January 8, 2003

Mr. John L. Skolds, President
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3 - RELIEF REQUEST CR-24 FOR THIRD 10-YEAR INSERVICE INSPECTION INTERVAL (TAC NOS. MB4845 AND MB4846)

Dear Mr. Skolds:

By letter dated April 12, 2002, Exelon Generation Company, LLC (the licensee) submitted a request for relief, CR-24, from requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, for Dresden Nuclear Power Station, Units 2 and 3.

The Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's submittal and concludes that it is impractical for the licensee to comply with the Code requirements for which relief was requested. The staff finds that the examination coverages of the accessible weld volumes and of the surface areas provide reasonable assurance of the structural integrity of the welds identified in the relief request. Therefore, the requested relief is granted in accordance with 10 CFR 50.55a(g)(6)(i) for the licensee's third 10-year inservice inspection interval for Dresden Nuclear Power Station, Units 2 and 3. The staff has concluded that granting relief pursuant to 10 CFR 50.55a(g)(6)(i) 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. The enclosed safety evaluation contains the basis for this determination.

Sincerely,
/RA by L. Raghavan for/
Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-237 and 50-249

Enclosure: Safety Evaluation

cc w/encl: See next page

Dresden Nuclear Power Units 2 and 3

cc:

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SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3 - RELIEF REQUEST CR-24 FOR THIRD 10-YEAR INSERVICE INSPECTION INTERVAL (TAC NOS. MB4845 AND MB 4846)

Dear Mr. Skolds:

By letter dated April 12, 2002, Exelon Generation Company, LLC (the licensee) submitted a request for relief, CR-24, from requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, for Dresden Nuclear Power Station, Units 2 and 3.

The Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's submittal and concludes that it is impractical for the licensee to comply with the Code requirements for which relief was requested. The staff finds that the examination coverages of the accessible weld volumes and of the surface areas provide reasonable assurance of the structural integrity of the welds identified in the relief request. Therefore, the requested relief is granted in accordance with 10 CFR 50.55a(g)(6)(i) for the licensee's third 10-year inservice inspection interval for Dresden Nuclear Power Station, Units 2 and 3. The staff has concluded that granting relief pursuant to 10 CFR 50.55a(g)(6)(i) 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. The enclosed safety evaluation contains the basis for this determination.

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Docket Nos. 50-237 and 50-249

Enclosure: Safety Evaluation

cc w/encl: See next page

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ADAMS Accession Number: ML023610374 * Safety Evaluation dated 12/23/02

OFFICE	PM:PDIII-2	LA:PDIII-2	SC:EMCB	OGC	SC:PDIII-2
NAME	LRossbach	CRosenberg	TChan*	RHoefling	LRagahavan for AMendiola
DATE	12/31/02	12/30/02	12/23/02	12/31/02	01/08/03

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

THIRD 10-YEAR INTERVAL REQUEST FOR RELIEF NUMBER CR-24

EXELON GENERATION COMPANY, LLC

DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3

DOCKET NOS. 50-237 AND 50-249

1.0 INTRODUCTION

By letter dated April 12, 2002, Exelon Nuclear Generation Company, LCC (the licensee), requested relief from certain inservice examination requirements of the 1989 Edition of the American Society of Mechanical Engineers (ASME) Code, Section XI, in regard to surface and volumetric examinations conducted on reactor vessel nozzle to shell welds, head to flange, upper head meridional weld and other piping welds identified in Table CR-24.1 of the submittal during the third 10-year inspection interval of Dresden Units 2 and 3. The licensee stated that the Code-required examination coverage of essentially 100 percent for the welds were impractical due to weld configuration, physical obstructions and other limitations imposed by design and materials of construction of the component. However, all components received as a minimum, the required examination(s) applicable to the extent practical due to limited or lack of access available. The staff has evaluated the reduction in examination coverage pursuant to 10 CFR 50.55a(g)(6)(i).

2.0 BACKGROUND

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The applicable ISI Code of Record for the third 10-year ISI interval of Dresden Nuclear Power Station (DNPS), Units 2 and 3, is the 1989 Edition of ASME Code, Section XI.

2.1 REQUEST FOR APPROVAL OF AN ALTERNATIVE

Pursuant to 10 CFR 50.55a(g)(5), if the licensee has determined that conformance with certain code requirements is impractical for its facility, the licensee shall notify the Commission and submit, as specified in Section 50.4, information to support the determinations. Section 10 CFR 50.55a(g)(6)(i) states that the Commission will evaluate determinations under paragraph (g)(5) of this section that code requirements are impractical. The Commission 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.

3.0 DISCUSSION (RELIEF REQUEST NO. CR-24)

3.1 IDENTIFICATION OF COMPONENTS

Code Classes:	1 and 2
References:	Subarticles IWB-2500 and IWC-2500 of ASME Code, Section XI
Examination Categories:	B-A, B-D, B-J, C-B, C-C, and C-F-2
Item Numbers	B1.22, B1.40, B3.90, B3.100, B9.11 and B.9.31 C2.21, C3.20, C3.30 and C5.51
Examination Methods:	Volumetric and Surface Examination
Component Numbers:	Various, see Table CR-24.1 for examination completed during the third 10-year inspection interval

3.2 CODE REQUIREMENTS (as stated)

Subarticle IWB-2500 states in part, “Components shall be examined and tested as specified in Table IWB-2500-1.” Table IWB-2500-1 requires a volumetric examination or a surface and volumetric examination be performed on the component based on Category and Item Number. The applicable examination area or volume and method required is as shown below from Table IWB-2500-1:

Examination Category	Item Number	Examination Requirements /Figure Number	Examination Method
B-A B-A	B1.22 B1.40	IWB-2500-3 IWB-2500-5	Volumetric Surface and Volumetric
B-D	B3.90	IWB-2500-7(a) IWB-2500-7(b)	Volumetric
B-D	B3.100	IWB-2500-7(a) IWB-2500-7(b)	Volumetric
B-J	B9.11	IWB-2500-8(c)	Surface and Volumetric
B-J	B9.31	IWB-2500-10	Surface and Volumetric

Subarticle IWC-2500 states in part, “Components shall be examined and pressure tested as specified in Table IWC-2500-1.” Table IWC-2500-1 requires a surface examination or a surface and volumetric examination be performed on the component based on Category and Item Number. The applicable examination area or volume and method required is as shown below from Table IWC-2500-1:

Examination Category	Item Number	Examination Requirements /Figure Number	Examination Method
C-B	C2.21 C3.20	IWC-2500-4(b) IWC-2500-5(a) IWC-2500-5(b)	Surface & Volumetric Surface
C-C	C3.30	IWC-2500-5(a)	Surface
C-F-2	C5.51	IWC-2500-7(a)	Surface & Volumetric

3.3 CODE REQUIREMENT FROM WHICH RELIEF IS REQUESTED (as stated)

Relief is requested from performing a complete coverage examination of the entire volume or area required. Entire volume or area required is defined by ASME Section XI Code Case N-460, “Alternative Examination Coverage for Class 1 and Class 2 Welds, Section XI, Division 1." Code Case N-460 states in part, “... when the entire examination volume or area cannot be examined...a reduction in examination coverage...may be accepted provided the reduction in coverage for that weld is less than 10%.” DNPS invokes Code Case N-460 for use during the third 10-year inservice inspection interval.

NRC Information Notice 98-42, “Implementation of 10 CFR 50.55a(g) Inservice Inspection Requirements” termed the reduction in coverage of less than 10 percent to be “essentially 100 percent.” Information Notice 98-42 states in part, “The NRC has adopted and further refined

the definition of “essentially 100 percent” to mean “greater than 90 percent”... has been applied to all examinations of welds or other areas required by ASME Section XI.”

Relief is requested from performing an examination of “essentially 100%” of the required volume or area as applicable for the identified components in Table CR-24.1.

TABLE CR-24.1

UNIT 2 COMPONENTS WITH LESS THAN “ESSENTIALLY 100%” COVERAGE

Section XI Category & Item No.	Component System & Line	Component Number	Component Description	Condition Limiting Coverage	Examination & Coverage Percent
B-A B1.22	RPV UPPER HEAD	2-THD-M1	MERIDIONAL WELD	REACTOR HEAD LIFTING LUG.	UT 86.01
B-A B1.40	RPV UPPER HEAD	2-THD-FLGA	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-A B1.40	RPV UPPER HEAD	2-THD-FLGB	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-A B1.40	RPV UPPER HEAD	2-THD-FLGC	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-A B1.40	RPV UPPER HEAD	2-THD-FLGD	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-A B1.40	RPV UPPER HEAD	2-THD-FLGE	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-A B1.40	RPV UPPER HEAD	2-THD-FLGF	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-D B3.90	RPV NOZZLE	N19A-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 33
B-D B3.90	RPV NOZZLE	N19B-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.51
B-D B3.90	RPV NOZZLE	N1A-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.07
B-D B3.90	RPV NOZZLE	N20A-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 73.52
B-D B3.90	RPV NOZZLE	N2A-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.85
B-D B3.90	RPV NOZZLE	N2B-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.85
B-D B3.90	RPV NOZZLE	N2C-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.85

TABLE CR-24.1

UNIT 2 COMPONENTS WITH LESS THAN "ESSENTIALLY 100%" COVERAGE

Section XI Category & Item No.	Component System&Line	Component Number	Component Description	Condition Limiting Coverage	Examination & Coverage Percent
B-D B3.90	RPV NOZZLE	N2D-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.85
B-D B3.90	RPV NOZZLE	N2E-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.85
B-D B3.90	RPV NOZZLE	N2F-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.85
B-D B3.90	RPV NOZZLE	N4A-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 25.5
B-D B3.90	RPV NOZZLE	N4B-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 25.5
B-D B3.90	RPV NOZZLE	N4C-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 25.5
B-D B3.90	RPV NOZZLE	N4D-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 25.5
B-D B3.90	RPV NOZZLE	N5B-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION. REACTOR VESSEL WELDED ATTACHMENT.	UT 20.06
B-D B3.90	RPV NOZZLE	N9-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 29.5
B-D B3.100	RPV NOZZLE	N5B-1	NOZZLE INNER RADIUS SECTION	REACTOR VESSEL WELDED ATTACHMENT.	UT 49.98
B-J B9.11	REACTOR RECIRCULATION 0201H-12	PD4-D22 (Long Seam)	LONG SEAM WELD ADJACENT TO OVERLAY OF ELBOW TO PIPE WELD	WELD ID BAND.	PT 88 UT 88
B-J B9.11	REACTOR RECIRCULATION 0201J-12	PD5-D21 (Long Seam)	LONG SEAM WELD ADJACENT TO OVERLAY OF PIPE TO ELBOW WELD	WELD ID BAND AND WHIP RESTRAINT.	PT 29 UT 29

TABLE CR-24.1

UNIT 2 COMPONENTS WITH LESS THAN "ESSENTIALLY 100%" COVERAGE

Section XI Category & Item No.	Component System & Line	Component Number	Component Description	Condition Limiting Coverage	Examination & Coverage Percent
B-J B9.11	REACTOR RECIRCULATION 0201K-12	PD6-D19 (Long Seam)	LONG SEAM WELD ADJACENT TO OVERLAY OF PIPE TO ELBOW WELD	WELD ID BAND AND WHIP RESTRAINT.	PT 29 UT 29
B-J B9.11	REACTOR RECIRCULATION 0201D-12	PD8-D10 (Long Seam)	LONG SEAM WELD ADJACENT TO OVERLAY OF PIPE TO ELBOW WELD	WHIP RESTRAINT.	PT 33 UT 25
B-J B9.11	REACTOR RECIRCULATION 0201E-12	PD9-D8 (Long Seam)	LONG SEAM WELD ADJACENT TO OVERLAY OF PIPE TO ELBOW WELD	WELD ID BAND AND WHIP RESTRAINT.	PT 21 UT 15
C-C C3.20	HPCI 2304-14	M-1151D-155	INTEGRALLY WELDED ATTACHMENT	PIPE CLAMP INTERFERENCE WITH SHEAR LUG ATTACHMENT.	MT 88.39
C-C C3.20	HPCI 2305-10	M-1151D-132	INTEGRALLY WELDED ATTACHMENT	PIPE CLAMP INTERFERENCE WITH SHEAR LUG ATTACHMENT.	MT 77.78
C-C C3.20	LPCI 1509-16	M-3214-17	INTEGRALLY WELDED ATTACHMENT	PIPE CLAMP INTERFERENCE WITH SHEAR LUG ATTACHMENT.	MT 75
C-C C3.20	LPCI 1519-18	M-3209-13	INTEGRALLY WELDED ATTACHMENT	PIPE CLAMP INTERFERENCE WITH SHEAR LUG ATTACHMENT.	MT 72.73
C-C C3.20	LPCI 1517-14	M-3208-07	INTEGRALLY WELDED ATTACHMENT	PIPE CLAMP INTERFERENCE WITH SHEAR LUG ATTACHMENT.	MT 80

TABLE CR-24.1

UNIT 3 COMPONENTS WITH LESS THAN “ESSENTIALLY 100%” COVERAGE

Section XI Category & Item No.	Component System & Line	Component Number	Component Description	Condition Limiting Coverage	Examination & Coverage Percent
B-A B1.40	RPV UPPER HEAD	3-THD-FLGA	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-A B1.40	RPV UPPER HEAD	3-THD-FLGB	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-A B1.40	RPV UPPER HEAD	3-THD-FLGC	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-A B1.40	RPV UPPER HEAD	3-THD-FLGD	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-A B1.40	RPV UPPER HEAD	3-THD-FLGE	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-A B1.40	RPV UPPER HEAD	3-THD-FLGF	HEAD TO FLANGE WELD	REACTOR HEAD TO FLANGE CONFIGURATION.	UT 71.47
B-D B3.90	RPV NOZZLE	N12-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 75.31
B-D B3.90	RPV NOZZLE	N19A-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.51
B-D B3.90	RPV NOZZLE	N19B-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.51
B-D B3.90	RPV NOZZLE	N1A-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.07
B-D B3.90	RPV NOZZLE	N1B-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.7
B-D B3.90	RPV NOZZLE	N2B-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.85
B-D B3.90	RPV NOZZLE	N2D-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.85
B-D B3.90	RPV NOZZLE	N2E-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.85

TABLE CR-24.1

UNIT 3 COMPONENTS WITH LESS THAN "ESSENTIALLY 100%" COVERAGE

Section XI Category & Item No.	Component System & Line	Component Number	Component Description	Condition Limiting Coverage	Examination & Coverage Percent
B-D B3.90	RPV NOZZLE	N2G-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.85
B-D B3.90	RPV NOZZLE	N3C-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 72
B-D B3.90	RPV NOZZLE	N3D-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 72
B-D B3.90	RPV NOZZLE	N4A-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.49
B-D B3.90	RPV NOZZLE	N4B-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.49
B-D B3.90	RPV NOZZLE	N4C-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.49
B-D B3.90	RPV NOZZLE	N4D-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.49
B-D B3.90	RPV NOZZLE	N5A-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.06
B-D B3.90	RPV NOZZLE	N5B-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.06
B-D B3.90	RPV NOZZLE	N18A-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.4
B-D B3.90	RPV NOZZLE	N18B-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 20.4
B-D B3.90	RPV NOZZLE	N8-2	NOZZLE TO VESSEL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 47.24
B-J B9.11	REACTOR RECIRCULATION 0202B-28	RRB-59F	ELBOW TO ELBOW WELD	PIPE TO ELBOW WELD CONFIGURATION.	UT 75.9
B-J B9.31	MAIN STEAM 3001A-20	8X-15	BRANCH PIPE CONNECTION WELD	BRANCH PIPE CONFIGURATION.	UT 50.5
B-J B9.31	MAIN STEAM 3001C-20	8X-10	BRANCH PIPE CONNECTION WELD	BRANCH PIPE CONFIGURATION.	UT 51.4

TABLE CR-24.1

UNIT 3 COMPONENTS WITH LESS THAN "ESSENTIALLY 100%" COVERAGE

Section XI Category & Item No.	Component System & Line	Component Number	Component Description	Condition Limiting Coverage	Examination & Coverage Percent
C-B C2.21	ISO CONDENSOR 1302A-12	12-8	NOZZLE TO SHELL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 44.56
C-B C2.21	ISO CONDENSOR 1302B-12	12-9	NOZZLE TO SHELL WELD	NOZZLE, RADIUS BLEND AND WELD CONFIGURATION.	UT 44.56
C-C C3.20	CRD 0409A-20	M-1188D-1120	INTEGRALLY WELDED ATTACHMENT	BOX GUIDE INTERFERENCE WITH SHEAR LUG ATTACHMENT.	MT 85.96
C-C C3.20	CORE SPRAY 1404-12	M-3408-24	INTEGRALLY WELDED ATTACHMENT	BOX GUIDE INTERFERENCE WITH SHEAR LUG ATTACHMENT.	MT 87.30
C-C C3.20	HPCI 2304-14	M-1187D-72	INTEGRALLY WELDED ATTACHMENT	BOX GUIDE INTERFERENCE WITH SHEAR LUG ATTACHMENT.	MT 56
C-C C3.20	ISO CONDENSOR 1303-12	M-1199D-258	INTEGRALLY WELDED ATTACHMENT	PIPE CLAMP INTERFERENCE WITH SHEAR LUG ATTACHMENT.	PT 82.69
C-C C3.30	CORE SPRAY PMP 3A-1401	M-1186D-1016	INTEGRALLY WELDED ATTACHMENT	PUMP TO SKIRT IWA CONFIGURATION.	MT 61.94
C-C C3.30	LPCI PMP 3A-1502	M-1200D-1017	INTEGRALLY WELDED ATTACHMENT	PUMP TO SKIRT IWA CONFIGURATION.	MT 61.94
C-F-2 C5.51	CRD 0408A-6	6-401	ELBOW TO PIPE WELD	ADJACENT PLANT STRUCTURE.	MT 80.95 UT 78.31
C-F-2 C5.51	CRD 0408A-6	6-74	TEE TO PIPE WELD	ADJACENT PLANT STRUCTURE.	MT 71.96
C-F-2 C5.51	LPCI 1517-14	14-1(A)	PIPE TO VALVE WELD	PIPE TO VALVE WELD CONFIGURATION.	UT 86.35

3.4 BASIS FOR RELIEF (as stated)

In accordance with 10 CFR 50.55a(g)(5)(iii), relief is requested on the basis that the required "essentially 100%" coverage examination is impractical due to physical obstructions and limitations imposed by design, geometry and materials of construction for the components of Table CR-24.1.

DNPS, Units 2 and 3 obtained Construction Permits CPPR-18 and CPPR-22 on January 10, 1966, and October 14, 1966 respectively. The piping systems and associated components were designed and fabricated before the examination requirements of ASME Section XI were formalized and published. Since this plant was not specifically designed to meet the requirements of ASME Section XI, compliance is not feasible or practical within the limits of the current plant design.

Physical obstructions imposed by design, geometry and materials of construction are typical of vessel appurtenances and sacrificial shield, insulation support rings, structural and component support members, adjacent component weldments in close proximity, unique component configurations and dissimilar metal weldments.

Improved examination techniques have been progressively upgraded during this interval to augment the required Section XI examinations. We have used the Electric Power Research Institute (EPRI), the Performance Demonstration Initiative (PDI), Inservice Inspection vendors and other industry sources to encourage the development of and provide an awareness of improved examination techniques to enhance coverage and flaw detection commensurate with radiation dose reduction.

Exelon examination procedures are revised on a continuing basis to incorporate proven techniques for a higher level of safety and quality as they become available. The examinations and techniques used today exceed the examinations conducted in the past on each component.

All components received as a minimum, the required examination(s) applicable to the extent practical due to limited or lack of access available. The examinations conducted, confirmed satisfactory results evidencing no unacceptable flaws present, even though “essentially 100%” coverage was not attained. Exelon has concluded that if any active degradation mechanisms were to exist in the subject welds, those degradations would have been identified in the examinations performed.

Based on the above, with our earlier design, the underlying objectives of the code required volumetric and surface examinations have been met. The examinations were completed to the extent practical and evidenced no unacceptable flaws present. Additionally, a VT-2 examination performed on the subject components during system pressure test per examination category B-P each refueling outage and category C-H each period provides additional assurance that the structural integrity of the subject components is maintained.

3.5 PROPOSED ALTERNATE EXAMINATIONS (as stated)

DNPS will continue to perform best effort examinations in order to achieve the maximum amount of coverage. Additionally, a VT-2 examination performed on the subject components during system pressure test per examination category B-P each refueling outage and category C-H each inspection period is performed.

4.0 EVALUATION

The ASME Code, Section XI, 1989 Edition, requires volumetric examination coverage of 100 percent of the reactor vessel outlet nozzle to shell weld. However, a reduction in examination coverage of less than 10 percent is acceptable due to interferences as provided by Code Case N-460, “Alternative Examination Coverage for Class 1 and Class 2 Welds” which has been approved by the NRC in Regulatory Guide 1.147. During the third 10-year inspection interval, the reactor vessel outlet nozzle to shell welds identified in Table CR-24.1 in examination category B-D were ultrasonically examined resulting in volumetric coverage ranging from 20 percent to 73.5 percent in lieu of the Code-required coverage in excess of 90 percent. The limitation in examination coverage was attributed to the configuration of the nozzle into the vessel interior which restricted scanning from one side of each weld from the interior surface of the reactor vessel. Also, the reactor vessel head to flange weld and vessel head meridional weld in examination category B-A were examined to obtain volumetric coverage of 71.5 percent and 86 percent due to limitations in scanning resulting from flange configuration or other interference. For the reactor recirculation, high and low pressure coolant injection piping welds identified in Table CR-24.1 in examination categories B-J and C-C,

volumetric and surface examination coverages were restricted due to interference from structural attachments. However, the licensee has examined the subject welds to the maximum extent practical by volumetric and surface examination.

The staff has determined that it is impractical to perform the Code-required examination of the subject welds identified in Table CR-24.1 due to the configuration of the weld or other interference that prevented complete ultrasonic scanning of the weld. In order to comply with the Code requirements, a design modification of the reactor vessel and the piping system including the supports will have to be performed which would impose a significant burden on the licensee. The staff, however, believes that the examination conducted for each weld provides reasonable assurance of structural integrity of the weld since any significant pattern of degradation in the weld should have been detected during examination of the accessible weld volume. Further, in the unlikely event that a service-induced flaw in the weld propagates to the inside surface of the weld, it would most likely be detected during the Code-required VT-3 visual examination of the reactor vessel interior surface or if a flaw were to propagate from the inside to outside surface due to stress-corrosion of the subject piping, the Code-required VT-2 examination during the system leakage test will most likely detect it.

5.0 CONCLUSION

The staff has reviewed the licensee's submittal and concludes that compliance with the Code requirements on volumetric and surface examinations for the reactor vessel nozzle to shell welds, the pipe-to-valve welds and the structural attachment welds identified in Table CR-24.1 are impractical due to component configuration, material composition, and/or other obstructions. The staff has further determined that if the Code requirements were to be imposed on the licensee, the nozzles and the piping including the structural attachments must be redesigned which would impose a significant burden on the licensee. The staff finds that the examination coverages of the accessible weld volumes and of the surface areas, provide reasonable assurance of the structural integrity of the welds identified in the relief request. Therefore, relief is granted from the Code examination coverage requirements pursuant to 10 CFR 50.55a(g)(6)(i) for the third 10-year inservice inspection interval of Dresden Units 2 and 3. The relief granted is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest given due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

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