	BMV	MRP-139	MRP-139J		14
RV-302-121-A	ISI-RBB01 SHT. 1	SAFE-END TO LOOP #1 RPV INLET NOZZLE	27.5	2.79	UT	MRP-139	MRP-139E	179	14
RV-302-121-B	ISI-RBB01 SHT. 1	SAFE-END TO LOOP #2 RPV INLET NOZZLE	27.5	2.79	UT	MRP-139	MRP-139E	179	14
RV-302-121-C	ISI-RBB01 SHT. 1	SAFE-END TO LOOP #3 RPV INLET NOZZLE	27.5	2.79	UT	MRP-139	MRP-139E	179	14
RV-302-121-D	ISI-RBB01 SHT. 1	SAFE-END TO LOOP #4 RPV INLET NOZZLE	27.5	2.79	UT	MRP-139	MRP-139E	179	14
TBB03-01-W	ISI-TBB03 SHT. 1	SURGE NOZZLE TO SAFE-END WELD	14	1.51	UT	MRP-139	MRP-139D1	171	14
TBB03-01-W	ISI-TBB03 SHT. 1	SURGE NOZZLE TO SAFE-END WELD			BMV	MRP-139	MRP-139J		14
TBB03-02-W	ISI-TBB03 SHT. 1	SPRAY NOZZLE TO SAFE-END WELD	4	1.00	UT	MRP-139	MRP-139D1	169	14
TBB03-02-W	ISI-TBB03 SHT. 1	SPRAY NOZZLE TO SAFE-END WELD			BMV	MRP-139	MRP-139J		14
TBB03-03-A-W	ISI-TBB03 SHT. 1	SAFETY NOZZLE TO SAFE-END WELD	6	1.42	UT	MRP-139	MRP-139D1	170	14
TBB03-03-A-W	ISI-TBB03 SHT. 1	SAFETY NOZZLE TO SAFE-END WELD			BMV	MRP-139	MRP-139J		14
TBB03-03-B-W	ISI-TBB03 SHT. 1	SAFETY NOZZLE TO SAFE-END WELD	6	1.42	UT	MRP-139	MRP-139D1	170	14
TBB03-03-B-W	ISI-TBB03 SHT. 1	SAFETY NOZZLE TO SAFE-END WELD			BMV	MRP-139	MRP-139J		14
TBB03-03-C-W	ISI-TBB03 SHT. 1	SAFETY NOZZLE TO SAFE-END WELD	6	1.42	UT	MRP-139	MRP-139D1	170	14
TBB03-03-C-W	ISI-TBB03 SHT. 1	SAFETY NOZZLE TO SAFE-END WELD			BMV	MRP-139	MRP-139J		14

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

TABLE BB-3

Period 3 Examinations

System: BB

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
TBB03-04-W	ISI-TBB03 SHT. 1	RELIEF NOZZLE TO SAFE-END WELD	6	1.42	UT	MRP-139	MRP-139D1	170	14
TBB03-04-W	ISI-TBB03 SHT. 1	RELIEF NOZZLE TO SAFE-END WELD			BMV	MRP-139	MRP-139J		14

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.5 Chemical and Volume Control System (BG)

A. Applicable System Piping and Instrument Drawings

1. M-12BG01-Chemical and Volume Control System
2. M-12BG03-Chemical and Volume Control System

B. Classification Of Components

Details of the classification of the Chemical and Volume Control System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Chemical and Volume Control System. These drawings are part of the M-189-50 series.

- | | | |
|-----|---------------------------|------------------------------------------------------------------------------|
| 1. | M-189-50BG-01-01 Sheet 1 | Chemical and Volume Control Normal Charging Line Containment Penetration |
| 2. | M-189-50BG-01-21 Sheet 1 | Chemical and Volume Control Normal and Alternate Charging Lines |
| 3. | M-189-50BG-02-22 Sheet 1 | Chemical and Volume Control Letdown Line |
| 4. | M-189-50BG-02-22 Sheet 2 | Chemical and Volume Control Letdown Line Containment Penetration |
| 5. | M-189-50BG-03-23 Sheet 1 | Chemical and Volume Control Excess Letdown Line |
| 6. | M-189-50BG-04-09 Sheet 1 | Chemical and Volume Control RCP Seal Water Injection Containment Penetration |
| 7. | M-189-50BG-05-24 Sheet 1 | Chemical and Volume Control Auxiliary Spray Line |
| 8. | M-189-50BG-06-02 Sheet 1 | Chemical and Volume Control Centrifugal Charging Pump Suction |
| 9. | M-189-50BG-06-02 Sheet 2 | Chemical and Volume Control CCP Discharge (HPSI Discharge) |
| 10. | M-189-50BG-06-10 Sheet 1 | Chemical and Volume CCP Discharge to Seal Water Injection Filters |
| 11. | M-189-50ISI-PUMPS Sheet 1 | ISI Pumps |

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.5 Chemical and Volume Control System (BG)

E. Summary Of Components Subject To Section XI and Augmented NDE/Scheduled For Examination

Table 1 is a summary of the components and items subject to NDE per ASME Section XI or per Augmented requirements. A detailed listing of these components and items is maintained in the ISI Database.

<p style="text-align: center;">TABLE 1 SECTION XI AND AUGMENTED COMPONENT SUMMARY AND SCHEDULE</p>									
<u>COMPONENT OR ITEM DESCRIPTION</u>	<u>CODE CATEGORY</u>	<u>CODE ITEM NO.</u>	<u>AUG. CATEGORY</u>	<u>AUG ITEM NO.</u>	<u>TOTAL IN SYSTEM</u>	<u>P1</u>	<u>P2</u>	<u>P3</u>	<u>EXAMS BY PERIOD & INTERVAL INTERVAL</u>
PIPING WELDED ATTACHMENTS	C-C	C3.20	-	-	4	1	0	0	1
PUMPS WELDED ATTACHMENTS	C-C	C3.30	-	-	8	0	1	0	1
PRESSURE RETAINING PUMP WELDS	C-G	C6.10	-	-	4	0	0	2	2
PIPING COMPONENTS SUPPORTS	F-A	F1.10	-	-	15	1	2	1	4
PIPING COMPONENTS SUPPORTS	F-A	F1.20	-	-	30	1	2	2	5
SUPPORTS OTHER THAN PIPING SUPPORTS	F-A	F1.40	-	-	8	2	2	0	4
PIPING WELDS SUBJECT TO THERMAL FATIGUE	R-A Note 1	R1.11 Note 1	-	-	25	2	2	3	7
PIPING WELDS NOT SUBJECT TO A DAMAGE MECHANISM	R-A Note 1	R1.20 Note 1	-	-	167	4	4	4	12
PIPING WELDS SUBJECT TO HELB REQUIREMENTS	-	-	USAR	3.6.2	103	0	0	0	0

Note 1: See Section H for an explanation of Category R-A and Item R1.xx nomenclature.

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.5 Chemical and Volume Control System (BG)

F. Augmented ISI Requirements

The following Augmented ISI requirements apply to the Chemical and Volume Control System:

1. WCGS USAR Sections 3.6.1, Postulated Piping Failures In Fluid Systems Inside and Outside Containment and 3.6.2, Determination Of Break Locations and Dynamic Effects Associated With The Postulated Rupture Of Piping- WCGS has implemented a Risk Informed-High Energy Line Break program as an alternative to the examination methodology of USNRC Branch Technical Position MEB 3-1. This program is maintained in WCRE-14 and is applicable to the piping within the "no break zone" associated with high energy piping in containment penetration areas. The "no break zone" is an area where pipe breaks were not postulated due to the stress levels being within limits specified in USAR Section 3.6.2. No welds in the BG system were selected under the RI-HELB program.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWB-5000, the Class 1 pressure retaining components within the Chemical and Volume Control System will receive a system leakage test per IWB-5220 prior to plant startup following each refueling outage.

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Chemical and Volume Control System will receive a system leakage test per IWC-5220 each inspection period.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

A Risk Informed Inservice Inspection (RI-ISI) Program has been applied to Code Class 1 and 2 piping welds at WCGS. This program is described in detail in Section 2.3. Chemical and Volume Control System welds selected for examination per the RI-ISI program are listed in Tables BG-1, BG-2 and BG-3. Since the EPRI methodology used for the RI-ISI Program does not prescribe Code Examination Category and Item Numbers, guidance was taken from Code Case N-578-1 for the assignment of these designators.

When a specific degradation mechanism (DM) exists at a selected location, then the volume to be examined shall be as recommended in Section 4 of EPRI TR-112657 Rev. B-A. Welds subject to a DM are identified by a note in the Table. Welds selected that have no associated DM shall have the volume examined as shown in Figures 4.1-4 of TR-112657 Rev. B-A.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table BG-1 (Period 1 Examinations), Table BG-2 (Period 2 Examinations), and Table BG-3 (Period 3 Examinations). The following Notes apply to the tables:

1. These welds have been selected per the RI-ISI Program. The requirements for examination of these welds are included in Paragraph H above.
2. These welds have Thermal Fatigue identified as the degradation mechanism.

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

TABLE BG-1

Period 1 Examinations

System: BG

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
BG-02-A002	BG-06-02 SHT. 1	PIPING INTEGRAL ATTACHMENTS	8		PT	C-C	C3.20		
BG-21-F012	BG-01-21	3" PIPE TO VALVE BB8378A	3	0.438	UT	R-A	R1.11	112	1, 2
BG-23-FW582	BG-03-23	VALVE BBV065 TO 2" PIPE	2	0.344	UT	R-A	R1.11	156	1
BG-23-W584	BG-03-23	2" TEE TO 2" PIPE	2	0.344	UT	R-A	R1.20	156	1
BG-02-F045	BG-06-02 SHT. 2	4" PIPE TO 4" ELBOW	4	0.531	UT	R-A	R1.20	114	1
BG-02-FW312	BG-06-02 SHT. 2	4" PIPE TO 4" ELBOW	4	0.531	UT	R-A	R1.20	114	1
BG-02-S040-C	BG-06-02 SHT. 2	4" ELBOW TO 4" PIPE	4	0.531	UT	R-A	R1.20	114	1
BG-24-H001	BG-05-24	PIPING SUPPORT	2		VT-3	F-A	F1.10		
BG-02-A002	BG-06-02 SHT. 1	PIPING SUPPORT	8		VT-3	F-A	F1.20		
PBG05A-SUP-1	BG-06-02 SHT. 1	CHARGING PUMP A SUPPORT	6		VT-3	F-A	F1.40		
PBG05A-SUP-2	BG-06-02 SHT. 1	CHARGING PUMP A SUPPORT	6		VT-3	F-A	F1.40		

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.6 Steam Generator Blowdown System (BM)

A. Applicable System Piping and Instrument Drawings

1. M-12BM01-Steam Generator Blowdown System

B. Classification Of Components

Details of the classification of the Steam Generator Blowdown System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Steam Generator Blowdown System. These drawings are part of the M-189-50 series.

- | | | | |
|----|------------------|---------|----------------------------------------|
| 1. | M-189-50BM-01-01 | Sheet 1 | Steam Generator Blowdown Loop
A & D |
| 2. | M-189-50BM-01-02 | Sheet 1 | Steam Generator Blowdown Loop
B & C |

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.6 Steam Generator Blowdown System (BM)

E. Summary Of Components Subject To Section XI and Augmented NDE/Scheduled For Examination

Table 1 is a summary of the components and items subject to NDE per ASME Section XI or per Augmented requirements. A detailed listing of these components and items is maintained in the ISI Database.

TABLE 1 SECTION XI AND AUGMENTED COMPONENT SUMMARY AND SCHEDULE									
<u>COMPONENT OR ITEM DESCRIPTION</u>	<u>CODE CATEGORY</u>	<u>CODE ITEM NO.</u>	<u>AUG. CATEGORY</u>	<u>AUG ITEM NO.</u>	<u>TOTAL IN SYSTEM</u>	<u>EXAMS BY PERIOD & INTERVAL</u>			
						<u>P1</u>	<u>P2</u>	<u>P3</u>	<u>INTERVAL</u>
PIPING WELDS SUBJECT TO HELB REQUIREMENTS	-	-	USAR	3.6.2	36	0	0	0	0

WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN

4.1.6 Steam Generator Blowdown System (BM)

F. Augmented ISI Requirements

The following Augmented ISI requirements apply to the Steam Generator Blowdown System:

1. WCGS USAR Sections 3.6.1, Postulated Piping Failures In Fluid Systems Inside and Outside Containment and 3.6.2, Determination Of Break Locations and Dynamic Effects Associated With The Postulated Rupture Of Piping- WCGS has implemented a Risk Informed-High Energy Line Break program as an alternative to the examination methodology of USNRC Branch Technical Position MEB 3-1. This program is maintained in WCRE-14 and is applicable to the piping within the "no break zone" associated with high energy piping in containment penetration areas. The "no break zone" is an area where pipe breaks were not postulated due to the stress levels being within limits specified in USAR Section 3.6.2. No welds in the BM system were selected under the RI-HELB program.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Steam Generator Blowdown System will receive a system leakage test per IWC-5220 each inspection period.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

The RI-ISI Program is not applicable to the BM system.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table BM-1 (Period 1 Examinations), Table BM-2 (Period 2 Examinations), and Table BM-3 (Period 3 Examinations). Because no components or component supports in the BM System have been selected or scheduled for examination, Tables BM-1, BM-2 and BM-3 are not included.

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.7 Borated Refueling Water System (BN)

A. Applicable System Piping and Instrument Drawings

1. M-12BN01-Borated Refueling Water System

B. Classification Of Components

Details of the classification of the Borated Refueling Water System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Borated Refueling Water System. These drawings are part of the M-189-50 series.

- | | | | |
|----|------------------|---------|----------------------------------------|
| 1 | M-189-50BN-01-01 | Sheet 1 | Borated Refueling Water Storage Supply |
| 2. | M-189-50BN-01-01 | Sheet 2 | Borated Refueling Water Storage Supply |
| 3. | M-189-50BN-01-01 | Sheet 3 | Borated Refueling Water Storage Supply |

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.7 Borated Refueling Water System (BN)

F. Augmented ISI Requirements

No Augmented ISI requirements apply to the Borated Refueling Water System.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Borated Refueling Water System will receive a system leakage test per IWC-5220 each inspection period.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

A Risk Informed Inservice Inspection (RI-ISI) Program has been applied to Code Class 1 and 2 piping welds at WCGS. This program is described in detail in Section 2.3.

No components in the BN system were selected for examination in the RI-ISI program.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table BN-1 (Period 1 Examinations), Table BN-2 (Period 2 Examinations), and Table BN-3 (Period 3 Examinations).

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

TABLE BN-2

Period 2 Examinations

System: BN

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
BN-01-H003	BN-01-01 SHT. 1	PIPING SUPPORT	24		VT-3	F-A	F1.20		

WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN

TABLE BN-3

Period 3 Examinations

System: BN

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request	
								Cal Block	or Notes
BN-01-R008	BN-01-01 SHT. 2	PIPING SUPPORT	8		VT-3	F-A	F1.20		
BN-01-R001	BN-01-01 SHT. 3	PIPING SUPPORT	12		VT-3	F-A	F1.20		

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.8 Essential Service Water System (EF)

A. Applicable System Piping and Instrument Drawings

1. M-12EF01-Essential Service Water System
2. M-12EF02-Essential Service Water System
3. M-K2EF01-Essential Service Water System
4. M-K2EF03-Essential Service Water System

B. Classification Of Components

Details of the classification of the Essential Service Water System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Essential Service Water System. These drawings are part of the M-189-50 series.

- | | | | | |
|-----|------------------|---------|-------------------------------------|-------------|
| 1. | M-189-50EF-01-01 | Sheet 1 | Essential Service Water "A" Train | Supply |
| 2. | M-189-50EF-01-01 | Sheet 2 | Essential Service Water "A" Train | Supply |
| 3. | M-189-50EF-01-02 | Sheet 1 | Essential Service Water "A" Train | Supply |
| 4. | M-189-50EF-01-02 | Sheet 2 | Essential Service Water "A" Train | Supply |
| 5. | M-189-50EF-01-03 | Sheet 1 | Essential Service Water "A" Train | Return |
| 6. | M-189-50EF-01-03 | Sheet 2 | Essential Service Water "A" Train | Return |
| 7. | M-189-50EF-01-07 | Sheet 1 | Essential Service Water "A" Train | Return |
| 8. | M-189-50EF-01-08 | Sheet 1 | Essential Service Water "A" Train | Supply |
| 9. | M-189-50EF-01-09 | Sheet 1 | Essential Service Water Containment | |
| | | | Cooling "A" Train | Supply |
| 10. | M-189-50EF-01-10 | Sheet 1 | Essential Service Water Containment | |
| | | | Cooling "A" Train | Return |
| 11. | M-189-50EF-02-01 | Sheet 1 | Essential Service Water "B" Train | Supply |
| 12. | M-189-50EF-02-01 | Sheet 2 | Essential Service Water "B" Train | Supply |
| 13. | M-189-50EF-02-01 | Sheet 3 | Essential Service Water "B" Train | Return |
| 14. | M-189-50EF-02-04 | Sheet 1 | Essential Service Water "B" Train | Supply |
| 15. | M-189-50EF-02-05 | Sheet 1 | Essential Service Water "B" Train | Return |
| 16. | M-189-50EF-02-05 | Sheet 2 | Essential Service Water "B" Train | Return |
| 17. | M-189-50EF-02-06 | Sheet 1 | Essential Service Water "B" Train | Supply |
| 18. | M-189-50EF-02-08 | Sheet 1 | Essential Service Water "B" Train | Supply |
| 19. | M-189-50EF-02-08 | Sheet 2 | Essential Service Water "B" Train | Supply |
| 20. | M-189-50EF-02-09 | Sheet 1 | Essential Service Water | Containment |
| | | | Cooling "B" Train | Supply |
| 21. | M-189-50EF-02-10 | Sheet 1 | Essential Service Water | Containment |
| | | | Cooling "B" Train | Return |

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.8 Essential Service Water System (EF)

F. Augmented ISI Requirements

No Augmented ISI requirements apply to the Essential Service Water System.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Essential Service Water System will receive a system leakage test per IWC-5220 each inspection period.

In accordance with Section XI, IWA-5000 and IWD-5000, the Class 3 pressure retaining components within the Essential Service Water System will receive a system leakage test per IWD-5221 every period and a system hydrostatic test per IWD-5222 at or near the end of the interval. As allowed by Code Case N-498-4, alternative rules may be employed in lieu of the system hydrostatic test of IWD-5222.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

A Risk Informed Inservice Inspection (RI-ISI) Program has been applied to Code Class 1 and 2 piping welds at WCGS. This program is described in detail in Section 2.3. Since the EPRI methodology used for the RI-ISI Program does not prescribe Code Examination Category and Item Numbers, the assignment of these designators is the same as utilized in Code Case N-578-1. No welds in the EF system were selected for examination in the RI-ISI program.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table EF-1 (Period 1 Examinations), Table EF-2 (Period 2 Examinations), and Table EF-3 (Period 3 Examinations).

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

TABLE EF-2

Period 2 Examinations

System: EF

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
GN-01-F036	EF-01-10	PIPING INTEGRAL ATTACHMENTS	14		PT	C-C	C3.20		
FEF02A-SUPPORT-2	EF-01-01 SHT. 1	VESSEL INTEGRAL ATTACHMENTS	30		VT-1	D-A	D1.10		
EF-03-C004	EF-01-03 SHT. 1	PIPING INTEGRAL ATTACHMENTS	24		VT-1	D-A	D1.20		
EF-06-A014	EF-02-06	PIPING INTEGRAL ATTACHMENTS	8		VT-1	D-A	D1.20		
EF-02-R017	EF-01-09	PIPING SUPPORT	14		VT-3	F-A	F1.20		
EF-06-C026	EF-01-02 SHT. 2	PIPING SUPPORT	8		VT-3	F-A	F1.30		
EF-03-C004	EF-01-03 SHT. 1	PIPING SUPPORT	24		VT-3	F-A	F1.30		
EF-03-H004	EF-01-03 SHT. 2	PIPING SUPPORT	16		VT-3	F-A	F1.30		
EF-03-R004	EF-01-03 SHT. 2	PIPING SUPPORT	14		VT-3	F-A	F1.30		
EF-08-H001	EF-01-07	PIPING SUPPORT	8		VT-3	F-A	F1.30		
EF-05-R005	EF-02-05 SHT. 1	PIPING SUPPORT	24		VT-3	F-A	F1.30		
EF-06-A014	EF-02-06	PIPING SUPPORT	8		VT-3	F-A	F1.30		
FEF02A-SUPPORT-1	EF-01-01 SHT. 1	VESSEL SUPPORT	30		VT-3	F-A	F1.40		
FEF02A-SUPPORT-2	EF-01-01 SHT. 1	VESSEL SUPPORT	30		VT-3	F-A	F1.40		

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

TABLE EF-3

Period 3 Examinations
System: EF

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Cal Block	Relief Request or Notes
EF-03-R021	EF-01-03 SHT. 1	PIPING INTEGRAL ATTACHMENTS	24		VT-1	D-A	D1.20		
EF-03-C016	EF-01-03 SHT. 2	PIPING INTEGRAL ATTACHMENTS	8		VT-1	D-A	D1.20		
PEF01A-SUPPORT-1	EF-01-01 SHT. 1	ESW PUMP INTEGRAL ATTACHMENT	30		VT-1	D-A	D1.30		
K-EF-11-R001	EF-01-01 SHT. 1	PIPING SUPPORT	30		VT-3	F-A	F1.30		
K-EF-11-R003	EF-01-01 SHT. 1	PIPING SUPPORT	30		VT-3	F-A	F1.30		
K-EF-11-R005	EF-01-01 SHT. 1	PIPING SUPPORT	30		VT-3	F-A	F1.30		
EF-01-C002	EF-01-01 SHT. 2	PIPING SUPPORT	30		VT-3	F-A	F1.30		
EF-02-A010	EF-01-01 SHT. 2	PIPING SUPPORT	18		VT-3	F-A	F1.30		
EF-03-R021	EF-01-03 SHT. 1	PIPING SUPPORT	24		VT-3	F-A	F1.30		
EF-03-C016	EF-01-03 SHT. 2	PIPING SUPPORT	8		VT-3	F-A	F1.30		
EF-07-C009	EF-01-07	PIPING SUPPORT	8		VT-3	F-A	F1.30		
EF-05-R013	EF-02-05 SHT. 1	PIPING SUPPORT	24		VT-3	F-A	F1.30		
EF-06-H001	EF-02-06	PIPING SUPPORT	8		VT-3	F-A	F1.30		

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WOLF CREEK GENERATING STATION THIRD INTERVAL ISI PROGRAM PLAN

4.1.9 Component Cooling Water System (EG)

A. Applicable System Piping and Instrument Drawings

1. M-12EG01-Component Cooling Water System
2. M-12EG02-Component Cooling Water System
3. M-12EG03-Component Cooling Water System

B. Classification Of Components

Details of the classification of the Component Cooling Water System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Component Cooling Water System. These drawings are part of the M-189-50 series.

1.	M-189-50EG-01-01	Sheet 1	Component Cooling Water "A" Train CCW Heat Exchanger
2.	M-189-50EG-01-02	Sheet 1	Component Cooling Water "A" Train Supply
3.	M-189-50EG-01-02	Sheet 2	Component Cooling Water "A" Train Return
4.	M-189-50EG-02-03	Sheet 1	Component Cooling Water "B" Train CCW Heat Exchanger
5.	M-189-50EG-02-03	Sheet 2	Component Cooling Water "B" Train
6.	M-189-50EG-02-05	Sheet 1	Component Cooling Water "B" Train Return
7.	M-189-50EG-02-05	Sheet 2	Component Cooling Water "B" Train Supply
8.	M-189-50EG-03-06	Sheet 1	Component Cooling Water Common Header
9.	M-189-50EG-03-07	Sheet 1	Component Cooling Water Common Header
10.	M-189-50EG-04-01	Sheet 1	Component Cooling Water RHR Heat Exchanger Supply
11.	M-189-50EG-04-01	Sheet 2	Component Cooling Water RHR Heat Exchanger Return
12.	M-189-50EG-05-06	Sheet 1	Component Cooling Water Letdown Heat Exchanger Supply
13.	M-189-50EG-05-06	Sheet 2	Component Cooling Water Letdown Heat Exchanger Return
14.	M-189-50EG-06-09	Sheet 1	Component Cooling Water RCP "B" & "C" Supply
15.	M-189-50EG-06-09	Sheet 2	Component Cooling Water RCP Return

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.9 Component Cooling Water System (EG)

F. Augmented ISI Requirements

No Augmented ISI requirements apply to the Component Cooling Water System.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWD-5000, the Class 3 pressure retaining components within the Component Cooling Water System will receive a system leakage test per IWD-5221 every period and a system hydrostatic test per IWD-5222 at or near the end of the interval. As allowed by Code Case N-498-4, alternative rules may be employed in lieu of the system hydrostatic test of IWD-5222.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

The RI-ISI Program is not applicable to the EG system.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table EG-1 (Period 1 Examinations), Table EG-2 (Period 2 Examinations), and Table EG-3 (Period 3 Examinations).

Period 2 Examinations

System: EG

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request	Notes
EBG01-SUPPORT-1	EG-05-06	LETDOWN HX INTEGRAL ATTACHMENT			VT-1	D-A	D1.10		
EBG01-SUPPORT-2	EG-05-06	LETDOWN HX INTEGRAL ATTACHMENT			VT-1	D-A	D1.10		
EG-04-A001	EG-04-01 SHT. 2	PIPING INTEGRAL ATTACHMENTS	18		VT-1	D-A	D1.20		
EG-06-C016	EG-05-06 SHT. 1	PIPING INTEGRAL ATTACHMENT	6		VT-1	D-A	D1.20		
EG-18-C001	EG-01-02 SHT. 1	PIPING SUPPORT	12		VT-3	F-A	F1.30		
EG-05-C003	EG-02-05 SHT. 1	PIPING SUPPORT	12		VT-3	F-A	F1.30		
EG-07-C003	EG-03-07	PIPING SUPPORT	12		VT-3	F-A	F1.30		
EG-04-H007	EG-04-01 SHT. 1	PIPING SUPPORT	18		VT-3	F-A	F1.30		
EG-04-A001	EG-04-01 SHT. 2	PIPING SUPPORT	18		VT-3	F-A	F1.30		
EG-04-C009	EG-04-01 SHT. 2	PIPING SUPPORT	18		VT-3	F-A	F1.30		
EG-06-C016	EG-05-06 SHT. 1	PIPING SUPPORT	6		VT-3	F-A	F1.30		
EG-09-C002	EG-06-09 SHT. 2	PIPING SUPPORT	10		VT-3	F-A	F1.30		
EG-17-R009	EG-06-09 SHT. 2	PIPING SUPPORT	6		VT-3	F-A	F1.30		
EBG01-SUPPORT-1	EG-05-06	LETDOWN HX SUPPORT			VT-3	F-A	F1.40		
EBG01-SUPPORT-2	EG-05-06	LETDOWN HX SUPPORT			VT-3	F-A	F1.40		

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TABLE EG- 3

Period 3 Examinations

System: EG

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request	Notes
EG-07-C021	EG-03-07	PIPING INTEGRAL ATTACHMENT	12		VT-1	D-A	D1.20		
EG-01-C001	EG-01-01	PIPING INTEGRAL ATTACHMENTS	20		VT-1	D-A	D1.20		
EG-02-H005	EG-01-02 SHT. 1	PIPING SUPPORT	12		VT-3	F-A	F1.30		
EG-18-H003	EG-01-02 SHT. 2	PIPING SUPPORT	12		VT-3	F-A	F1.30		
EG-03-H005	EG-02-03 SHT. 2	PIPING SUPPORT	20		VT-3	F-A	F1.30		
EG-05-C001	EG-02-05 SHT. 1	PIPING SUPPORT	12		VT-3	F-A	F1.30		
EG-18-H006	EG-02-05 SHT. 1	PIPING SUPPORT	12		VT-3	F-A	F1.30		
EG-07-C021	EG-03-07	PIPING SUPPORT	12		VT-3	F-A	F1.30		
EG-01-C001	EG-01-01	PIPING SUPPORT	20		VT-3	F-A	F1.30		
EG-09-R004	EG-06-09 SHT. 1	PIPING SUPPORT	10		VT-3	F-A	F1.30		
EG-12-C004	EG-06-09 SHT. 1	PIPING SUPPORT	8		VT-3	F-A	F1.30		
EG-07-R026	EG-03-07	PIPING SUPPORT	12		VT-3	F-A	F1.30		
PEG01A-SUP-1	EG-01-01	PUMP SUPPORT	18		VT-3	F-A	F1.40		
EEC01A-SUP-1	EG-01-02 SHT. 1	FUEL POOL COOLING HX SUPPORT			VT-3	F-A	F1.40		
EEC01A-SUP-2	EG-01-02 SHT. 1	FUEL POOL COOLING HX SUPPORT			VT-3	F-A	F1.40		
EEC01A-SUP-3	EG-01-02 SHT. 1	FUEL POOL COOLING HX SUPPORT			VT-3	F-A	F1.40		

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

4.1.10 Residual Heat Removal System (EJ)

A. Applicable System Piping and Instrument Drawings

1. M-12EJ01-Residual Heat Removal System

B. Classification Of Components

Details of the classification of the Residual Heat Removal System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Residual Heat Removal System. These drawings are part of the M-189-50 series.

1.	M-189-50EJ-01-01	Sheet 1	Residual Heat Removal "A" Train RHR Pump Suction
2.	M-189-50EJ-01-01	Sheet 2	Residual Heat Removal "A" Train RHR Pump Discharge
3.	M-189-50EJ-01-01	Sheet 3	Residual Heat Removal "A" Train RHR Pump Suction
4.	M-189-50EJ-01-01	Sheet 4	Residual Heat Removal "A" Train RHR Pump Discharge to Safety Injection
5.	M-189-50EJ-01-01	Sheet 5	Residual Heat Removal Return to Refueling Water Storage Tank
6.	M-189-50EJ-01-04	Sheet 1	Residual Heat Removal "A" Train RHR Pump Suction
7.	M-189-50EJ-02-02	Sheet 1	Residual Heat Removal "B" Train RHR Pump Suction
8.	M-189-50EJ-02-02	Sheet 2	Residual Heat Removal "B" Train RHR Pump Discharge
9.	M-189-50EJ-02-02	Sheet 3	Residual Heat Removal "B" Train RHR Pump Suction
10.	M-189-50EJ-02-02	Sheet 4	Residual Heat Removal "B" Train RHR Pump Discharge to Safety Injection
11.	M-189-50EJ-02-02	Sheet 5	Residual Heat Removal "B" Train RHR Pump Discharge to Safety Injection
12.	M-189-50EJ-02-04	Sheet 1	Residual Heat Removal "B" Train RHR Pump Suction

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D. Applicable ISI Isometrics and ISI Equipment Drawings (Cont'd)

13.	M-189-50EJ-02-04	Sheet 2	Residual Heat Removal "B" Train RHR Pump Discharge to Accumulator Injection
14.	M-189-50EJ-02-04	Sheet 3	Residual Heat Removal "B" Train RHR Pump Discharge to Safety Injection Loop No. 2 & 3
15.	M-189-50ISI-EEJ01A	Sheet 1	RHR Heat Exchanger "A" EEJ01A
16.	M-189-50ISI-EEJ01B	Sheet 1	RHR Heat Exchanger "B" EEJ01B
17.	M-189-50ISI-PUMPS	Sheet 1	ISI Pumps

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THIRD INTERVAL ISI PROGRAM PLAN**

4.1.10 Residual Heat Removal System (EJ)

F. Augmented ISI Requirements

No Augmented ISI requirements apply to the Residual Heat Removal System.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWB-5000, the Class 1 pressure retaining components within the Residual Heat Removal System will receive a system leakage test per IWB-5220 prior to plant startup following each refueling outage.

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Residual Heat Removal System will receive a system leakage test per IWC-5220 each inspection period.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

A Risk Informed Inservice Inspection (RI-ISI) Program has been applied to Code Class 1 and 2 piping welds at WCGS. This program is described in detail in Section 2.3. Residual Heat Removal System welds selected for examination per the RI-ISI program are listed in Tables EJ-1, EJ-2 and EJ-3. Since the EPRI methodology used for the RI-ISI Program does not prescribe Code Examination Category and Item Numbers, guidance was taken from Code Case N-578-1 for the assignment of these designators.

When a specific degradation mechanism (DM) exists at a selected location, then the volume to be examined shall be as recommended in Section 4 of EPRI TR-112657 Rev. B-A. Welds subject to a DM are identified by a note in the Table. Welds selected that have no associated DM shall have the volume examined as shown in Figures 4.1-4 of TR-112657 Rev. B-A.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table EJ-1 (Period 1 Examinations), Table EJ-2 (Period 2 Examinations), and Table EJ-3 (Period 3 Examinations). The following Notes apply to the tables:

1. Bolting is required to be examined only when a connection is disassembled or bolting is removed. For valves, examination of bolting is required only when the component is examined under Examination Category B-M-2. Examination of bolted connection is required only once during the interval. See Code Case N-652, Category B-G-2, Notes 1 and 2.
2. Examination of the valve internal surface is required only when a valve is disassembled for maintenance, repair, or volumetric examination. To aid in scheduling, the valve has been included in each inspection period. However, examination will be performed only once during the inspection interval and is limited to one valve within a group of valves that are the same size, constructional design, and manufacturing methods and which performs a similar function in the system. Examination may be alternatively performed on another valve within the group. If a valve has not been disassembled, examination is deferrable to subsequent periods. (Reference PIR 97-2539)
3. These welds have been selected per the RI-ISI Program. The requirements for examination of these welds are included in Paragraph H above.
4. These welds have Thermal Fatigue identified as the degradation mechanism.

WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN

TABLE EJ-1

Period 1 Examinations

System: EJ

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
EJ-04-R008	EJ-02-04 SHT. 3	PIPING SUPPORT	6		VT-3	F-A	F1.20		
PEJ01A-SUP-1	EJ-01-01 SHT. 2	RHR PUMP A SUPPORT	8	0.322	VT-3	F-A	F1.40		
PEJ01A-SUP-2	EJ-01-01 SHT. 2	RHR PUMP A SUPPORT	8	0.322	VT-3	F-A	F1.40		
PEJ01A-SUP-3	EJ-01-01 SHT. 2	RHR PUMP A SUPPORT	8	0.322	VT-3	F-A	F1.40		
EJ-04-S010-B	EJ-02-04 SHT. 1	12" PIPE TO 12" ELBOW	12	1.125	UT	R-A	R1.20	126	3
EJ-01-FW342	EJ-01-01 SHT. 4	10" ELBOW TO 10" PIPE	10	0.365	UT	R-A	R1.20	204	3
EJ-01-FW343	EJ-01-01 SHT. 4	10" PIPE TO 10" ELBOW	10	0.365	UT	R-A	R1.20	204	3
EJ-01-S025-B	EJ-01-01 SHT. 5	10" PIPE TO 10" ELBOW	10	0.365	UT	R-A	R1.20	204	3
EJ-04-FW312	EJ-01-01 SHT. 4	6" PIPE TO 10" X 10" X 6" TEE	6	0.719	UT	R-A	R1.20	117	3
EJ-01-S025-C	EJ-01-01 SHT. 5	10" ELBOW TO 10" PIPE	10	0.365	UT	R-A	R1.20	204	3
EJ-02-FW339	EJ-02-02 SHT. 2	10" X 8" REDUCER TO 10" PIPE	10	0.365	UT	R-A	R1.20	204	3
EJ-02-S034-C	EJ-02-02 SHT. 4	10" PIPE TO 10" ELBOW	10	0.365	UT	R-A	R1.20	204	3
EJ-02-S034-D	EJ-02-02 SHT. 4	10" ELBOW TO 10" PIPE	10	0.365	UT	R-A	R1.20	204	3
EJ-04-S025-B	EJ-01-01 SHT. 4	10" X 10" X 6" TO 10" PIPE	10	1	UT	R-A	R1.20	122	3
EJ-01-FW358	EJ-01-01 SHT. 2	8" FLANGE TO 8" PIPE	8	0.322	UT	R-A	R1.20	203	3

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TABLE EJ-1

Period 1 Examinations

System: EJ

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
EJ-01-S016-B	EJ-01-01 SHT. 3	8" PIPE TO 8" ELBOW	8	0.322	UT	R-A	R1.20	203	3
EJ-01-S016-C	EJ-01-01 SHT. 3	8" ELBOW TO 8" PIPE	8	0.322	UT	R-A	R1.20	203	3
EJ-03-S003-F	EJ-02-02 SHT. 3	8" ELBOW TO 8" PIPE	8	0.322	UT	R-A	R1.20	203	3
EJ-03-S003-H	EJ-02-02 SHT. 3	8" ELBOW TO 8" PIPE	8	0.322	UT	R-A	R1.20	203	3

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TABLE EJ-2

Period 2 Examinations

System: EJ

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
EJ-01-S024-F	EJ-01-01 SHT. 4	10" TEE TO 10" PIPE	10	0.365	UT	R-A	R1.20	204	3
EJ-02-F050	EJ-02-02 SHT. 5	10" PIPE TO 10" ELBOW	10	0.365	UT	R-A	R1.20	204	3
EJ-02-S022-B	EJ-02-02 SHT. 3	10" PIPE TO 10" X 10" X 8" TEE	10	0.365	UT	R-A	R1.20	204	3
EJ-02-S022-D	EJ-02-02 SHT. 3	10" X 10" X 8" TEE TO 10" PIPE	10	0.365	UT	R-A	R1.20	204	3
EJ-02-S045-B	EJ-02-02 SHT. 5	10" ELBOW TO 10" PIPE	10	0.365	UT	R-A	R1.20	204	3
EJ-02-FW311	EJ-02-02 SHT. 3	8" PIPE TO 10" X 10" X 8" TEE	8	0.322	UT	R-A	R1.20	203	3

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TABLE EJ-3

Period 3 Examinations

System: EJ

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
EJ-04-HV-8701A-b	EJ-01-04	VALVE HV-8701A BOLTING	12		VT-1	B-G-2	B7.70		1
EJ-04-8841A-b	EJ-02-04 SHT. 3	VALVE 8841A BOLTING	6		VT-1	B-G-2	B7.70		1
EJ-04-BB-PV-8702A-SURF	EJ-01-04	VALVE PV-8702A INTERNAL PRESSURE SURFACE	12		VT-3	B-M-2	B12.50		2
EJ-04-HV-8701A-SURF	EJ-01-04	VALVE HV-8701A INTERNAL PRESSURE SURFACE	12		VT-3	B-M-2	B12.50		2
EJ-04-8841A-SURF	EJ-02-04 SHT. 3	VALVE 8841A INTERNAL PRESSURE SURFACE	6		VT-3	B-M-2	B12.50		2
EEJ01A-SEAM-1-W	ISI-EEJ01A SHT. 1	BONNET FLANGE TO CHANNEL WELD	NA	0.88	UT	C-A	C1.10	172	
EEJ01A-SEAM-2-W	ISI-EEJ01A SHT. 1	CHANNEL TO HEAD WELD	NA	0.88	UT	C-A	C1.20	172	
EEJ01A-NA-1	ISI-EEJ01A SHT. 1	NOZZLE A TO SHELL WELD (INLET)			VT-2	C-B	C2.33		
EEJ01A-SKIRT-W	ISI-EEJ01A SHT. 1	SUPPORT SKIRT WELD			PT	C-C	C3.10		
EJ-01-C015	EJ-01-01 SHT. 3	PIPING INTEGRAL ATTACHMENTS	8		PT	C-C	C3.20		
EJ-02-C012	EJ-02-02 SHT. 4	PIPING INTEGRAL ATTACHMENTS (8 LUGS)	10		PT	C-C	C3.20		
PEJ01A-SUP-1	EJ-01-01 SHT. 2	RHR PUMP A INTEGRALLY WELDED ATTACHMENTS	8		PT	C-C	C3.30		
EEJ01A-SUP-1	ISI-EEJ01A SHT. 1	SUPPORT LUG TO SHELL WELD			VT-1	D-A	D1.10		
EEJ01A-SUP-2	ISI-EEJ01A SHT. 1	SUPPORT LUG TO SHELL WELD			VT-1	D-A	D1.10		

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4.1.10 Residual Heat Removal System (EJ)

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TABLE EJ-3

Period 3 Examinations

System: EJ

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
EJ-04-H007	EJ-01-04	PIPING SUPPORT	12		VT-3	F-A	F1.10		
EJ-04-C020	EJ-02-04 SHT. 1	PIPING SUPPORT	12		VT-3	F-A	F1.10		
EJ-01-C015	EJ-01-01 SHT. 3	PIPING SUPPORT	8		VT-3	F-A	F1.20		
EJ-01-R016	EJ-01-01 SHT. 1	PIPING SUPPORT	14		VT-3	F-A	F1.20		
EJ-01-R019	EJ-01-01 SHT. 1	PIPING SUPPORT	14		VT-3	F-A	F1.20		
EJ-01-R006	EJ-01-01 SHT. 2	PIPING SUPPORT	10		VT-3	F-A	F1.20		
EJ-02-R023	EJ-02-02 SHT. 3	PIPING SUPPORT	10		VT-3	F-A	F1.20		
EJ-02-C012	EJ-02-02 SHT. 4	PIPING SUPPORT	10		VT-3	F-A	F1.20		
EJ-04-R010	EJ-02-04 SHT. 2	PIPING SUPPORT	6		VT-3	F-A	F1.20		
EJ-04-C011	EJ-02-04 SHT. 3	PIPING SUPPORT	6		VT-3	F-A	F1.20		
EEJ01A-SKIRT-W	ISI-EEJ01A SHT. 1	RHR HX SUPPORT			VT-3	F-A	F1.40		
EEJ01A-SUP-1	ISI-EEJ01A SHT. 1	RHR HX SUPPORT			VT-3	F-A	F1.40		
EEJ01A-SUP-2	ISI-EEJ01A SHT. 1	RHR HX SUPPORT			VT-3	F-A	F1.40		
EJ-04-F048A	EJ-01-04	12" PIPE TO VALVE HV-8701A	12	1.125	UT	R-A	R1.11	126	3, 4

WOLF CREEK GENERATING STATION THIRD INTERVAL ISI PROGRAM PLAN

TABLE EJ-3

Period 3 Examinations

System: EJ

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
EJ-04-S016-G	EJ-02-04 SHT. 1	12" PIPE TO 12" ELBOW	12	1.125	UT	R-A	R1.11	126	3, 4
EJ-04-S016-H	EJ-02-04 SHT. 1	12" ELBOW TO 12" PIPE	12	1.125	UT	R-A	R1.11	126	3, 4
EP-01-F009	EJ-01-01 SHT. 4	6" PIPE TO VALVE 8818A	6	0.719	UT	R-A	R1.11	117	3, 4
EP-02-F022A	EJ-02-04 SHT. 2	6" PIPE TO VALVE 8818C	6	0.719	UT	R-A	R1.11	117	3, 4
EP-01-F021	EJ-02-04 SHT. 2	6" PIPE TO VALVE 8818D	6	0.719	UT	R-A	R1.11	117	3, 4
EJ-04-S014-D	EJ-02-04 SHT. 1	12" ELBOW TO 12" PIPE	12	1.125	UT	R-A	R1.20	126	3
EJ-01-F005	EJ-01-01 SHT. 1	14" PIPE TO 14" ELBOW	14	0.438	UT	R-A	R1.20	192	3
EJ-01-FW311B	EJ-01-01 SHT. 1	12" ELBOW TO 12" PIPE	12	0.375	UT	R-A	R1.20	183	3
EJ-01-FW333	EJ-01-01 SHT. 1	12" PIPE TO 12" PIPE	12	0.375	UT	R-A	R1.20	183	3
EJ-01-S021-E	EJ-01-01 SHT. 2	10" PIPE TO 10" ELBOW	10	0.365	UT	R-A	R1.20	204	3
EJ-01-S021-F	EJ-01-01 SHT. 2	10" ELBOW TO 10" PIPE	10	0.365	UT	R-A	R1.20	204	3
EJ-01-S026-E	EJ-01-01 SHT. 5	8" PIPE TO 8" ELBOW	8	0.322	UT	R-A	R1.20	203	3
EJ-02-F021	EJ-02-02 SHT. 2	10" TEE TO 10" PIPE	10	0.365	UT	R-A	R1.20	204	3
EJ-02-F031	EJ-02-02 SHT. 4	10" TEE TO 10" PIPE	10	0.365	UT	R-A	R1.20	204	3

**WOLF CREEK GENERATING STATION
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4.1.11 High Pressure Coolant Injection System (EM)

A. Applicable System Piping and Instrument Drawings

1. M-12EM01-High Pressure Coolant Injection System
2. M-12EM02-High Pressure Coolant Injection System*

* Except for ASME Class 2 components listed in Section 4.3

B. Classification Of Components

Details of the classification of the High Pressure Coolant Injection System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

Note: for purposes of determining which EM system components are exempt based on size (i.e., NPS 4 inch vs NPS 1½ inch for High Pressure Safety Injection systems), the pumps in the EM system, PEM01A and PEM01B, are defined as Intermediate Pressure Safety Injection Pumps (reference USAR Table 6.2.1-3). Thus, the NPS 4 inch exemption is applied. The Centrifugal Charging Pumps (CCPs), PBG05A and PBG05B, are considered the High Head Safety Injection Pumps. Thus, the CCPs and components associated with the boration flowpath to the RCS are subject to the NPS 1½ inch exemption rule. See the ISI Classification Basis Document for definition of which lines fall under each exemption.

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the High Pressure Coolant Injection System. These drawings are part of the M-189-50 series.

1.	M-189-50EM-01-01	Sheet 1	High Pressure Coolant Injection Safety Injection Pump "A" Suction
2.	M-189-50EM-02-01	Sheet 1	High Pressure Coolant Injection Safety Injection Pump "B" Discharge
3.	M-189-50EM-03-05	Sheet 1	High Pressure Coolant Injection Safety Injection Pumps to RHR System
4.	M-189-50EM-04-03	Sheet 1	High Pressure Coolant Injection Safety Injection Pumps to RCS
5.	M-189-50EM-05-01	Sheet 1	High Pressure Coolant Injection Safety Injection Pump Suction Cross Tie
6.	M-189-50EM-05-01	Sheet 2	High Pressure Coolant Injection Safety Injection Pump Suction Cross Tie to CVCS
7.	M-189-50EM-06-02	Sheet 1	High Pressure Coolant Injection HPSI Discharge to RCS
8.	M-189-50EM-06-02	Sheet 2	High Pressure Coolant Injection HPSI Discharge to RCS

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D. Applicable ISI Isometrics and ISI Equipment Drawings (Cont'd)

- | | | | |
|-----|-------------------|---------|----------------------------------------------------------|
| 9. | M-189-50EM-06-03 | Sheet 1 | High Pressure Coolant Injection HPSI
Discharge to RCS |
| 10. | M-189-50ISI-PUMPS | Sheet 1 | ISI Pumps |

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TABLE 1 SECTION XI AND AUGMENTED COMPONENT SUMMARY AND SCHEDULE									
<u>COMPONENT OR ITEM DESCRIPTION</u>	<u>CODE CATEGORY</u>	<u>CODE ITEM NO.</u>	<u>AUG. CATEGORY</u>	<u>AUG ITEM NO.</u>	<u>TOTAL IN SYSTEM</u>	<u>EXAMS BY PERIOD & INTERVAL</u>			
						<u>P1</u>	<u>P2</u>	<u>P3</u>	<u>INTERVAL</u>
EQUIPMENT SUPPORTS (OTHER THAN PIPING)	F-A	F1.40	-	-	4	1	2	1	4
PIPING WELDS SUBJECT TO THERMAL FATIGUE	R-A Note 2	R1.11 Note 2	-	-	8	0	0	0	0
PIPING WELDS SUBJECT TO IGSCC or TGSCC	R-A Note 2	R1.16 Note 2	-	-	20	0	0	2	2
PIPING WELDS NOT SUBJECT TO A DAMAGE MECHANISM	R-A Note 2	R1.20 Note 2	-	-	369	2	1	0	3

Note 1: Examination of Pressure Retaining Bolting is performed in accordance with Code Case N-652. See Notes 1 and 2 in Paragraph I for selection and scheduling criteria.

Note 2: See Section H for an explanation of Category R-A and Item R1.xx nomenclature.

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4.1.11 High Pressure Coolant Injection System (EM)

F. Augmented ISI Requirements

No Augmented ISI requirements apply to the High Pressure Coolant Injection System.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWB-5000, the Class 1 pressure retaining components within the High Pressure Coolant Injection System will receive a system leakage test per IWB-5220 prior to plant startup following each refueling outage.

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the High Pressure Coolant Injection System will receive a system leakage test per IWC-5220 each inspection period.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

A Risk Informed Inservice Inspection (RI-ISI) Program has been applied to Code Class 1 and 2 piping welds at WCGS. This program is described in detail in Section 2.3. High Pressure Coolant Injection System welds selected for examination per the RI-ISI program are listed in Tables EM-1, EM-2 and EM-3. Since the EPRI methodology used for the RI-ISI Program does not prescribe Code Examination Category and Item Numbers, guidance was taken from Code Case N-578-1 for the assignment of these designators.

When a specific degradation mechanism (DM) exists at a selected location, then the volume to be examined shall be as recommended in Section 4 of EPRI TR-112657 Rev. B-A. Welds subject to a DM are identified by a note in the Table. Welds selected that have no associated DM shall have the volume examined as shown in Figures 4.1-4 of TR-112657 Rev. B-A.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table EM-1 (Period 1 Examinations), Table EM-2 (Period 2 Examinations), and Table EM-3 (Period 3 Examinations). The following Notes apply to the tables:

1. Bolting is required to be examined only when a connection is disassembled or bolting is removed. The examination of flange bolting in piping systems may be limited to one bolted connection among a group of bolted connections that are similar in design, size, function, and service. Examination of bolted connection is required only once during the interval. See Code Case N-652, B-G-2, Notes 1 and 3.

2. Bolting is required to be examined only when a connection is disassembled or bolting is removed. For valves, examination of bolting is required only when the component is examined under Examination Category B-M-2. Examination of bolted connection is required only once during the interval. See Code Case N-652, Category B-G-2, Notes 1 and 2.

3. Examination of the valve internal surface is required only when a valve is disassembled for maintenance, repair, or volumetric examination. To aide in scheduling, the valve has been included in each inspection period. However, examination will be performed only once during the inspection interval and is limited to one valve within a group of valves that are the same size, constructional design, and manufacturing methods and which performs a similar function in the system. Examination may be alternatively performed on another valve within the group. If a valve has not been disassembled, examination is deferrable to subsequent periods. (Reference PIR 97-2539)

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4. These welds have been selected per the RI-ISI Program. The requirements for examination of these welds are included in Paragraph H above.
5. These welds have IGSCC identified as the degradation mechanism.

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[illegible]

Period 1 Examinations

System: EM

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TABLE EM-2
Period 2 Examinations
System: EM

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
EM-05-BB-8949D-b	EM-03-05	VALVE 8949D BOLTING	6		VT-1	B-G-2	B7.70		2
EM-05-BB-8949A-SURF	EM-03-05	VALVE 8949A INTERNAL PRESSURE SURFACE	6		VT-3	B-M-2	B12.50		3
TEM01-SEAM-2-W	EM-06-02 SHT. 2	TOP HEAD TO SHELL WELD	NA	2.00	UT	C-A	C1.20	144	
TEM01-SEAM-3-W	EM-06-02 SHT. 2	BOTTOM HEAD TO SHELL WELD	NA	2.00	UT	C-A	C1.20	144	
TEM01-1-W	EM-06-02 SHT. 2	OUTLET NOZZLE TO TOP HEAD WELD	NA	2.00	UT/PT	C-B	C2.21	144	
TEM01-4-W	EM-06-02 SHT. 2	INLET NOZZLE TO BOTTOM HEAD WELD	NA	2.00	UT/PT	C-B	C2.21	144	
TEM01-SUPPORT-2	EM-06-02 SHT. 2	VESSEL INTEGRAL ATTACHMENTS			PT	C-C	C3.10		
EM-02-R010	EM-06-02 SHT. 1	PIPING INTEGRAL ATTACHMENTS	4		PT	C-C	C3.20		
PEM01A-F-1	EM-01-01	SI PUMP A FLANGE TO PUMP CASING WELD	6	0.28	PT	C-G	C6.10		
EM-05-C008	EM-03-05	PIPING SUPPORT	2		VT-3	F-A	F1.10		
EM-05-R004	EM-03-05	PIPING SUPPORT	2		VT-3	F-A	F1.10		
EM-03-C008	EM-06-03	PIPING SUPPORT	3		VT-3	F-A	F1.10		
EM-03-C035	EM-06-03	PIPING SUPPORT	1.5		VT-3	F-A	F1.10		
EM-03-C047	EM-06-03	PIPING SUPPORT	1.5		VT-3	F-A	F1.10		

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TABLE EM-2

Period 2 Examinations

System: EM

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
EM-03-R016	EM-06-03	PIPING SUPPORT	1.5		VT-3	F-A	F1.10		
EM-01-C044	EM-01-01	PIPING SUPPORT	8		VT-3	F-A	F1.20		
EM-01-R031	EM-01-01	PIPING SUPPORT	6		VT-3	F-A	F1.20		
EM-01-C017	EM-05-01 SHT. 1	PIPING SUPPORT	6		VT-3	F-A	F1.20		
EM-01-H003	EM-05-01 SHT. 1	PIPING SUPPORT	6		VT-3	F-A	F1.20		
EM-01-H016	EM-05-01 SHT. 1	PIPING SUPPORT	6		VT-3	F-A	F1.20		
EM-02-R010	EM-06-02 SHT. 1	PIPING SUPPORT	4		VT-3	F-A	F1.20		
TEM01-SUPPORT-2	EM-06-02 SHT. 2	B.I.T. TANK SUPPORT			VT-3	F-A	F1.40		
TEM01-SUPPORT-3	EM-06-02 SHT. 2	B.I.T. TANK SUPPORT			VT-3	F-A	F1.40		
EM-03-S015-B	EM-04-03	6" PIPE TO 6" ELBOW	6	0.719	UT	R-A	R1.20	117	4

**WOLF CREEK GENERATING STATION
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4.1.12 Containment Spray System (EN)

A. Applicable System Piping and Instrument Drawings

1. M-12EN01-Containment Spray System

B. Classification Of Components

Details of the classification of the Containment Spray System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Containment Spray System. These drawings are part of the M-189-50 series.

- | | | |
|----|--------------------------|--------------------------------------------|
| 1. | M-189-50EN-01-01 Sheet 1 | Containment Spray "A" Train Pump Suction |
| 2. | M-189-50EN-01-01 Sheet 2 | Containment Spray "A" Train Pump Discharge |
| 3. | M-189-50EN-02-02 Sheet 1 | Containment Spray "B" Train Pump Suction |
| 4. | M-189-50EN-02-02 Sheet 2 | Containment Spray "B" Train Pump Discharge |
| 5. | M-189-50ISI-PUMPS | Sheet 1 ISI Pumps |

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4.1.12 Containment Spray System (EN)

E. Summary Of Components Subject To Section XI and Augmented NDE/Scheduled For Examination

Table 1 is a summary of the components and items subject to NDE per ASME Section XI or per Augmented requirements. A detailed listing of these components and items is maintained in the ISI Database.

TABLE 1 SECTION XI AND AUGMENTED COMPONENT SUMMARY AND SCHEDULE									
<u>COMPONENT OR ITEM DESCRIPTION</u>	<u>CODE CATEGORY</u>	<u>CODE ITEM NO.</u>	<u>AUG. CATEGORY</u>	<u>AUG ITEM NO.</u>	<u>TOTAL IN SYSTEM</u>	<u>P1</u>	<u>P2</u>	<u>P3</u>	<u>EXAMS BY PERIOD & INTERVAL INTERVAL</u>
PIPING WELDED ATTACHMENTS	C-C	C3.20	-	-	5	0	0	1	1
PUMP WELDED ATTACHMENTS	C-C	C3.30	-	-	6	0	0	1	1
PIPING SUPPORTS	F-A	F1.20	-	-	22	1	1	2	4
SUPPORTS OTHER THAN PIPING SUPPORTS	F-A	F1.40	-	-	6	3	0	0	3
PIPING WELDS NOT SUBJECT TO A DAMAGE MECHANISM.	R-A Note 1	R1.20 Note 1	-	-	93	0	0	0	0

Note 1: See Section H for an explanation of Category R-A and Item R1.xx nomenclature.

IMAGED 01/25/2006

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4.1.12 Containment Spray System (EN)

F. Augmented ISI Requirements

No Augmented ISI requirements apply to the Containment Spray System.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Containment Spray System will receive a system leakage test per IWC-5220 each inspection period.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

A Risk Informed Inservice Inspection (RI-ISI) Program has been applied to Code Class 1 and 2 piping welds at WCGS. This program is described in detail in Section 2.3. Since the EPRI methodology used for the RI-ISI Program does not prescribe Code Examination Category and Item Numbers, the assignment of these designators is the same as utilized in Code Case N-578-1. No welds in the Containment Spray System were selected for examination in the RI-ISI program.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table EN-1 (Period 1 Examinations), Table EN-2 (Period 2 Examinations), and Table EN-3 (Period 3 Examinations).

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TABLE EN-1

Period 1 Examinations

System: EN

Component Name	Drawing Number	Component	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
EN-02-H005	EN-02-02 SHT. 2	PIPING SUPPORT	10		VT-3	F-A	F1.20		
PEN01A-SUP-1	EN-01-01 SHT. 1	CONTAINMENT SPRAY "A" PUMP SUPPORT	12		VT-3	F-A	F1.40		
PEN01A-SUP-2	EN-01-01 SHT. 1	CONTAINMENT SPRAY "A" PUMP SUPPORT	12		VT-3	F-A	F1.40		
PEN01A-SUP-3	EN-01-01 SHT. 1	CONTAINMENT SPRAY "A" PUMP SUPPORT	12		VT-3	F-A	F1.40		

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TABLE EN-2

Period 2 Examinations

System: EN

Component Name	Drawing Number	Component	Size	Thickness	NDE Method	Category	Item	Cal Block	Relief Request or
									Notes
EN-02-R004	EN-02-02 SHT. 2	PIPING SUPPORT	10		VT-3	F-A	F1.20		

**WOLF CREEK GENERATING STATION
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4.1.13 Accumulator Safety Injection System (EP)

A. Applicable System Piping and Instrument Drawings

1. M-12EP01-Accumulator Safety Injection System

B. Classification Of Components

Details of the classification of the Accumulator Safety Injection System components for ISI are in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Accumulator Safety Injection System. These drawings are part of the M-189-50 series.

1.	M-189-50EP-01-01	Sheet 1	Accumulator Safety Injection Loop 1
2.	M-189-50EP-02-02	Sheet 1	Accumulator Safety Injection Loop 2
3.	M-189-50EP-03-02	Sheet 1	Accumulator Safety Injection Loop 3
4.	M-189-50EP-04-01	Sheet 1	Accumulator Safety Injection Loop 4

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4.1.13 Accumulator Safety Injection System (EP)

F. Augmented ISI Requirements

No Augmented ISI requirements apply to the Accumulator Safety Injection System.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWB-5000, the Class 1 pressure retaining components within the High Pressure Coolant Injection will receive a system leakage test per IWB-5220 prior to plant startup following each refueling outage.

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Accumulator Safety Injection System will receive a system leakage test per IWC-5220 each inspection period.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

A Risk Informed Inservice Inspection (RI-ISI) Program has been applied to Code Class 1 and 2 piping welds at WCGS. This program is described in detail in Section 2.3. Accumulator Safety Injection System welds selected for examination per the RI-ISI program are listed in Tables EP-1, EP-2 and EP-3. Since the EPRI methodology used for the RI-ISI Program does not prescribe Code Examination Category and Item Numbers, guidance was taken from Code Case N-578-1 for the assignment of these designators.

When a specific degradation mechanism (DM) exists at a selected location, then the volume to be examined shall be as recommended in Section 4 of EPRI TR-112657 Rev. B-A. Welds subject to a DM are identified by a note in the Table. Welds selected that have no associated DM shall have the volume examined as shown in Figures 4.1-4 of TR-112657 Rev. B-A.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table EP-1 (Period 1 Examinations), Table EP-2 (Period 2 Examinations), and Table EP-3 (Period 3 Examinations). The following Notes apply to the tables:

1. Examination of Pressure Retaining Bolting is performed in accordance with Code Case N-652. Bolting is required to be examined only when a connection is disassembled or bolting is removed. For valves, examination of bolting is required only when the component is examined under Examination Category B-M-2. Examination of bolted connection is required only once during the interval. See Code Case N-652, Category B-G-2, Notes 1 and 2.

2. Examination of the valve internal surface is required only when a valve is disassembled for maintenance, repair, or volumetric examination. To aide in scheduling, the valve has been included in each inspection period. However, examination will be performed only once during the inspection interval and is limited to one valve within a group of valves that are the same size, constructional design, and manufacturing methods and which performs a similar function in the system. Examination may be alternatively performed on another valve within the group. If a valve has not been disassembled, examination is deferrable to subsequent periods. (Reference PIR 97-2539)

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3. These welds have been selected per the RI-ISI Program. The requirements for examination of these welds is given in Paragraph H above.
4. These welds have IGSCC identified as the degradation mechanism.

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TABLE EP-3

Period 3 Examinations

System: EP

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
EP-01-8818A-SURF	EP-01-01	VALVE 8818A INTERNAL PRESSURE SURFACE	6		VT-3	B-M-2	B12.50		2
EP-01-BB-8948A-SURF	EP-01-01	VALVE 8948A INTERNAL PRESSURE SURFACE	10		VT-3	B-M-2	B12.50		2
EP-01-R013	EP-01-01	PIPING SUPPORT	10		VT-3	F-A	F1.10		
EP-01-C004	EP-04-01	PIPING SUPPORT	2		VT-3	F-A	F1.10		
EP-01-R001	EP-04-01	PIPING SUPPORT	6		VT-3	F-A	F1.10		
EP-01-S003-K	EP-01-01	10" PIPE TO 10" ELBOW	10	1	UT	R-A	R1.16	122	3, 4
EP-01-S003-L	EP-01-01	10" ELBOW TO 10" PIPE	10	1	UT	R-A	R1.16	122	3, 4

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4.1.14 Auxiliary Feedwater Pump Turbine System (FC)

A. Applicable System Piping and Instrument Drawings

1. M-12FC02-Auxiliary Feedwater Pump Turbine System

B. Classification Of Components

Details of the classification of the Auxiliary Feedwater Pump System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Auxiliary Feedwater Pump System. This drawing is part of the M-189-50 series.

- | | | |
|----|------------------|---------------------------------------------------------------------------------------|
| 1. | M-189-50FC-01-01 | Sheet 1 Auxiliary Turbines Auxiliary
Feedwater Pump Turbine Steam Supply Piping |
|----|------------------|---------------------------------------------------------------------------------------|

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4.1.14 Auxiliary Feedwater Pump Turbine System (FC)

F. Augmented ISI Requirements

The following Augmented ISI requirements apply to the Auxiliary Feedwater Pump System:

1. WCGS USAR Sections 3.6.1, Postulated Piping Failures In Fluid Systems Inside and Outside Containment and 3.6.2, Determination Of Break Locations and Dynamic Effects Associated With The Postulated Rupture Of Piping- WCGS has implemented a Risk Informed-High Energy Line Break program as an alternative to the examination methodology of USNRC Branch Technical Position MEB 3-1. This program is maintained in WCRE-14 and is applicable to the piping within the "no break zone" associated with high energy piping in containment penetration areas. The "no break zone" is an area where pipe breaks were not postulated due to the stress levels being within limits specified in USAR Section 3.6.2. The applicable welds are shown on the Auxiliary Feedwater Pump System Isometrics within the "No Break Zone" and included in Tables FC-1, FC-2, and FC-3 with Category "USAR" and Item No. "3.6.2".

When a specific degradation mechanism (DM) exists at a selected location, then the volume to be examined shall be as recommended in Section 4 of EPRI TR-112657 Rev. B-A. Welds subject to a DM are identified by a note in the Table. Welds selected that have no associated DM shall have the volume examined as shown in Figures 4.1-4 of TR-112657 Rev. B-A.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components within the Auxiliary Feedwater Pump System will receive a system leakage test per IWC-5220 each inspection period.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

The RI-ISI Program is not applicable to the FC system.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table FC-1 (Period 1 Examinations), Table FC-2 (Period 2 Examinations), and Table FC-3 (Period 3 Examinations).

**WOLF CREEK GENERATING STATION
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Period 1 Examinations

System: FC

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
FC-01-F022	FC-01-01	VALVE V001 TO 4" PIPE	4	0.337	UT	USAR	3.6.2	159	
FC-01-F023	FC-01-01	4" PIPE TO VALVE V024	4	0.337	UT	USAR	3.6.2	159	

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TABLE FC-2

Period 2 Examinations

System: FC

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request or	
								Cal Block	Notes
FC-01-S021-C	FC-01-01	4" PIPE TO 4" ELBOW	4	0.337	UT	USAR	3.6.2	159	

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4.1.15 Containment Cooling System (GN)

A. Applicable System Piping and Instrument Drawings

1. M-12GN01-Containment Cooling System

B. Classification Of Components

Details of the classification of the Containment Cooling System components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Containment Cooling System. These drawings are part of the M-189-50 series.

1.	M-189-50GN-01-01	Sheet 1	Containment Cooling System "A" Train Supply
2.	M-189-50GN-01-01	Sheet 2	Containment Cooling System "A" Train Return
3.	M-189-50GN-01-01	Sheet 3	Containment Cooling System "A" Train Cooler "A" Supply and Return Headers
4.	M-189-50GN-01-01	Sheet 4	Containment Cooling System "A" Train Cooler "C" Supply and Return Headers
5.	M-189-50GN-02-02	Sheet 1	Containment Cooling System "B" Train Supply
6.	M-189-50GN-02-02	Sheet 2	Containment Cooling System "B" Train Return
7.	M-189-50GN-02-02	Sheet 3	Containment Cooling System "B" Train Cooler "B" Supply and Return Headers
8.	M-189-50GN-02-02	Sheet 4	Containment Cooling System "B" Train Cooler "D" Supply and Return Headers

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4.1.15 Containment Cooling System (GN)

E. Summary Of Components Subject To Section XI and Augmented NDE/Scheduled For Examination

Table 1 is a summary of the components and items subject to NDE per ASME Section XI or per Augmented requirements. A detailed listing of these components and items is maintained in the ISI Database.

TABLE 1 SECTION XI AND AUGMENTED COMPONENT SUMMARY AND SCHEDULE									
<u>COMPONENT OR ITEM DESCRIPTION</u>	<u>CODE CATEGORY</u>	<u>CODE ITEM NO.</u>	<u>AUG. CATEGORY</u>	<u>AUG ITEM NO.</u>	<u>TOTAL IN SYSTEM</u>	<u>EXAMS BY PERIOD & INTERVAL</u>			
						<u>P1</u>	<u>P2</u>	<u>P3</u>	<u>INTERVAL</u>
PIPING WELDED ATTACHMENTS	D-A	D1.20	-	-	41	1	2	2	5
PIPING COMPONENT SUPPORTS	F-A	F1.30	-	-	112	4	4	4	12

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4.1.15 Containment Cooling System (GN)

F. Augmented ISI Requirements

No Augmented ISI requirements apply to the Containment Cooling System.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWD-5000, the Class 3 pressure retaining components within the Containment Cooling System will receive a system leakage test per IWD-5221 every period and a system hydrostatic test per IWD-5222 at or near the end of the interval. As allowed by Code Case N-498-4, alternative rules may be employed in lieu of the system hydrostatic test of IWD-5222.

**H. Procedures used to perform System Pressure Testing are listed in Table 4.2.1
Risk Informed ISI Program**

The RI-ISI Program is not applicable to the Containment Cooling System.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table GN-1 (Period 1 Examinations), Table GN-2 (Period 2 Examinations), and Table GN-3 (Period 3 Examinations).

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TABLE GN-1

Period 1 Examinations

System: GN

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request	Notes
GN-01-C017	GN-01-01 SHT. 2	PIPING INTEGRAL ATTACHMENTS	14		VT-1	D-A	D1.20		
GN-01-C003	GN-01-01 SHT. 1	PIPING SUPPORT	14		VT-3	F-A	F1.30		
GN-01-C017	GN-01-01 SHT. 2	PIPING SUPPORT	14		VT-3	F-A	F1.30		
GN-02-H001	GN-02-02 SHT. 2	PIPING SUPPORT	10		VT-3	F-A	F1.30		
M-620-003-24	GN-02-02 SHT. 4	PIPING SUPPORT	6		VT-3	F-A	F1.30		

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TABLE GN-2

Period 2 Examinations

System: GN

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request	Notes
M-620-003-09	GN-01-01 SHT. 3	PIPING INTEGRAL ATTACHMENTS	8		VT-1	D-A	D1.20		
M-620-003-10	GN-01-01 SHT. 3	PIPING INTEGRAL ATTACHMENTS	8		VT-1	D-A	D1.20		
GN-01-H005	GN-01-01 SHT. 2	PIPING SUPPORT	10		VT-3	F-A	F1.30		
M-620-003-09	GN-01-01 SHT. 3	PIPING SUPPORT	8		VT-3	F-A	F1.30		
M-620-003-10	GN-01-01 SHT. 3	PIPING SUPPORT	8		VT-3	F-A	F1.30		
GN-02-C006	GN-02-02 SHT. 1	PIPING SUPPORT	10		VT-3	F-A	F1.30		

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TABLE GN-3

Period 3 Examinations

System: GN

Component Name	Drawing Number	Component Description	Size	Thickness	NDE Method	Category	Item	Relief Request	Notes
M-620-003-13	GN-01-01 SHT. 3	PIPING INTEGRAL ATTACHMENTS	6		VT-1	D-A	D1.20		
M-620-003-14	GN-01-01 SHT. 3	PIPING INTEGRAL ATTACHMENTS	6		VT-1	D-A	D1.20		
GN-01-C016	GN-01-01 SHT. 1	PIPING SUPPORT	14		VT-3	F-A	F1.30		
M-620-003-13	GN-01-01 SHT. 3	PIPING SUPPORT	6		VT-3	F-A	F1.30		
M-620-003-14	GN-01-01 SHT. 3	PIPING SUPPORT	6		VT-3	F-A	F1.30		
GN-02-C026	GN-02-02 SHT. 1	PIPING SUPPORT	10		VT-3	F-A	F1.30		

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4.1.16 Standby Diesel Generator Systems (KJ)

A. Applicable System Piping and Instrument Drawings

1. M-12KJ01-Standby Diesel Generator Cooling System
2. M-12KJ02-Standby Diesel Generator "A" Intake Exhaust, F.O. & Start Air System
3. M-12KJ03-Standby Diesel Generator "A" Lube Oil System
4. M-12KJ04-Standby Diesel Generator "B" Cooling Water System
5. M-12KJ05-Standby Diesel Generator "B" Intake Exhaust, F.O. & Start Air System
6. M-12KJ06-Standby Diesel Generator "B" Lube Oil System

B. Classification Of Components

Details of the classification of the Standby Diesel Generator Systems components for ISI are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Nonexempt and Exempt ASME Class Components

A listing of Nonexempt and Exempt ASME Class components is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. Applicable ISI Isometrics and ISI Equipment Drawings

The following isometrics and drawings detail the nonexempt components and items subject to NDE in the Standby Diesel Generator Systems. These drawings are part of the M-189-50 series.

- | | | | |
|----|------------------|---------|--------------------------------------------------------------------|
| 1. | M-189-50KJ-01-01 | Sheet 1 | Standby Diesel Engine Diesel Generator "A"
Cooling Water Piping |
| 2. | M-189-50KJ-01-01 | Sheet 2 | Standby Diesel Engine Diesel Generator "A"
Lube Oil Piping |
| 3. | M-189-50KJ-01-01 | Sheet 3 | Standby Diesel Engine Diesel Generator "A"
Air Intake Piping |
| 4. | M-189-50KJ-01-01 | Sheet 4 | Standby Diesel Engine Diesel Generator "A"
Exhaust Piping |
| 5. | M-189-50KJ-02-04 | Sheet 1 | Standby Diesel Engine Diesel Generator "B"
Cooling Water Piping |
| 6. | M-189-50KJ-02-04 | Sheet 2 | Standby Diesel Engine Diesel Generator "B"
Lube Oil Piping |
| 7. | M-189-50KJ-02-04 | Sheet 3 | Standby Diesel Engine Diesel Generator "B"
Air Intake Piping |
| 8. | M-189-50KJ-02-04 | Sheet 4 | Standby Diesel Engine Diesel Generator "B"
Exhaust Piping |

E. Summary Of Components Subject To Section XI and Augmented NDE/Scheduled For Examination

<u>COMPONENT OR ITEM DESCRIPTION</u>	<u>CODE CATEGORY</u>	<u>CODE ITEM NO.</u>	<u>AUG. CATEGORY</u>	<u>AUG ITEM NO.</u>	<u>TOTAL IN SYSTEM</u>	<u>EXAMS BY PERIOD & INTERVAL</u>			
						<u>P1</u>	<u>P2</u>	<u>P3</u>	<u>INTERVAL</u>
VESSEL WELDED ATTACHMENTS	D-A	D1.10	-	-	16	2	3	3	8
PIPING WELDED ATTACHMENTS	D-A	D1.20	-	-	22	1	1	1	3
PIPING COMPONENT SUPPORTS	F-A	F1.30	-	-	60	2	1	3	6
EQUIPMENT SUPPORTS (OTHER THAN PIPING)	F-A	F1.40	-	-	16	2	3	3	8

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4.1.16 Standby Diesel Generator Systems (KJ)

F. Augmented ISI Requirements

The following Augmented ISI requirements apply to the Standby Diesel Generator Systems:

1. USNRC Regulatory Guide 1.137, Revision 0 - Fuel-Oil Systems for Standby Diesel Generators-This Regulatory Guide includes pressure testing requirements for fuel oil systems of standby diesel generators. WCGS has committed to this testing per USAR Appendix 3A and Section 9.5.4. These requirements are satisfied by the implementation of the testing and VT-2 examinations required by Articles IWD-2000 and IWD-5000 of ASME Section XI, 1998 Edition with 2000 Addenda.

G. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWD-5000, the Class 3 pressure retaining components within the Standby Diesel Generator Systems will receive a system leakage test per IWD-5221 every period and a system hydrostatic test per IWD-5222 at or near the end of the interval. As allowed by Code Case N-498-4, alternative rules may be employed in lieu of the system hydrostatic test of IWD-5222.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

H. Risk Informed ISI Program

The RI-ISI Program is not applicable to the Standby Diesel Generator Systems.

I. Components and Component Supports Selected/Scheduled For Examination

The components and component supports selected for examination during Interval 3 are included in Table KJ-1 (Period 1 Examinations), Table KJ-2 (Period 2 Examinations), and Table KJ-3 (Period 3 Examinations).

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4.2 WCGS SYSTEMS SUBJECT TO SECTION XI PRESSURE TESTING ONLY

A. Applicable System Piping and Instrument Drawings

The following systems (or portions of systems) are subject to Section XI Pressure Testing only:

- 4.2.1 Reactor Coolant System (M-12BB04)
- 4.2.2 Chemical and Volume Control System (M-12BG02)
- 4.2.3 Chemical and Volume Control System (M-12BG04)
- 4.2.4 Chemical and Volume Control System (M-12BG05)
- 4.2.5 Fuel Pool Cooling and Clean-Up System (M-12EC01)
- 4.2.6 Fuel Pool Cooling and Clean-Up System (M-12EC02)*
- 4.2.7 Miscellaneous Buildings HVAC (M-12GF01)
- 4.2.8 Fuel Building HVAC (M-12GG02)
- 4.2.9 Control Building HVAC (M-12GK01)
- 4.2.10 Auxiliary Building HVAC (M-12GK03)
- 4.2.11 Auxiliary Building HVAC (M-12GL01, M-12GL02, M-12GL03)
- 4.2.12 Containment Hydrogen Control System (M-12GS01)*
- 4.2.13 Liquid Radwaste System (M-12HB01)*
- 4.2.14 Emergency Fuel Oil System (M-12JE01)
- 4.2.15 Compressed Air System (M-12KA05 Class 3 Components)
- 4.2.16 Auxiliary Building Floor & Equipment Drain System (M-12LF03)
- 4.2.17 Nuclear Sampling System (M-12SJ01)
- 4.2.17 Nuclear Sampling System (M-12SJ04)

* Except for ASME Class 2 components listed in Section 4.3

B. Classification Of Components

Details of the classification of the components subject to ASME Section XI System Pressure Testing are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. Applicable ASME Class Components

A listing of the ASME Class components subject to ASME Section XI System Pressure Testing is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

D. System Pressure Testing

In accordance with Section XI, IWA-5000 and IWB-5000, the Class 1 pressure retaining components included on the P&IDs of Section A will receive a system leakage test per IWB-5220 prior to plant startup following each refueling outage.

In accordance with Section XI, IWA-5000 and IWC-5000, the Class 2 pressure retaining components included on the P&IDs of Section A will receive a system leakage test per IWC-5220 each inspection period.

In accordance with Section XI, IWA-5000 and IWD-5000, the Class 3 pressure retaining components included on the P&IDs of Section A will receive a system leakage test per IWD-5221 every period and a system hydrostatic test per IWD-5222 at or near the end of the interval. As allowed by Code Case N-498-4, alternative rules may be employed in lieu of the system hydrostatic test of IWD-5222.

Procedures used to perform System Pressure Testing are listed in Table 4.2.1

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TABLE 4.2-1 SYSTEM PRESSURE TESTING PROCEDURES

Procedure Number	Procedure Title
STS PE-021A	Train A Emergency Diesel Fuel Oil and Keep Warm System Pressure Test
STS PE-021B	Train B Emergency Diesel Fuel Oil and Keep Warm System Pressure Test
STS PE-021C	Train A Emergency Diesel FO, LO, J Wtr, Intclr, Roc Arm, Crank Vac, Air In & Exh
STS PE-021D	Train B Emergency Diesel FO, LO, J Wtr, Intclr, Roc Arm, Crank Vac, Air In & Exh
STS PE-021E	Train A Emergency Fuel Oil Transfer System Pressure Test
STS PE-021F	Train B Emergency Fuel Oil Transfer System Pressure Test
STS PE-021G	Train A Emergency Diesel Air Start System Pressure Test
STS PE-021H	Train B Emergency Diesel Air Start System Pressure Test
STS PE-040A	Reactor Coolant System Pressure Test
STS PE-040C	Reactor Coolant System Pressure Test (10 Year)
STS PE-040E	RPV Head Bare Metal Inspection
STS PE-041A	Steam Generator System Pressure Test (Ctmt)
STS PE-041D	Steam Generator System Pressure Test (Non-Ctmt)
STS PE-042A	CVCS Normal Ops (Ctmt)
STS PE-042B	CVCS VCT Tank Room
STS PE-042C	Chemical and Volume Control System NCP Discharge Header Pressure Test
STS PE-042D	Chemical and Volume Control System CCP A Discharge Header Pressure Test
STS PE-042E	Chemical and Volume Control System CCP B Discharge Header Pressure Test
STS PE-042F	CVCS Normal Ops (Aux Bldg)
STS PE-042G	L/D Reheat Heat Exchanger
STS PE-042H	CVCS Excess Letdown Piping Pressure Test
STS PE-042I	CVCS Boric Acid Tank A and Boric Acid Transfer Pump A Pressure Test
STS PE-042J	CVCS Boric Acid Tank B and Boric Acid Transfer Pump B Pressure Test
STS PE-042K	CVCS Immediate Borate Test
STS PE-043A	RHR Train A
STS PE-043B	Residual Heat Removal System Hot Leg Discharge and CCP/SI Pump Cross Connection Pressure Test
STS PE-043C	RHR Train B Normal Ops
STS PE-043D	RHR L/D and Hot Leg Cross-tie
STS PE-044A	High Pressure Safety Injection System Pressure Test
STS PE-044C	High Pressure Safety Injection System Pressure Test
STS PE-044D	High Pressure Safety Injection System Pressure Test
STS PE-044E	SI Cold Leg Inj, P-58, P-92
STS PE-044F	SI Pump A
STS PE-044G	SI Pump B
STS PE-045A	Containment Spray Train A
STS PE-045B	Containment Spray Train B
STS PE-046	Safety Injection Accumulator Pressure Test
STS PE-047A	Compressed Air System Auxiliary Feedwater Control/Main Steam Atmosphere Relief Valves Accumulator Pressure Test

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TABLE 4.2-1 SYSTEM PRESSURE TESTING PROCEDURES (Continued)

STS PE-048A	Fuel Pool Cooling Train A
STS PE-048C	Refueling Pool Skimmer System Pressure Test
STS PE-048D	Fuel Pool Cooling Train B
STS PE-049A	Essential Service Water System A Train Pressure Test
STS PE-049B	Essential Service Water System B Train Pressure Test
STS PE-049C	A Train Underground Essential Service Water System Piping Flow Test
STS PE-049D	B Train Underground Essential Service Water System Piping Flow Test
STS PE-050A	Component Cooling Water System PEG01A Pressure Test
STS PE-050B	Component Cooling Water System PEG01C Pressure Test
STS PE-050C	Component Cooling Water System PEG01B Pressure Test
STS PE-050D	Component Cooling Water System PEG01D Pressure Test
STS PE-050E	Pressure Test of CCW System RHR Heat Exchangers, and in Containment Service Loop
STS PE-051	Borated Refueling Water Storage Pressure Test
STS PE-052A	Auxiliary Feedwater Pump Turbine Pressure Test
STS PE-053A	A Train Auxiliary Feedwater Pressure Test
STS PE-053B	Auxiliary Feedwater Pressure Test Using Turbine Driven AFW Pump
STS PE-053C	Essential Service Water To Auxiliary Feedwater Pressure Test
STS PE-053D	Auxiliary Feedwater Pressure Test Using Condensate Storage Tank
STS PE-053E	B Train Auxiliary Feedwater Pressure Test
STS PE-055E	Containment Hydrogen Analyzer A Piping through P-101 and P-97 Pressure Test
STS PE-055F	Containment Hydrogen Analyzer B Piping Through P-99 and P-56 Pressure Test
STS PE-055G	Pressure Test of Containment Hydrogen Control Piping Through P-101 and P-97
STS PE-055H	Pressure Test of Containment Hydrogen Control Piping Through P-99 and P-56
STS PE-055Q	Pressure Test of Floor and Equipment Drain Piping Between LF HV-105 and LF HV-106
STS PE-055W	Pressure Test of Nuclear Sampling Piping through P-64, P-69, and P-93

**WOLF CREEK GENERATING STATION
THIRD INTERVAL ISI PROGRAM PLAN**

**4.3 WCGS SYSTEMS EXCLUDED FROM SECTION XI PRESSURE TESTING
PER IWA-5110(c)**

A. Applicable Components

The following ASME Class 2 components are excluded from Section XI System Pressure Testing per IWA-5110(c):

<u>P&ID Number</u>	<u>Line Number(s)</u>	<u>Penetration</u>
M-12BB02	BB-103-HCB-1"	P-62
M-12BL01	BL-028-HCB-3"	P-25
M-12BM01	BM-053-HBB-3"	P-78
M-12EC02	EC-067-HCB-6"	P-53
M-12EC02	EC-072-HCB-6"	P-54
M-12EC02	EC-081-HCB-3"	P-55
M-12EM01	EM-071-BCB-3/4"	P-92
M-12GP01	GP-001-HBB-6"	P-34
M-12GP01	GP-003-HBB-1"	P-51
M-12GP01	GP-005-HBB-1"	P-51
M-12GS01	GS-025-HBB-6"	P-65
M-12GT01	GT-007-HBB-36"	V-160
M-12GT01	GT-004-HBB-36"	V-161
M-12GT01	GT-029-HBB-18"	V-161
M-12GT01	GT-034-HBB-18"	V-160
M-12GT01	GT-033-HBB-18"	V-160
M-12GT01	GT-030-HBB-18"	V-161
M-12HB01	HB-015-HCB-3"	P-26
M-12HB01	HB-025-HBB-3/4"	P-44
M-12HD01	HD-015-HBB-2"	P-43
M-12KA01	KA-244-HCB-1 1/2"	P-30
M-12KA01	KA-259-HCB-1 1/2"	P-30
M-12KA02	KA-051-HBB-4"	P-63
M-12KA02	KA-261-HBB-1"	P-63
M-12KA05	KA-732-HBB-1"	Personnel Hatch
M-12KA05	KA-733-HBB-1"	Personnel Hatch
M-12KB01	KB-001-HCB-2"	P-98
M-12KC02	KC-560-HBB-4"	P-67
M-12LF09	LF-842-HCB-6"	P-32

B. Classification Of Components

Details of the classification of the components that are excluded from Section XI System Pressure Testing Per IWA-5110(c) are included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".

C. ASME Class Components

A listing of the ASME Class 2 components excluded from Section XI System Pressure Testing Per IWA-5110(c) is included in "Inservice Inspection Classification Basis Document Wolf Creek Generating Station Interval 3".