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MURLEY,T.E. Office of Nuclear Reactor Regulation, Director (Post 870411

SUBJECT: Requests one time exemption from 10CFR50,App J,Section III.A.6(b) re CILRT during next refueling outage.

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Iowa Electric Light and Power Company

April 2, 1990

NG-90-0833

Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License No: DPR-49
Request for Limited Exemption from 10 CFR 50, Appendix J Retest Requirements

References: (1) Letter from R. McGaughy, (Iowa Electric) to H. Denton (NRC) dated November 14, 1985 (NG-85-4475)
(2) Letter from W. Rothert (Iowa Electric) to T. Murley (NRC) dated September 1, 1987 (NG-87-3096)
(3) Letter from D. Mineck (Iowa Electric) to T. Murley (NRC) dated March 15, 1989 (NG-89-0723)

File: A-105, T-23i

Dear Dr. Murley:

Pursuant to the requirements of 10 CFR Part 50.12(a), we request a one time exemption from the requirement (10 CFR Part 50, Appendix J, Section III.A.6.(b)) to conduct a Containment Integrated Leak Rate Test (CILRT) during the next refueling outage at the Duane Arnold Energy Center (DAEC). This exemption would permit resumption of the normal CILRT frequency at the DAEC.

Appendix J to 10 CFR Part 50 requires that a Type A CILRT be conducted three times during each 10-year inservice period. Should two consecutive Type A tests fail to meet the applicable acceptance criteria, a retest must be performed during subsequent refueling outages until two consecutive tests meet the acceptance criteria.

In the referenced letters, we transmitted the results of the CILRTs conducted at the DAEC in July 1985, June 1987 and December 1988. Although these tests successfully demonstrated the leaktightness of the primary containment, the tests conducted in July 1985 and June 1987 were considered to be failures in the "as found" condition due to penalties incurred for the Type B and Type C Local Leak Rate Tests (LLRTs) conducted during those outages. Excessive valve leakage found during these LLRTs was repaired during the individual outages.

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We, therefore, conducted a CILRT in December 1988 which successfully demonstrated the leaktightness of the primary containment in the "as found" condition. Unless an exemption from this requirement is granted, we would be required by 10 CFR Part 50, Appendix J, Section III.A.6(b), to conduct a CILRT during the upcoming refueling outage (June-September 1990).

In reviewing the results of the past CILRTs, we have determined that the major contributors to the excessive "as found" leak rates were the Main Steam Isolation Valves (MSIVs) and the Feedwater system check valves. Consequently, we have initiated an aggressive program to provide permanent repairs to these valves as described in Attachment 1 to this letter.

Attachment 2 to this letter explains how this request for exemption from the requirements of 10 CFR Part 50, Appendix J, Section III.A.6.(b) meets the guidance of 10 CFR Part 50.12. Attachment 3 contains a summary and proposed schedule for CILRTs conducted during our present inservice period.

Because we are required to conduct a CILRT during the next refueling outage scheduled to begin in June 1990 unless the required exemption is granted, we request that the NRC respond to this request by June 30, 1990.

Should you have any questions regarding this matter, please contact this office.

Very truly yours,

Daniel L. Mineck
Manager, Nuclear Division

DLM/NKP/pjv+

Attachments:
(1) Corrective Action Plan for Main Steam Isolation Valve and Feedwater Check Valve Leakage
(2) Request for Exemption from 10 CFR Part 50, Appendix J, Section III.A.6.(b)
(3) Summary and Proposed CILRT Schedule

cc: N. Peterson
L. Liu
L. Root
R. McGaughy
J. R. Hall (NRC-NRR)
A. Bert Davis (Region III)
NRC Resident Office

CORRECTIVE ACTION PLAN

FOR

MAIN STEAM ISOLATION VALVE

AND

FEEDWATER CHECK VALVE

LEAKAGE

I. Main Steam Isolation Valves (MSIVs)

NRC Inspection Report 50-331/89018 (Reference 1) requested that we propose a test program for the Main Steam Isolation Valves (MSIVs) at Duane Arnold Energy Center (DAEC). It was recognized in that Inspection Report that the corrective actions taken to date have reduced the MSIV leakage rate and that the modifications to be installed in the upcoming refuel outage appear capable of affecting a more permanent correction of MSIV leakage. This attachment describes the test program will be implemented to demonstrate that the "new design will perform as expected."

A. BACKGROUND

We have been gathering historical data since the early 1980s to provide a basis for identifying improved maintenance techniques and modifications to the valve design to improve the Local Leak Rate Test (LLRT) performance and minimize forced outages to repair the MSIVs. LLRT performance since 1980 is included in Table 1. The maintenance techniques have primarily focused on improving tooling to ensure all the valve seats are round and concentric within the valve bore. Modifications to the valve design have focused on minimizing problems that could lead to forced outages, improving materials, and minimizing friction forces external to the valve body.

The improved maintenance techniques and modifications to the valve improved LLRT performance but greater improvement appeared possible. In 1987, DAEC began a program to reduce the clearance between the disk/piston assembly and the valve bore. This program has increased our success in improving LLRT performance. A preventive maintenance program is in place which will preserve the reduced clearances and continue to gather data.

Information provided by the NRC in Inspection Report 50-331/88022 (Reference 2) and from the GE BWR Owners Group shows that closing the MSIVs while hot with flow through them and performing the LLRT while the valves are still hot reduces the LLRT leakage rate. During an outage in September 1989, we tested all MSIVs mid-cycle and achieved an improvement in LLRT performance by incorporating these changes to the test method. We are continuing to evaluate the test method to further improve LLRT performance.

We recognize that the improvements in maintenance techniques, the design modifications, and the improvements in LLRT method made to date will improve the LLRT performance but additional improvements appear to be possible. With this in mind we have been working with General Electric, the NSSS supplier for DAEC, and the other equipment manufacturers to identify upgrades to the MSIVs which could significantly improve LLRT performance. This team approach to improving LLRT performance has identified several modifications that will be installed during the 1990 refueling outage. These modifications are listed in Table 2. In general, the modifications are intended to improve LLRT performance by:

1. Increasing the seating force.

2. Decreasing the side loads that detract from the seating force.

3. Minimizing the lateral movement of the disk as it seats by reestablishing concentricity, adding additional guiding, and reducing clearances.

In addition to installing modifications to improve LLRT performance, modifications will be installed to improve overall valve reliability. By this team approach and by improving the total valve performance, the MSIVs at DAEC will be able to meet leakage criteria consistently.

B. ANALYSIS

The modified MSIVs are expected to have significantly improved leak test success rates compared to historical performance. Table 3 is a matrix of improvement features and contributing causes of failures. The features to be installed have been shown to improve leakage performance by proven application - at DAEC or other sites, by tests performed by EPRI (References 3 and 4) or valve manufacturers, or by studies conducted by the BWR Owners Group (Reference 5). The improvement features address the primary contributors to LLRT failure as presented by the BWR Owners Group and technically analyzed by the NRC in NUREG 1169 (Reference 6). The primary contributor, improper maintenance, is addressed by restoring the valve to design dimensional tolerances, replacing components that may have been improperly maintained, and reviews performed in the modification process to ensure that procedures and tooling are appropriate for the modification and adequate training is conducted. Further, secondary contributors that are specific to DAEC are being addressed.

By reducing leakage the benefits to be gained include; consistent technical specification compliance, reduction of repair and refurbishment costs, reduction in dose exposures to maintenance personnel, reduction in scheduled outage time, extension of the effective service life of the MSIVs, and minimization of the potential for outage extension.

The test program provides for evaluation of any valve that exhibits repeat failures and, if necessary, increase of the test frequency to ensure that problems are corrected promptly and stay corrected.

The technical analysis shows that the features to be installed are comprehensive in addressing known problems, proven through industry experience or testing, and appropriate to ensure a significant improvement in leakage performance. Therefore, the testing program presented is adequate to demonstrate that the new design will perform as expected.

C. TEST PROGRAM

The test program we have developed is based on tests required by regulations and an assessment of our MSIV history coupled with the new design modifications that will be installed in 1990.

The success of the modifications will be determined by physical examination of the valves as well as leak rate tests. The preventive maintenance program incorporates this examination thereby ensuring the long term success of the modifications by correcting any hidden problems, maintaining acceptable dimensions, and replacing subcomponents before failure. The established frequency of MSIV disassembly for preventive maintenance is 0 at the end of the first cycle, 4 at the end of the second cycle, and 4 at the end of the third cycle. This frequency takes into account the technical finding of NUREG 1169 that "two or more operating cycles of maintenance and test experience may be needed to establish the effectiveness of the improved practices", a finding that is applicable to hardware modifications as well.

The test program also provides for the preventive maintenance program to be evaluated at the end of the third cycle. This allows adjustment of the preventive maintenance program to ensure the valves are not disassembled excessively. This is consistent with NUREG 1169 which states in its technical findings that during disassembly of MSIVs and attempted correction of "nonexistent or minimal defects in the valves under less-than-optimum field maintenance conditions, it is likely that some actual defects have been introduced that led to later leak test failure."

We are required by 10 CFR Part 50 Appendix J and the DAEC Technical Specifications to conduct local leak rate tests (Type C per Appendix J) on the MSIVs "during each reactor shutdown for major refueling or other convenient interval but in no case at intervals greater than two years".

We are required by 10 CFR Part 50.55a(g) to perform inservice tests of the MSIVs in accordance with Subsection IWV to the ASME Boiler and Pressure Vessel Code 1980 with winter 1981 addenda. The MSIVs are defined by the DAEC Inservice Testing Program as being Category A valves. Paragraph IWV-3420 establishes the interval of leak rate testing as at least once every two years. This test is performed in conjunction with the Appendix J Type C LLRT. IWV-3427 provides for increased testing (Frequency doubled) if the margin as defined by IWV-3427 is reduced by more than 50 percent until repairs can be accomplished. We presently have one valve on an increased testing frequency for seat leakage.

We will evaluate any valve which does not meet the allowable LLRT limits on successive tests and, if necessary, increase the testing frequency for that valve. The test interval and conditions for returning a valve to the original test frequency, if appropriate, would be similar to those provided in IWV-3427.

The preventive maintenance program for the MSIVs is designed to maintain the reduced clearances between the disk/piston assembly and the valve bore. The established program frequency requires that the two canted valves be disassembled every other refueling outage and the six non-canted valves every third outage. Reference 1 suggested that three valves should be disassembled every refuel outage, one canted and two non-canted. Reviews conducted by Iowa Electric in deciding which modifications would be installed also recommended that the frequency of preventive maintenance remain unchanged but that the number of valves scheduled for requiring preventive maintenance each refuel outage be revised to zero after the first cycle, four after the second cycle (inboard MSIVs including the canted valves), and four after the third cycle (outboard MSIVs). DAEC will record historical data similar to that currently obtained during all valve disassemblies. Based on the data gathered, we will adjust the preventive maintenance (PM) program as necessary. In addition, we have coupled the PM program on the actuators and topworks with that for the valves.

D. REFERENCES

1. NRC Region III Inspection Report 50-331/88022(DRS), January 26, 1989.

2. NRC Region III Inspection Report 50-331/89018(DRS), October 20, 1989.

3. EPRI NP-2454, "Comparison of Generic BWR-MSIV Configurations", June 1982.

4. EPRI NP-2381, Volumes 1 and 2, "Measurements and Comparisons of Generic BWR Main Steam Isolation Valves", July 1982.

5. GE Nuclear Energy, NEDC-13643-P, "Increasing Main Steam Isolation Valve Leakage Rate Limits and Elimination of Leakage Control Systems", November 1988.

6. NUREG 1169, "Resolution to Generic Issue C-8, An Evaluation of Boiling Water Reactor Main Steam Isolation Valve Leakage and the Effectiveness of Leakage Treatment Methods", August 1986.

TABLE 1

LOCAL LEAK RATE TEST AS-FOUND PERFORMANCE SINCE 1980

VALVE/DATE	1980	1981	1983	1985	1987	1988	1989
CV4412 A INBOARD	FAILED	38.6	0	0	0	36.0	5.3[1,2]
CV4413 A OUTBOARD	FAILED	65.7	1.8	GROSS	21.6	478.8	5.3[1,2,3]
CV4415 B INBOARD	PASS	0	GROSS	GROSS	GROSS	13.2[2]	9.4[2]
CV4416 B OUTBOARD	PASS	53.0	49.8	0	3.4	0.2	>148
CV4418 C INBOARD	FAILED	8.5	0	3.4	77.3	1.5[2]	4.2[2]
CV4419 C OUTBOARD	FAILED	GROSS	3.6	GROSS	0	13.1	24.4[2,3]
CV4420 D INBOARD	FAILED	GROSS	0	0	0	40.3	6.3[2]
CV4421 D OUTBOARD	PASS	37.7	0.76	17.8	4.7	0	3.7[2]

ALL LEAKAGES IN SCFH
ACCEPTANCE CRITERIA >11.5 SCFH

NOTE

1 - Combination test
2 - After clearance reduction
3 - After valve reboring

TABLE 2

MODIFICATION PACKAGE FEATURES

Design features to improve MSIV leaktightness.

1. Increase the diameter of the actuator from 14 inches to 20 inches
2. Increase the size of the external springs
3. Machine the body bore to restore the as-designed dimensions.
4. Add four guide pads to assist alignment of the main disk for valve closure.
5. Machine the guide ribs to restore alignment and to reduce the clearance between the main disk and the guide ribs.
6. Redesign the main disc assembly to reduce wear and improve alignment.

Design features to improve valve reliability

1. Stiffen the topworks to reduce misalignment.
2. Incorporate a modified coupling between the valve stem and the actuator stem.
3. Incorporate a modified bonnet.
4. Incorporate graphite packing rings.
5. Revise the stem material to reduce the potential for galling.

TABLE 3

MATRIX OF IMPROVEMENT FEATURES AND CONTRIBUTING CAUSES OF MSIV FAILURES

	Primary Contributors	■ Improper maintenance	■ Valve orientation	■ Excessive clearance/seat to guide misalignment	■ Lack of concentricity	■ Incorrect seat contact	■ Excessive coefficient of friction/corrosion	Secondary Contributors	■ Inadequate actuator loading	■ Leakage sources other than seat
Design Features to Improve MSIV Leaktightness										
1. Increase actuator diameter.							X		X	
2. Increase spring size.							X		X	
3. Machine body bore.		X	X		X	X				
4. Add guide pads.				X						
5. Machine guide ribs.		X			X	X				
6. Redesign main disk.						X	X			
Design Features to Improve Valve Reliability										
1. Stiffen topworks				X			X			
2. Incorporate modified coupling.				X			X			
3. Incorporate modified bonnet.		X			X					X
4. Incorporate graphite packing.							X			
5. Revise stem material.							X			

II. FEEDWATER CHECK VALVES

A. BACKGROUND

For a number of years, we have identified excessive leakage during "as-found" Type C leak rate testing of the feedwater check valves (V-14-1 and V-14-3). Descriptions of the most-recent "as-found" test failures are documented in LER 50-331/85-005 and LER 50-331/87-005. In these instances, the check valves were successfully repaired and retested, but these repairs were not successful in yielding a long-term solution (see Table 4).

After the 1987 refueling outage, we conducted a review of the past performance of these valves and proposed long-term solutions. We found the major cause of excessive leakage was inadequate valve seating force caused by excessive valve packing drag and inadequate valve operator seating forces. We also noted that the design of valve seat material was a smaller, secondary contributor to excessive leakage. The predominant corrective action taken throughout the industry has been the installation of "soft seats" to improve the leaktightness of the valves.

Therefore, we decided to modify the valves to increase the valve seating forces and included the installation of "soft seats" in V-14-1 and V-14-3 during the 1988 refueling outage.

B. ANALYSIS

Feedwater Check Valves V-14-1 and V-14-3 serve as the inboard isolation valves for the feedwater lines which penetrate the primary containment. To ensure positive seating of these valves when feedwater flow is lost, these check valves are equipped with pneumatic-spring actuators. The operation of these actuators is determined by the position of control switches in the Control Room.

When the control switch is held in the FREE position, nitrogen pressure is ported to the actuators compressing the springs. This allows the check valve disc to move freely and function as a normal tilting pad check valve. In the SEAT position, nitrogen pressure is vented from the actuators. The spring force then engages two dog clutch mechanisms to move the disc towards the seated position and maintain it on it's seat. The force developed by the springs is insufficient to seat the disc against flow, but will ensure positive seating under no flow conditions.

In the AUTO position of the control switch, the supply of nitrogen to the actuators is determined by the position of the check valve disc. As the check valve begins to open, a limit switch energizes the solenoids which supply nitrogen to the actuators. The springs are compressed and the disc moves freely. On closure, when the disc reaches the fully-closed position, the solenoids deenergize and nitrogen is vented from the actuators. Spring force then is applied to hold the disc on its seat.

To assure that the valves are functioning properly, they are subjected to an LLRT each refueling outage. The LLRT is a low pressure (43 psig) air test. The acceptance criterion for this LLRT is a total valve leakage less than 24,000 sccm.

In response to prior LLRT failures, we modified the valves (V-14-1, V-14-3) during the 1988 Refueling Outage. The following modifications were made to the valve and valve actuator to enhance closure performance.

- Replaced fifteen ring packing with five ring packing to reduce packing drag
- Installed a stiffened spring on the indicator side of the valve operator
- Increased the preload on the valve operator to provide a greater closing force
- Modified the operator limit switches to engage the actuator to allow the spring force to act over a larger range of disk rotation.

The industry has experienced problems with hard-seated check valves not passing the low pressure test. Several utilities have tried to resolve the problem by using the secondary soft seat arrangement as shown in Figure 1. The soft seat is designed to provide the sealing at low pressures (i.e., reactor depressurized) while the hard seats provide sealing for higher pressure (i.e., reactor pressurized)

The soft seat conversion was made by installing new discs in the valves. These new discs have the soft seat conversion included. The soft seat conversion consists of a soft seat clamped into a groove cut into the hard seat. Hard seat sealing remains as before the conversion.

C. TEST PROGRAM

The LLRTs will be conducted each refueling outage in accordance with the requirements of 10 CFR Part 50, Appendix J and the ASME Code, as is the case for the MSIVs. In addition, we will disassemble and inspect these valves each refueling outage.

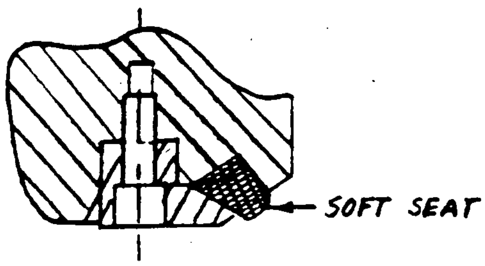
The soft seat material is a polymer and is subject to degradation over time in its service environment. Therefore, it is planned that the seats will be inspected as part of preventive maintenance of the valve each refuel outage and appropriate corrective actions will be taken.

TABLE 4

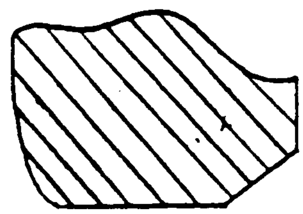
YEAR	LEAKAGE CRITERIA (sccm)	AS FOUND LEAKAGE (sccm)	V-14-1 MAINTENANCE DESCRIPTION	POST MAINTENANCE LEAKAGE (sccm)
1981	800[1]	>45,000	Lapped Disc and Seat	1980
1982	800[1,2]	12,500[3]	None	N/A
1985	16,540[4]	>90,666	Valve overhauled with assistance from Anchor/Draling service representative. Installed modified (eccentric) disc hinge busihings,	3378
1987	13,890[4]	>400,000	Iron-oxide particles removed from disc hinge bushings. Disc re-aligned after initial maintenance. Bonnet pressure seal replaced/resealed.	9350
				V-14-3
1981	800[1]	14,400	Lapped Disc and Seat	13,800
1983	800[1,2]	9,200[5]	None	N/A
1985	16,540[4]	>176,166	Valve overhauled with assistance from Anchor/Darling Service representative. Installed modified (eccentric) disc hinge bushings.	1400
1987	13,890[4]	>400,000	Iron-oxide particles removed form disc hinge bushings.	850

(1) Desired Results
(2) Tested with water
(3) Combined leakage through V-14-1 and V-14-2
(4) Maximum Permissable Leakage
(5) Combined leakage through V-14-3 and V-14-4

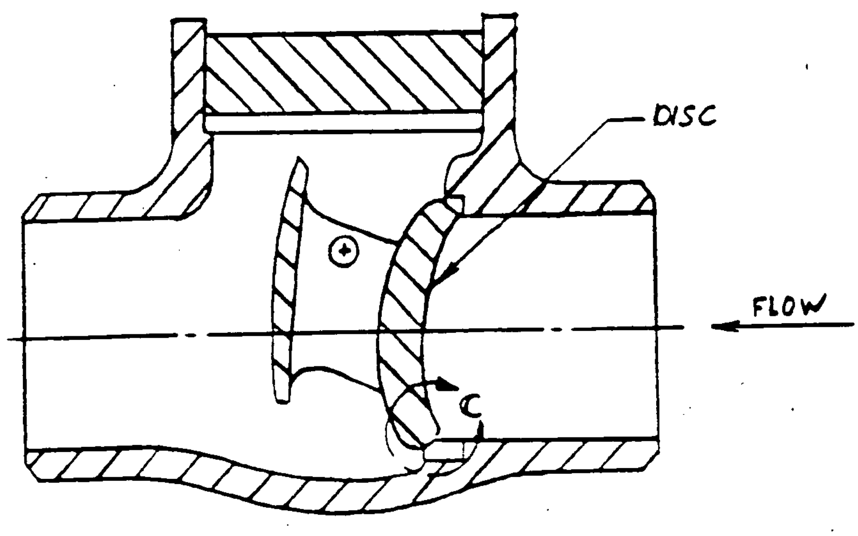
FIGURE 1



VIEW C WITH MODIFICATION



VIEW C WITHOUT MODIFICATION



REQUEST FOR EXEMPTION

FROM

10 CFR PART 50, APPENDIX J, SECTION III.A.6.(b)

In accordance with 10 CFR Part 50.12(a), Iowa Electric Light and Power Company requests an exemption from 10 CFR Part 50, Appendix J, Section III.A.6(b) which states,

> "If two consecutive periodic Type A tests fail to meet the applicable acceptance criteria on III.A.5(b), notwithstanding the periodic retest schedule of III.D, a Type A test shall be performed at each plant shutdown for refueling or approximately every 18 months whichever occurs first, until two consecutive Type A tests meet the acceptance criteria in III.A.5(b) after which time the retest schedule specified in III.D may be resumed."

This exemption request is made so that the Type A retest schedule of Section III.D may be resumed at the Duane Arnold Energy Center (DAEC).

Type A tests performed in July 1985 and June 1987 did not meet the allowable leakage acceptance criteria, in the "as found" condition. A Type A test was performed in December 1988, which did meet the allowable leakage criteria. Application of Section III.A.6.(b) would require another Type A test at the next refueling outage unless an exemption is granted. Iowa Electric requests an exemption from the requirement to perform a Type A Containment Integrated Leakage Rate Test (CILRT) during the refueling outage, now scheduled to begin in June 1990.

10 CFR 50.12(a) indicates that the Commission may grant exemptions if special circumstances are present. One of the special circumstances presented in Part 50.12(a)(2)(ii) is,

> "application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule."

The underlying purpose of 10 CFR Part 50, Appendix J, Section III.A.6(b) is to ensure that unacceptable containment leakage is identified and corrected. As described below, performance of a Type A test at the next refueling outage is not necessary to achieve this purpose.

10 CFR Part 50 Appendix J establishes two types of tests utilizing separate acceptance criteria. The Local Leak Rate Tests (LLRTs) (Type B and C) are performed during each refueling outage while the CILRT (Type A) is performed three times in each 10-year inservice inspection (ISI) interval (approximately every 40 months). The LLRTs provide periodic surveillance of components such as isolation valves and air lock seals. The CILRT is a measurement of the overall integrated leakage rate of the containment. It includes testing of passive and structural components and verifies the adequacy of the LLRT program.

Exceeding the allowable leakage rate during the CILRT indicates that either a passive or structural component is leaking or that there may be an inadequacy in the LLRT program. For leaking passive or structural components, the only test that could determine that such leakage exists or had been corrected would be the CILRT. In the case of a LLRT program deficiency, the CILRT would serve as a means of verification of the LLRT program results.

The failures of the DAEC 1985 and 1987 "as-found" CILRTs were the direct result of Type B and C penalty additions and not the failure of a passive or structural component. The cause of the failure (valve leakage) was repaired and tested prior to the CILRT. After these repairs, the Type A CILRTs successfully met the applicable leakage criteria. The CILRT conducted in December 1988 successfully met its leakage criteria in the "as found" condition.

Since the cause of the DAEC 1985 and 1987 CILRT failures was LLRT failures, more frequent CILRTs are not necessary to assure that unacceptable containment leakage is identified and corrected. Containment isolation valve leakage is identified and corrected during each refueling outage in the existing LLRT program and performing an additional CILRT would result in increased outage length and increased radiation exposure to plant personnel, but would provide no benefit to the health and safety of the general public above that provided by the existing LLRT program.

NRC IE Information Notice 85-71 dated August 22, 1985, states in part,

> "if Type B and C leakage rates constitute an identified contributor to this failure of the "as-found" condition for the CILRT, the general purpose of maintaining a high degree of containment integrity might be better served through an improved maintenance and testing program for containment penetration boundaries and isolation valves. In this situation, the licensee may submit a Corrective Action Plan with an alternative leakage test program proposal as an exemption request for NRC review."

As described in Attachment 2 to this letter, Iowa Electric has addressed the concern of excessive leakage observed during Type B and C testing through a Corrective Action Plan consistent with the guidance contained in Information Notice 85-71. The Plan addresses the appropriate repairs and retest requirements for those valves identified as the major contributors to the excessive leakage rates found during Type B and Type C testing. Implementation of our Corrective Action Plan will ensure that the purpose of Section III.A.6.(b) is met through an aggressive program to identify and correct containment isolation valve leakage. Therefore, special circumstances exist which justify the granting of the requested exemption.

10 CFR Part 50.12(a)(2)(iv) identifies as another special circumstance,

> "The exemption would result in a benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption."

Exemption from the requirements to perform a CILRT at the next refueling outage will result in avoidance of the radiological dose to plant personnel that would otherwise result from the performance of the CILRT. This health and safety benefit more than compensates for any decrease in safety that may result from granting the requested exemption.

SUMMARY AND PROPOSED CILRT SCHEDULE

DATE	DESCRIPTION	CILRT CONDUCTED	PASS/FAIL
March 1985 - July 1985	Cycle 7/8 Refueling Outage	Yes	Fail
March 1987 - July 1987	Cycle 8/9 Refueling Outage	Yes	Fail
September 1988 - January 1989	Cycle 9/10 Refueling Outage	Yes	Pass
June 1990 - September 1990	Cycle 10/11 Refueling Outage	No[1]	--
January 1992 - March 1992	Cycle 11/12 Refueling Outage	Yes[1]	--
July 1993 - September 1993	Cycle 12/13 Refueling Outage	No[1]	--
January 1995 - March 1995	Cycle 13/14 Refueling Outage	Yes[1]	--
Note: (1) Proposed CILRT Schedule			