



IES Utilities Inc.
Duane Arnold Energy Center
3277 DAEC Road
Palo, IA 52324-9785

Office: 319.851.7611
Fax: 319.851.7986
www.alliant-energy.com

October 30, 1998
NG-98-1853

Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-37
Washington, DC 20555-0001

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License No: DPR-49
Inservice Inspection Relief Requests NDE-R001, NDE-R027,
NDE-R028, NDE-R029, NDE-R030, NDE-R032, NDE-R034,
NDE-R035 and NDE-R036

Reference: Letter from R. Savio (NRC) to L. Liu (IES) dated March 23, 1998,
Evaluation of Third Ten-Year Inservice Inspection Interval
Requests for Relief

File: A-100, A-286

The referenced letter transmitted the NRC's evaluation of the Duane Arnold Energy Center (DAEC) inservice inspection (ISI) requests for relief for the third ten year interval. Since that time, the DAEC has identified the need for additional relief. Relief requests NDE-R001, NDE-R027, NDE-R028, NDE-R029 and NDE-R030 are provided in the attachment. IES Utilities also requests authorization for the use of Performance Demonstration Initiative (PDI) techniques in the ISI program (NDE-R034).

100032

9811100260 981030
PDR ADOCK 05000331
G PDR

A047

October 30, 1998

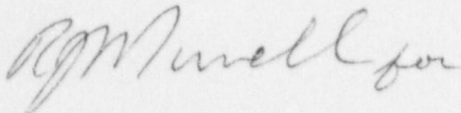
NG-98-1853

Page 2

In addition, IES Utilities requests authorization to use the alternative requirements described in Code Cases 573, 598 and 574. These requests are contained in relief requests NDE-R032, NDE-R035 and NDE-R036, respectively. As stated in footnote 6 to 10CFR50.55a, the use of Code Cases may be authorized by the Director of the Office of Nuclear Reactor Regulation, pursuant to 10CFR50.55a(a)(3). According to 10CFR50.55a(a)(3), the proposed alternatives must provide an "acceptable level of quality and safety." Use of the aforementioned Code Cases does so, as discussed in the attachment.

IES Utilities requests approval of these requests prior to Refueling Outage (RFO) 16, currently scheduled to begin in October 8, 1999.

Sincerely,



Kenneth E. Peveler
Manager, Regulatory Performance

Attachment

cc: C. Rushworth (w/a)
E. Protsch (w/o)
J. Franz (w/o)
D. Wilson (w/o)
R. Laufer (NRC-NRR) (w/a)
J. Caldwell (Region III) (w/a)
NRC Resident Office (w/a)
Docu (w/a)

RELIEF REQUEST NUMBER: NDE-R001

COMPONENT IDENTIFICATION

Code Class: 1
References: IWB-2500
Table IWB-2500-1
Examination Category: B-A
Item Number: B1.11, B1.22, B1.30, B1.40
Description: Circumferential Weld (Vessel)
Meridional Weld (Bottom Head)
Shell to Flange Weld
Head to Flange Weld
Component Numbers: VCB-B004, HMA-B002, VCB-C005, HCC-C001

CODE REQUIREMENT

Section XI (1989 Edition), Table IWB-2500-1 Category B-A, Items B1.11, B1.22, B1.30 and B1.40, require a volumetric examination of applicable Class 1 pressure retaining welds, which includes essentially 100% of weld length, once during the ten-year interval.

Code Case N-460 and 10CFR50.55 permit a reduction in examination coverage of Class 1 reactor vessel welds provided the coverage reduction is less than 10%. The Duane Arnold Energy Center (DAEC) has adopted Code Case N-460 in the Inservice Inspection (ISI) Program Plan, as permitted by USNRC Regulatory Guide 1.147, Revision 11.

Relief is requested from performing essentially 100% of the weld length for reactor vessel welds VCB-B004, HMA-B002, VCB-C005 and HCC-C001.

BASIS FOR RELIEF

The DAEC plant design was completed and a license to operate was requested in 1971. The reactor vessel was designed and installed to ASME Section III, 1965 Edition, 1967 Addenda. The parameters for accessibility for Inservice Inspection were not requirements at that time and therefore not necessarily factored into component and system configurations, thereby creating conditions where ASME Section XI Code required examination coverage of reactor vessel welds can not be obtained.

During refueling outage (RFO) 14, the DAEC performed the augmented weld examination of the reactor vessel using the General Electric GERIS 2000 ultrasonic examination system. The extent of examination coverage is outlined in the following table. The amount of coverage which will be obtainable when the third ten-year interval examinations are performed is based on the percentages obtained during RFO 14. Relief is therefore requested for the third ten-year interval for the four welds for which less than 90% coverage will be obtainable - VCB-B004, HMA-B002, VCB-C005 and HCC-C001.

REACTOR VESSEL WELD LIMITED EXAMINATION TABLE

ASME Item No.	Weld Description	Weld ID	Accessible Exam Coverage	Comments
B1.11	Circumferential weld	VCB-B1	96.5%	
B1.11	Circumferential weld	VCB-A2	96.7%	
B1.11	Circumferential weld	VCB-B3	96.7%	
B1.11	Circumferential weld	VCB-B4	86.91%	
B1.12	Longitudinal Welds	VLA-A001	96.6%	
B1.12	Longitudinal Welds	VLA-A002	96.7%	
B1.12	Longitudinal Welds	VLB-A001	95.4%	
B1.12	Longitudinal Welds	VLB-A002	95.8%	
B1.12	Longitudinal Welds	VLC-B001	93.8%	
B1.12	Longitudinal Welds	VLC-B002	93.4%	
B1.12	Longitudinal Welds	VLD-B001	96.7%	
B1.12	Longitudinal Welds	VLD-B002	96.7%	
B1.21	Circ Weld (Bott Hd)	HCA-B001	100%	
B1.22	Meridional Welds (Bottom Head)	HMA-B002	80.3%	
B1.30	Shell to Flange Welds	VCB-C005	42.7%	(one side)
B1.40	Head to Flange Welds	HCC-C001	36.8%	(one side)
B1.51	Repair Welds (Beltline Region)	(VLA-A002) 118 R1	96.9%	Right side of weld, 31" X 38" area, Y=119" to 150"

VCB-B004

This is the Course 3 to Course 4 circumferential weld. The vessel stabilizers and an insulation support ring are located at the location and limit the examination to approximately 86.91%. The insulation support ring is located 18" from the weld. The bottom of the stabilizer brackets are located on the weld. In order to perform the additional 13.09% of the weld, the stabilizers would require removal. Removing the vessel stabilizers is not a feasible option.

HMA-B002

This weld is located at the vessel skirt. There is a portion of the weld above and below the vessel skirt. Therefore the vessel skirt limits the examination coverage to approximately 80.3%. In order to perform the additional 19.7% of the weld, the vessel skirt would require removal and then reinstallation. This is not a feasible option.

VCB-C005

This is the Vessel to Flange weld. This weld is examined from the flange surface and the vessel wall. The examination is limited to approximately 42.7% due to the configuration of the weld. There is no feasible option in order to examine the additional 57.3%.

HCC-C001

This is the Head to Flange weld. This weld is examined from the head surface. The examination is limited to approximately 36.8% due to the configuration of the weld. There is no feasible option in order to examine the additional 63.2%.

ALTERNATE EXAMINATION

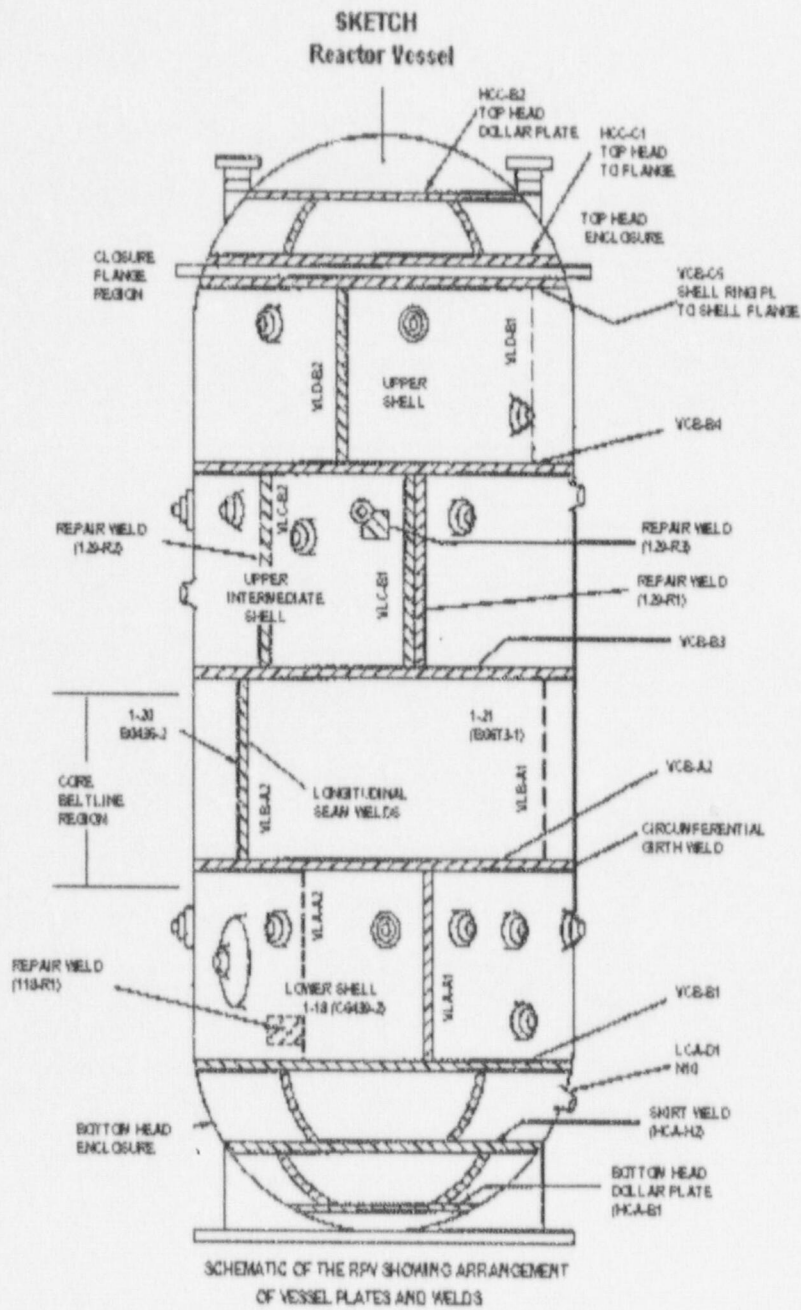
Pursuant to 10CFR50.55a(a)(3)(ii), the DAEC proposes to examine, once during the ten year interval, the applicable pressure retaining reactor vessel welds to the maximum extent practical within the limitations of the examination technique or design of the component. The welds and approximate coverage are:

VCB-B004	86.91%
HMA-B002	80.3%
VCB-C005	42.7%
HCC-C001	36.8%

The inaccessible portions of the reactor vessel welds will continue to be subject to the applicable system pressure test requirements of IWA and IWB-5000 with a VT-2 visual examination.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Inservice Inspection Program for DAEC.



RELIEF REQUEST NUMBER: NDE-R027

COMPONENT IDENTIFICATION

Code Class: 1
References: IWB-2500
Table IWB-2500-1
Examination Category: B-G-1
Item Number: B6.40
Description: Threads in Flange
Component Numbers: Closure Head Threads in Vessel Flange
(CLSR HD-LGMNTS, (1-60))

CODE REQUIREMENT

Section XI (1989 Edition), Table IWB-2500-1 Category B-G-1, Item B6.40, requires a volumetric examination, which includes 1 inch around the vessel bushing (when installed) as referenced in Figure IWB-2500-12, once during the ten-year interval.

Code Case N-460 permits a reduction in examination coverage of Class 1 welds provided the coverage reduction is less than 10%. The Duane Arnold Energy Center (DAEC) has adopted Code Case N-460 in the Inservice Inspection (ISI) Program Plan, as permitted by USNRC Regulatory Guide 1.147, Revision 11.

BASIS FOR RELIEF

The 1 inch annular area required by IWB-2500-12 to be examined encompasses the flange sealing surface area. This ligament examination is limited due to the proximity of the flange sealing surface. A total of approximately 77.1% of the examination volume can be achieved. The sealing surface does not allow examination of a 4 inch and 4.3 inch area on both sides of the stud which interfaces with the sealing surface. This is due to the flange configuration and the O-ring groove. In accordance with 10CFR 50.55a(6)(i), relief requests may be granted when the examination requirements are shown to be impractical.

ALTERNATE EXAMINATION

The DAEC proposes to perform examination of 77.1% of the flange ligament once every ten year period.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Inservice Inspection Program for DAEC.

RELIEF REQUEST NUMBER: NDE-R028

COMPONENT IDENTIFICATION

Code Class: 1
References: IWB-2500
Table IWB-2500-1
Examination Category: B-D
Item Number: B3.90
Description: Nozzle-to-Vessel Welds
Component Numbers: See "List of Nozzle-to-Vessel Welds" for Component Identification

CODE REQUIREMENT

Section XI (1989 Edition), Table IWB-2500-1 Category B-D, Item B3.90, requires a volumetric examination, which includes essentially 100% of the weld, once during the ten-year interval. The examination volume is defined in Figure IWB-2500-7(b).

Code Case N-460 permits a reduction in examination coverage of Class 1 welds provided the coverage reduction is less than 10%. The Duane Arnold Energy Center (DAEC) has adopted Code Case N-460 in the Inservice Inspection (ISI) Program Plan, as permitted by USNRC Regulatory Guide 1.147, Revision 11.

Relief is requested from performing essentially 100% of the weld length for those welds identified in the "List of Nozzle-to-Vessel Welds."

BASIS FOR RELIEF

Due to the design of these welds it is not feasible to effectively perform a volumetric examination of 100% of the volume as described in IWB-2500-7(b). The nozzle-to-vessel welds are accessible from the vessel side, but examination cannot be performed from the nozzle side because of the forging curvature. In addition to component configuration certain nozzle-to-vessel weld examinations are further limited by reactor pressure vessel (RPV) design obstructions (such as RPV appurtenances). In accordance with 10CFR 50.55a(6)(i) relief requests may be granted when the examination requirements are shown to be impractical.

ALTERNATE EXAMINATION

The DAEC proposes to perform volumetric examination from the vessel side of the nozzle-to-vessel welds identified in the "List of Nozzle-to-Vessel Welds." Because of the design of these welds, there are no alternative examination techniques currently available to increase the examination volume.

List of Nozzle-to-Vessel Welds

Nozzle ID	Code Coverage*	Remarks
CRA-D001	61.3%	Control Rod Drive
CSB-D001	66%	Core Spray
FWA-D001	56.5%	Feedwater
HVA-D001	66.0%	Head Vent
JPA-D001	61.1%	Jet Pump
MSA-D001	59.6%	Main Steam
RHA-D001	65.7%	Head Spray
RRD-D001	51.4%	Recirculation Inlet
RRE-D001	64%	Recirculation Inlet
RRH-D001	64%	Recirculation Inlet
VIE-D001	66%	Vessel Instrumentation

*Due to the nozzle design, it is not feasible to effectively exam 100% of the required code volume as defined in Figure IWB-2500-7(b).

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Inservice Inspection Program for DAEC.

RELIEF REQUEST NUMBER: NDE-R029

COMPONENT IDENTIFICATION

Code Classes: 1
References: IWB-2500,
Table IWB-2500-1
Examination Categories: B-J
Item Numbers: B9.11
Description: All pressure retaining
Component Numbers: Reactor Water Cleanup System Weld CUA-J010

CODE REQUIREMENT

Section XI (1989 Edition), Table IWB-2500-1 Category B-J, Item B9.11 requires a volumetric and surface examination of applicable Class 1 pressure retaining welds, which includes essentially 100% of weld length, once during the ten-year interval.

Code Case N-460 permits a reduction in examination coverage of Class 1 welds provided the coverage reduction is less than 10%. The Duane Arnold Energy Center (DAEC) has adopted Code Case N-460 in the Inservice Inspection (ISI) Program Plan, as permitted by USNRC Regulatory Guide 1.147, Revision 11.

Pursuant to 10CFR50.55a(a)(3)(ii), relief is requested from performing volumetric examination of essentially 100% of the weld length for Reactor Water Cleanup System Weld CUA-J010.

BASIS FOR RELIEF

This weld is an elbow to valve weld configuration which limits the volumetric (UT) coverage to a one-sided exam. The weld was examined utilizing a 45° and a supplemental 70° shear wave search unit. This results in approximately 60% coverage of the weld length. In order to perform radiography of the weld, the Reactor Water Cleanup System would be required to be drained, which would result in an increase in exposure to personnel by a factor of 1.7 (200mr/hr vs. 340mr/hr) for a total of 140mr for the additional 40% coverage. This does not include the operational time in valve line-ups and draining the system or the exposure in other areas of the plant due to the system being drained. The benefit of examining the additional 40% weld length has only a small potential of increasing plant safety margins and a very disproportionate impact on expenditures of plant manpower and radiation exposure.

ALTERNATE EXAMINATION

As an alternative to existing Section XI requirements, DAEC proposes to perform volumetric examination of the 60% weld length. DAEC will examine applicable pressure retaining piping welds to the maximum extent practical within the limitations of the examination technique or design of the component. Should reportable indications be found in the accessible portions of the listed weld, an engineering evaluation will be performed to determine if the inaccessible portion of the weld would be affected.

Subsequent to examination of the affected weld, NDE data sheets will describe in detail, the extent of the limitation and any alternative examination techniques used to obtain coverage.

The inaccessible portions of the weld will continue to be subject to the applicable system pressure test requirements of IWA and IWB-5000 with a VT-2 visual examination, as well as Code-required surface examination.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Inservice Inspection Program for DAEC.

RELIEF REQUEST NUMBER: NDE-R030

COMPONENT IDENTIFICATION

Code Classes: 1
References: IWB-2500,
Table IWB-2500-1
Examination Categories: B-J
Item Numbers: B9.11
Description: All pressure retaining
Component Numbers: Residual Heat Removal System Weld RHC-J025

CODE REQUIREMENT

Section XI (1989 Edition), Table IWB-2500-1 Category B-J, Item B9.11 requires a volumetric and surface examination of applicable Class 1 pressure retaining welds, which includes essentially 100% of weld length, once during the ten-year interval.

Code Case N-460 permits a reduction in examination coverage of Class 1 welds provided the coverage reduction is less than 10%. The Duane Arnold Energy Center (DAEC) has adopted Code Case N-460 in the Inservice Inspection (ISI) Program Plan, as permitted by USNRC Regulatory Guide 1.147, Revision 11.

Pursuant to 10CFR50.55a(a)(3)(ii), relief is requested from performing volumetric examination of essentially 100% of the weld length for Residual Heat Removal System Weld RHC-J025.

BASIS FOR RELIEF

This weld is a valve to penetration weld configuration which limits the volumetric (UT) coverage. The weld was examined utilizing a 45° shear wave search unit. This results in approximately 68% coverage of the weld length. In order to perform radiography of the weld, the Residual Heat Removal System would be required to be drained, which would result in an increase in exposure to personnel by a factor of 1.7 (30mr/hr vs. 51mr/hr) for a total of 21mr for the additional 32% coverage. This does not include the operational time in valve line-ups and draining the system or the exposure in other areas of the plant due to the system being drained. The benefit of examining the additional 32% weld length has only a small potential of increasing plant safety margins and a very disproportionate impact on expenditures of plant manpower and radiation exposure.

ALTERNATE EXAMINATION

As an alternative to existing Section XI requirements, the DAEC proposes to perform volumetric examination of approximately 68% of the weld length. The DAEC will examine applicable pressure retaining piping welds to the maximum extent practical within the limitations of the examination technique or design of the component. Should reportable indications be found in the accessible portions of the listed weld, an engineering evaluation will be performed to determine if the inaccessible portion of the weld would be affected.

Subsequent to examination of the affected weld, NDE data sheets will describe in detail, the extent of the limitation and any alternative examination techniques used to obtain coverage.

The inaccessible portions of the weld will continue to be subject to the applicable system pressure test requirements of IWA and IWB-5000 with a VT-2 visual examination, as well as a Code-required surface examination.

APPLICABLE TIME PERIOD

Relief is requested for the third ten-year interval of the Inservice Inspection Program for DAEC.

ALTERNATIVE EXAMINATION NUMBER: NDE-R032

SYSTEM/COMPONENT(S) FOR WHICH ALTERNATE EXAMINATION WILL BE USED

Code Classes: 1, 2, and 3
References: ASME, Section XI, IWA-4400(a) (1989 Edition)
ASME Code Case N-573
Examination Category: All
Item Number: All
Description: Use of Code Case N-573
Component Numbers: All

CODE REQUIREMENT

ASME, Section XI, IWA-4400(a), 1989 edition with 1989 addenda (NDE-R015) requires that the Owner must qualify all welding procedures.

BASIS FOR ALTERNATE EXAMINATION

Pursuant to 10CFR50.55a(a)(3)(ii), relief is requested from the requirements for welding and brazing procedure qualifications as stated in ASME, Section XI, IWA-4000. This request also includes relief for all Procedure Qualification Records (PQRs) supporting alternative repair procedures in accordance with ASME, Section XI, IWA-4500 and balance of plant welding.

The Duane Arnold Energy Center (DAEC) requests to utilize ASME Code Case N-573 as an alternative method to qualify welding procedures. Code Case N-573 extends the logic already found in construction code USAS B31.1, 1967 edition with 1969 addenda, paragraphs 127.4.1 and 127.5.

Maintaining the original requirement presents an undue hardship, as considerable utility specific resources would be duplicated when qualified procedures from other NRC licensed facilities have already been demonstrated to provide an acceptable level of quality and safety. The requested alternative will not reduce safety or quality.

ALTERNATE EXAMINATION

The DAEC will use Code Case N-573 to allow the use of other Owner's PQRs. Steps to be taken by the DAEC to ensure the technical correctness of other Owner's PQRs and to ensure the resulting Welding Procedure Specifications (WPSs) produce sound welds are as follows.

- The DAEC will perform a technical review of the supplying Owner's PQR. The supplying Owner will state in writing that the PQR was performed under an approved Nuclear Quality Assurance program that meets ASME, Section XI, IWA-1400 and that it was performed in accordance with ASME, Section IX.
- The DAEC will generate a WPS using the variables established in the supplied PQRs. DAEC PQRs may supplement the other Owner's supplied PQRs. All essential variables of the most recent ASME, Section IX, shall be addressed in the generated WPS.
- The generated WPS will be reviewed and approved in accordance with DAEC's Quality Assurance Program.
- The generated WPS will be demonstrated by DAEC by successfully passing a performance qualification test in accordance with ASME, Section IX.
- The DAEC will not transfer a supplied PQR to any other Owner.
- The DAEC will document the use of Code Case N-573 on the appropriate NIS-2 form.

APPLICABLE TIME PERIOD

Alternative is requested for the third ten-year interval of the Inservice Inspection Program for DAEC.

ALTERNATIVE EXAMINATION NUMBER: NDE-R034

SYSTEM/COMPONENT(S) FOR WHICH ALTERNATE EXAMINATION WILL BE USED

Code Classes: 1 and 2
References: ASME, Section XI, IWA-2232 (1989 Edition)
Examination Category: B-J and C-F-2
Item Number: B9.11, and C5.51
Description: Use of the Performance Demonstration Initiative (PDI) Techniques
Component Numbers: All

CODE REQUIREMENT

ASME, Section XI, 1989 edition, Tables IWB-2500 and IWC-2500 requires a volumetric examination of the above item numbers. IWA-2232 requires that the Owner shall perform ultrasonic examination in accordance with Appendix I. Appendix I states that examinations shall be conducted in accordance with Appendix III.

BASIS FOR ALTERNATE EXAMINATION

The PDI program is based on the 1992 Edition with the 1993 Addenda of the ASME Section XI Code. This edition with addenda requires that ultrasonic equipment, procedure, and examiners be qualified on flawed and notched materials and configurations similar to those found in the actual plant. Hence, the PDI Program provides a higher degree of reliability for detection and characterization of any flaws when compared to the conventional amplitude-based ultrasonic techniques required by the 1989 edition of the ASME Section XI Code.

The NRC issued a letter on March 1, 1996 discussing the transition from the Intergranular Stress Corrosion Cracking (IGSCC) Qualification Program to the PDI Program. In this letter, the NRC approved the following actions while the staff proceeded with the rulemaking and the incorporation of the PDI into that rulemaking. The specific items that were approved by the Staff are as follows:

- "Effective March 1, 1996, IGSCC examiner qualification may be obtained by passing the appropriate test of either the PDI program or the original IGSCC program. Examiner qualification for weld overlays will continue as it currently exists under the IGSCC Coordination Plan until weld overlay qualification is incorporated in the PDI program. The need to include weld overlay qualification in the PDI program is considered an outstanding issue... ."

- "BWR IGSCC examiner qualification for detecting and sizing IGSCC in piping and weld overlays is acceptable for up to 5 years from the date of the last qualification examination before March 1, 1994. Examiner qualification acquired on or after March 1, 1994, is acceptable for 3 years under the IGSCC Coordination Plan and 3 years under the PDI program. Using the PDI program for qualification of BWR IGSCC examination personnel is preferred over using the IGSCC Coordination Plan. ..."
- "When an examiner obtains IGSCC qualification from the PDI program, subsequent requalification must be performed under the PDI program. To avoid maintenance of dual BWR IGSCC qualification programs, it is intended that the PDI program will eventually replace the IGSCC Coordination Plan and that the IGSCC Coordination Plan will subsequently be dissolved."
- "The registry of qualified personnel for ultrasonic examination of IGSCC that is being maintained for the IGSCC Coordination Plan should be expanded to include IGSCC qualified examiners from the PDI program."

Pursuant to 10CFR 50.55a(a)(3)(i) the use of the PDI Program for examination procedures, equipment, and personnel qualifications would provide an acceptable alternative to the existing ASME Section XI Code requirements.

ALTERNATE EXAMINATION

Examination procedures, equipment, and personnel qualified by performance demonstration will be utilized in accordance with the PDI Program for the examination of stainless steel and ferritic piping welds that fall under the above mentioned item numbers.

APPLICABLE TIME PERIOD

Alternative is requested for the third ten-year interval of the Inservice Inspection Program for DAEC.

ALTERNATIVE EXAMINATION NUMBER: NDE-R035

SYSTEM/COMPONENT(S) FOR WHICH ALTERNATE EXAMINATION WILL BE USED

Code Classes: All
 References: ASME, Section XI, Tables IWB-2412-1, IWC-2412-1, IWD-2412-1, (1989 Edition)
 Examination Category: All
 Item Number: All
 Description: Alternative Requirements to Required Percentages of Examinations
 Component Numbers: All

CODE REQUIREMENT

Tables IWX-2412-1 (as shown below) requires that a certain percentage of examinations be performed within each inspection period.

Inspection Interval	Inspection Period, Calendar Years of Plant Service Within the Interval	Minimum Examinations Completed, %	Maximum Examinations Credited, %
All	3	16	34
	7	50	67
	10	100	100

BASIS FOR ALTERNATE EXAMINATION

Inspection Program B as set up in Tables IWX-2412-1 is very restrictive, weighing the second and third periods more heavily than the first period. Both the second and third periods can have up to a maximum of 50% of the examinations performed, but the first can have only 34%. ASME Code Case N-598 provides alternative examination percentages which allow more flexibility in scheduling examinations. The use of this Code Case allows the scheduling of examinations to avoid unnecessary expenditure of both manpower and exposure, while ensuring the integrity of the examined components.

In the 1991 Addenda of ASME Section XI, clarification was made on the scheduling of items when there are less than three items within one category. IWB-2412(a) states "If there are less than three items to be examined in an Examination Category, the items may be examined in any two periods, or in any one period if there is only one item, in lieu of the percentage requirements of Table IWB-2412-1." Similar statements are made in paragraphs IWC-2412 and IWD-2412 of the same addenda. The use of Code Case N-598 is in keeping with these percentages. For example, in the case that there are only two items in a category, the Code Case, as well as the

1991 Addenda allows the examination of these items in any two periods, for a 50% examination percentage per period. By the 1989 edition, neither item could be examined in the first period without exceeding the 34% maximum percentage.

The use of this Code Case and the change to 50% maximum percentage for the first period does not deviate from the philosophy of the Code. In fact, this supports performing examinations earlier than that allowed by the 1989 Edition of the Code. The alternative change in the maximum percentage to 75% for the second period also does not deviate from the Code philosophy because it allows more examinations to be performed in the second period. This is in line with the 1989 Code requirements of a minimum of 50% in the second period. This alternative does not change the Code philosophy of performing a percentage of each category each period, but allows the DAEC more flexibility in conducting the examinations in shorter outages.

ALTERNATE EXAMINATION

Pursuant to 10CFR 50.55a(a)(3)(i), the DAEC requests authorization to use Code Case N-598 as an alternative to the requirements of Table IWX-2412-1. The DAEC will use the period percentages delineated in Code Case N-598 in lieu of the period percentages in Tables IWX-2412-1. The percentages in Code Case N-598 are shown below:

Inspection Interval	Inspection Period, Calendar Years of Plant Service Within the Interval	Minimum Examinations Completed, %	Maximum Examinations Credited, %
All	3	16	50
	7	50 ⁽¹⁾	75
	10	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.

APPLICABLE TIME PERIOD

Alternative is requested for the third ten-year interval of the Inservice Inspection Program for DAEC.

ALTERNATIVE EXAMINATION NUMBER: NDE-R036

SYSTEM/COMPONENT(S) FOR WHICH ALTERNATE EXAMINATION WILL BE USED

Code Classes: All
References: ASME, Section XI, IWA-2313, (1989 Edition)
Examination Category: All
Item Number: All
Description: Alternative Requirements for NDE Personnel Recertification
Frequency
Component Numbers: All

CODE REQUIREMENT

IWA-2313 "Certification and Recertification" requires that Level I and Level II personnel shall be recertified by qualification examinations every 3 years.

BASIS FOR ALTERNATE EXAMINATION

Code Case N-574 extends the recertification period for Level I and Level II personnel to 5 years. The time period between recertification for Level III personnel is already 5 years, as allowed by IWA-2313 (1989 Edition). Code Case N-574 is included in the ASME Code in the 1997 addenda.

The DAEC requires each Level I and II to annually perform the methods for which they are certified. If the individual does not complete the annual performance, he/she shall be recertified by examination. This is documented and approved under the direction of the Level III.

All nondestructive examination personnel will continue to be qualified and certified in accordance with the 1989 Edition of ASME Section XI (including the required tests for each Level) with the exception that the period between recertifications will be extended to 5 years.

ALTERNATE EXAMINATION

Pursuant to 10CFR 50.55a(a)(3)(i), IES Utilities requests authorization to use Code Case N-574 as an alternative to the requirements of IWA-2313. The DAEC will use the recertification frequency delineated in Code Case N-574 in lieu of the requirements of IWA-2313. Both Level I and Level II personnel will be recertified by qualification examinations every 5 years.

APPLICABLE TIME PERIOD

Alternative is requested for the third ten-year interval of the Inservice Inspection Program for DAEC.