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 TERRY, C.D.      Niagara Mohawk Power Corp.  
 RECIP. NAME      RECIPIENT AFFILIATION  
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SUBJECT: Requests extension to schedular exemptions from requirements of App J to 10CFR50 for emergency condenser condensate return valves & shutdown cooling isolation valves, granted in NRC 881017 & 890829 ltrs.

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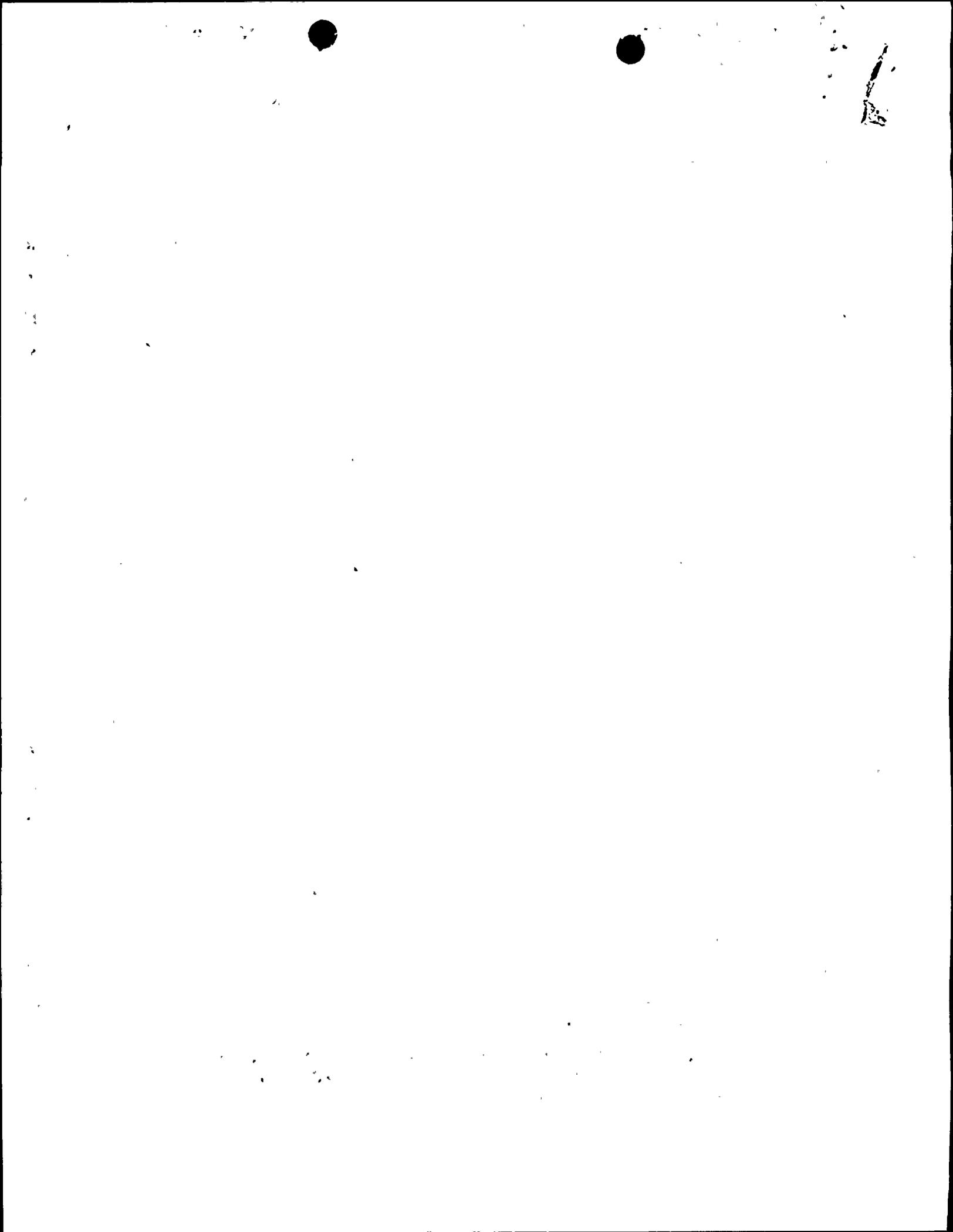
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December 12, 1991  
NMP1L 0626

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Re: Nine Mile Point Unit 1  
Docket No. 50-220  
DPR-63

Gentlemen:

Subject: Scheduling Exemption from the Requirements of Appendix J to 10 CFR Part 50 for the Emergency Condenser Condensate Return Valves and Shutdown Cooling Isolation Valves

By letters dated June 23, 1988, and November 22, 1988, Niagara Mohawk requested a scheduling exemption from the requirements of Appendix J to 10 CFR Part 50, regarding leak testing of the emergency condenser condensate return line valves and shutdown cooling isolation valves, respectively. Both letters also requested an exemption from the requirement that the leakage of these valves be included in the 0.60 La acceptance criteria for Type B and C tests.

By letters dated October 17, 1988, and August 29, 1989, the Commission indicated the exemptions requested on June 23, 1988, and November 22, 1988, respectively, were justified. The Commission therefore granted exemption for the period up to and including Nine Mile Point Unit 1's (NMP1's) next refueling outage. At the time both exemptions were granted, NMP1's next refueling outage referred to a planned outage in 1990. However, due to NMP1's extended time out of service, the next refueling outage was rescheduled to 1992.

The purpose of this letter is to request an extension to the scheduling exemptions granted in the Commission's letters dated October 17, 1988, and August 29, 1989. Pursuant to 10 CFR 50.12 (a), Niagara Mohawk hereby requests scheduling exemption from the requirements of Appendix J to 10 CFR Part 50, regarding leak testing of the emergency condenser condensate return line valves and the shutdown cooling isolation valves for the period up to and including NMP1's 1994 refueling outage. Enclosure 1



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(Emergency Condenser Condensate Return Line Valves) and Enclosure 2 (Shutdown Cooling Isolation Valves) provide the justification for granting exemptions up to and including the 1994 refueling outage. The continuation of the exemption is warranted based, in part, on information previously submitted in our letters dated June 23, 1988, and November 22, 1988, and on additional concerns with ALARA, draining and decontaminating the reactor, and outage management philosophy discussed herein. Also, if the exemption is extended, resources would become available such that the Control Rod Drive (CRD) modifications, currently planned for the 1994 outage, could be completed in the 1992 outage. The CRD modifications would consist of either replacement of the Control Rod Drive push buttons or wiring spare Control Rod Drive select push button contacts in series with contacts in use. Performing the CRD modifications in the 1992 outage is consistent with our outage management philosophy. However, in order to reschedule the CRD modifications to the 1992 outage, Niagara Mohawk would require approval of this exemption request prior to February 28, 1992.

The exemption has been reviewed and found to be authorized by law and consistent with the common defense and security. The enclosures to this letter demonstrate that the requested exemption extension presents no undue risk to the health and safety of the public and that special circumstances are present to justify continuing the exemption.

The proposed exemption has been analyzed and determined not to cause additional construction or operational activities which may significantly affect the environment. It will not result in a significant increase in any adverse environmental impact previously evaluated in the Final Environmental Statement, a significant change in effluents or power levels or a matter not previously reviewed by the Nuclear Regulatory Commission which may have a significant effect on the environment.

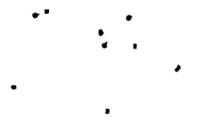
Very truly yours,



C. D. Terry  
Vice President  
Nuclear Engineering

JT/krc  
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Enclosures

xc: Regional Administrator, Region I  
Mr. R. A. Capra, Project Director, NRR  
Mr. D. S. Brinkman, Senior Project Manager, NRR  
Mr. W. L. Schmidt, Senior Resident Inspector  
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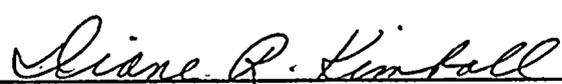
In the Matter of ]  
Niagara Mohawk Power Corporation ]  
Nine Mile Point Unit 1 ]

Docket No. 50-220

C. D. Terry, being duly sworn, states that he is Vice President - Nuclear Engineering of Niagara Mohawk Power Corporation; that he is authorized on the part of said Corporation to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information, and belief.

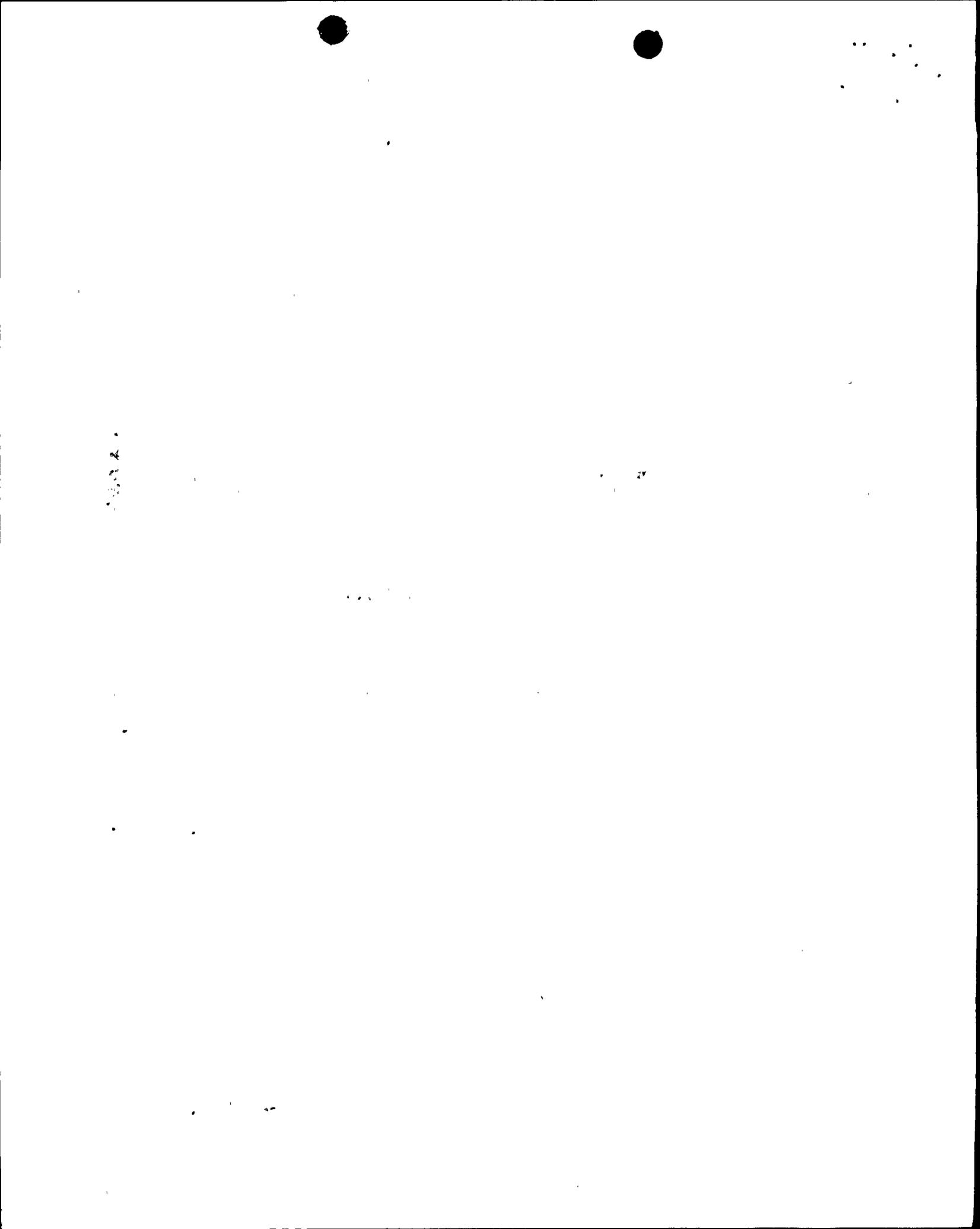
  
\_\_\_\_\_  
C. D. Terry  
Vice President - Nuclear Engineering

Subscribed and sworn to before me, a Notary Public in and for the State of New York and County of Onondaga, this 27th day of December, 1991.

  
\_\_\_\_\_  
Notary Public in and for  
Onondaga County, New York

DIANE R. KIMBALL  
Notary Public in the State of New York  
Qualified in Onondaga County No. 4933503  
My Commission Expires May 31, 1992

My Commission Expires: 5/31/92



## ENCLOSURE 1

### EXEMPTION REQUEST- EMERGENCY CONDENSER CONDENSATE RETURN VALVES

#### Introduction

This enclosure describes a request for schedular exemption pursuant to 10 CFR 50.12 (a) from certain requirements set forth in 10 CFR Part 50, Appendix J. Specifically, Niagara Mohawk requests temporary relief from the requirement to perform leakage testing of emergency condenser condensate return line valves 39-03, -04, -05 and -06, and the requirement that the leakage of these valves be included in the 0.60 La acceptance criteria for the Type B and C tests. The requested relief is for the period up to and including Nine Mile Point Unit 1's (NMP1's) 1994 refueling outage.

#### Background

By letter dated June 23, 1988, Niagara Mohawk requested a schedular exemption from the requirements of Appendix J to 10 CFR Part 50, regarding leak testing of emergency condenser condensate return line valves 39-03, -04, -05, and -06. The letter also requested an exemption from the requirement that the leakage of these valves be included in the 0.60 La acceptance criterion for Type B and C tests. The requested relief was for the period up to and including NMP1's next refueling outage which is currently scheduled for 1992. By letter dated October 17, 1988, the Commission indicated the requested exemption was justified as it was consistent with the common defense and security, presented no undue risk to the health and safety of the public and that special circumstances were present. Exemption was granted for the period up to and including the next refueling outage (1992) based, in part, on the following:

An attempt was made to perform a local leakage rate test on the emergency condenser condensate return line valves. However, since these valves were not originally designed to meet Appendix J leakage rate testing requirements and had not been locally leakage rate tested in the past, the valves were found to exhibit leakage rates greater than that allowed by Appendix J. In fact, it was difficult to establish a pressurization condition between the valves. This was particularly true relative to the inside check valves, which were designed to be held tightly closed by water at high reactor pressure (1,000 psig), whereas the Type C test is run with relatively low air pressure conditions (35 psig).

In order to leak test these valves, a number of system changes will be necessary. The check valves, which were not designed for low pressure testing, may need to be replaced if they cannot be repaired or modified to consistently meet the required leakage rate. Additionally, leak-tight test block valves and test taps may need to be installed in order to perform appropriate Appendix J tests. If the block valves leak, then they will need to be repaired or replaced. This repair is difficult with water in the reactor vessel. A major effort is

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required to install plugs in the recirculation lines to facilitate this repair operation. The plugs would serve as the only barrier to reactor coolant if the block valves must be repaired. Therefore, the reactor would be drained.

The valves in the emergency condenser condensate return lines are normally closed and do not perform a containment isolation function for a majority of the breaks considered during a Design Basis Loss-of-Coolant-Accident (LOCA). In fact, it is important for the subject valves to be open when the system is expected to operate. The emergency condenser system is designed, operated, and maintained to a quality of safety consistent with its core cooling function. The emergency condenser system is poised for service during normal operation with the steam supply line valves open and the condensate return line air-operated valves closed. Under accident conditions, the outside air-operated condensate isolation valves 39-05 and 39-06 will automatically open and initiate the emergency condenser system service on high reactor pressure or low-low water level in the reactor vessel.

The emergency condenser system will automatically isolate if the integrity of the system is significantly compromised (e.g., multiple condenser tube breaks, piping system breaks). High steam flow monitors initiate the isolation action by closing the steam supply valves. High radiation levels in either the primary or the secondary side of the condensers are detected by radiation monitors and the abnormal conditions are brought to the reactor operator's attention. The operator is also capable of monitoring not only the radiation level at the condenser, but also the shell side temperature and water level and the vent steaming conditions. Any indication of a system integrity loss will result in a manual system isolation.

As cited above, air-operated valves 39-05 and 39-06 and check valves 39-03 and 39-04 are closed during normal plant operation. If these valves exhibit sufficient leakage during normal operation, the leakage can be readily detected by steaming from the condenser vent, a reactor coolant system heat imbalance or high emergency condenser shell side temperature. If excessive leakage occurs, it will be identified and the system isolated. The valve, if required, will be repaired to prevent steam and/or condensate from leaking into or out of the reactor coolant system via the valves. Therefore, during normal operation these valves receive a continuous leak-tightness check. In addition to the above, a system integrity check of the emergency cooling system is performed per Technical Specification 6.14.

Based on the above, the Commission determined that the subject valves are designed to be, and would normally be, open during a LOCA and would only be required to close in the event of system leakage outside containment, which is periodically checked per Technical Specification 6.14. Also, although not equivalent



to Type C testing, the valves receive, in effect, a continuous gross leak-tightness check through monitoring the system indications and alarms described above.

The Commission, considering the low probability of a LOCA during which the emergency condenser system would be required to be isolated and the mitigating features of the system, found that plant operation without Type C testing of the subject valves up to the next refuel outage would not present an undue risk to the public health and safety.

Niagara Mohawk, after evaluating several alternatives to meet Appendix J Criteria, plans to perform the following modifications:

- 1) Replace the inboard check valves 39-03, -04 with testable check valves
- 2) Refurbish the outboard air operated valves 39-05, -06
- 3) Refurbish blocking valves 39-01, -02 to allow testing of the isolation valves

#### Exemption Extension Request

Niagara Mohawk requests that the schedular exemption from the requirements of Appendix J to 10 CFR Part 50 regarding leak testing of the emergency condenser condensate return line valves 39-03, -04, -05 and -06, and the requirement that the leakage of these valves be included in the 0.60 La acceptance criteria for the Type B and C tests, be extended up to and including the 1994 refueling outage.

As indicated above, the Commission found NMPC's original schedular exemption request for the period up to and including our next outage, to present no undue risk to the public health and safety. In summary, this was based on 1) The subject valves would normally be closed. The valves do not perform a containment isolation function for a majority of the breaks considered during a Design Basis Loss-of-Coolant Accident (LOCA). In fact, it is important for the valves to be open to perform their intended function. The emergency condenser system is only required to automatically isolate on high steam flow as would occur if the integrity of the system was significantly compromised (e.g. multiple condenser tube leaks, piping system breaks) 2) Isolation valve leakage is constantly monitored during normal operation.

Niagara Mohawk submits this basis also applies to the period between NMP1's 1992 outage and the 1994 outage. Therefore, extending the schedular exemption from the 1992 outage to the 1994 outage presents no undue risk to the public health or safety.

Furthermore, Niagara Mohawk believes special circumstances exist pursuant to 50.12(a)(2)(v) which justify extending the schedular exemption from the 1992 outage to the 1994 outage. These are as follows:



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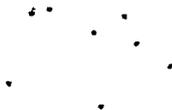
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- ° Niagara Mohawk's 1992 outage philosophy is to focus on safety system reliability with an electrical emphasis. The 1994 outage would focus on the reactor vessel and primary containment with a mechanical/structural emphasis. Therefore, work such as performing Appendix J modifications would more appropriately fit into the 1994 outage work scope. The specific reasons are elaborated below.
- ° The reactor vessel is currently scheduled to be drained during the 1994 outage in order to perform inspections and modifications. The Appendix J modifications, if performed during the 1992 outage, would also require the vessel to be drained. By deferring the modifications to 1994, the vessel would need to be drained only once. This would more effectively utilize outage related resources and would reduce the volume of radwaste generated and the time required to process the radwaste. Deferring the Appendix J modifications to 1994 would also allow plant personnel to focus on the safety system reliability modifications with electrical emphasis planned for 1992.
- ° The present schedule for completing the Appendix J modifications in 1992 does not justify a chemical decontamination in 1992. In addition, the work currently scheduled for the 1994 refuel outage does not justify performing a chemical decontamination in 1994. However, by performing the Appendix J modifications in 1994, a chemical decontamination (in 1994) is justified. Approximately 100 Person-Rem will be saved for Appendix J work alone.

The engineering work and the procurement of equipment required to complete the Appendix J modifications during the 1992 outage is currently on schedule. Therefore, Niagara Mohawk has shown a good faith effort to complete the modifications which would allow Appendix J testing.

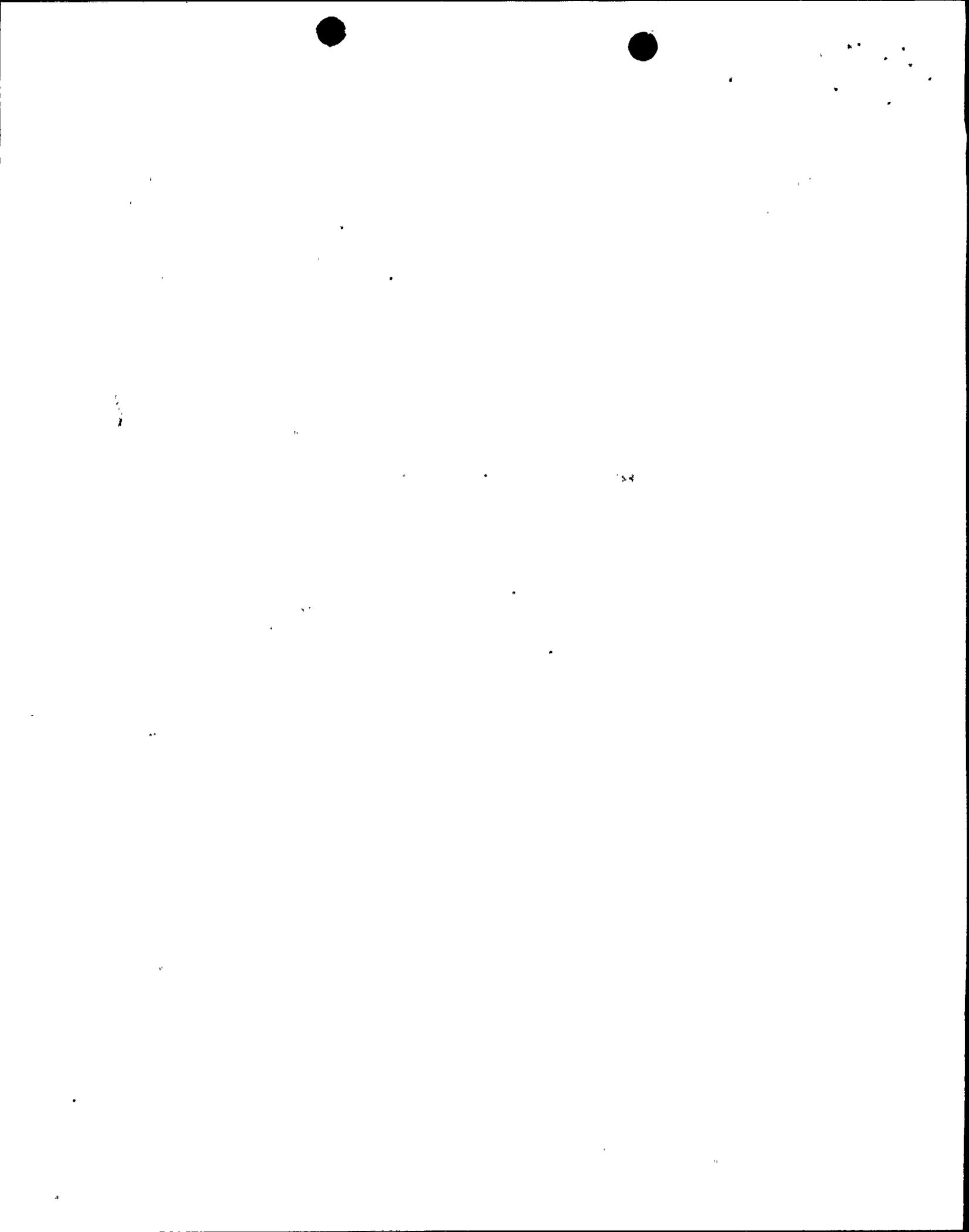
### Conclusion

Niagara Mohawk, for the reasons delineated above, believes that extending the schedular exemption from the 1992 to the 1994 refueling outage presents no undue risk to the health and safety of the public, that special circumstances exist and that a good faith effort has been shown to complete the modifications and perform Appendix J testing. Modifications are required to permit Appendix J testing of the emergency condenser condensate return valves. By deferring these modifications from 1992 to 1994, the following benefits are incurred: 1) The modifications performed in NMP1's 1992 and 1994 outages will be consistent with our current outage philosophy. By emphasizing electrical work in the 1992 outage and mechanical work in the 1994 outage, the complexity of both outages is reduced. Reducing the complexity of the outages allows more focus to be directed to the work planned, thus reducing the potential for human error. Therefore, a potential safety benefit results from deferring the Appendix J



modifications to the 1994 outage. Also, this deferral is consistent with our efforts to apply systematic long range outage planning in a more refined manner consistent with the Nuclear Division Reorganization and Business Plan. 2) The reactor vessel will need to be drained only once 3) A chemical decontamination may be performed in 1994 resulting in a savings of approximately 100 Person-Rem for Appendix J related work.

Accordingly, Niagara Mohawk requests schedular exemption from the requirements of Appendix J to 10 CFR Part 50, regarding leak testing of the emergency condenser condensate return line valves for the period up to and including NMP1's 1994 refueling outage.



## ENCLOSURE 2

### EXEMPTION REQUEST-SHUTDOWN COOLING ISOLATION VALVES

#### Introduction

This enclosure describes a request for schedular exemption pursuant to 10 CFR 50.12 (a) from the requirements set forth in 10 CFR Part 50, Appendix J. Specifically, Niagara Mohawk requests temporary relief from the requirement to perform leakage testing of shutdown cooling isolation valves 38-01, -02, -12, and -13 and the requirement that the leakage of these valves be included in the 0.60 La acceptance criteria for the Type B and C tests. The requested relief is for the period up to and including Nine Mile Point Unit 1's (NMP1's) 1994 refueling outage.

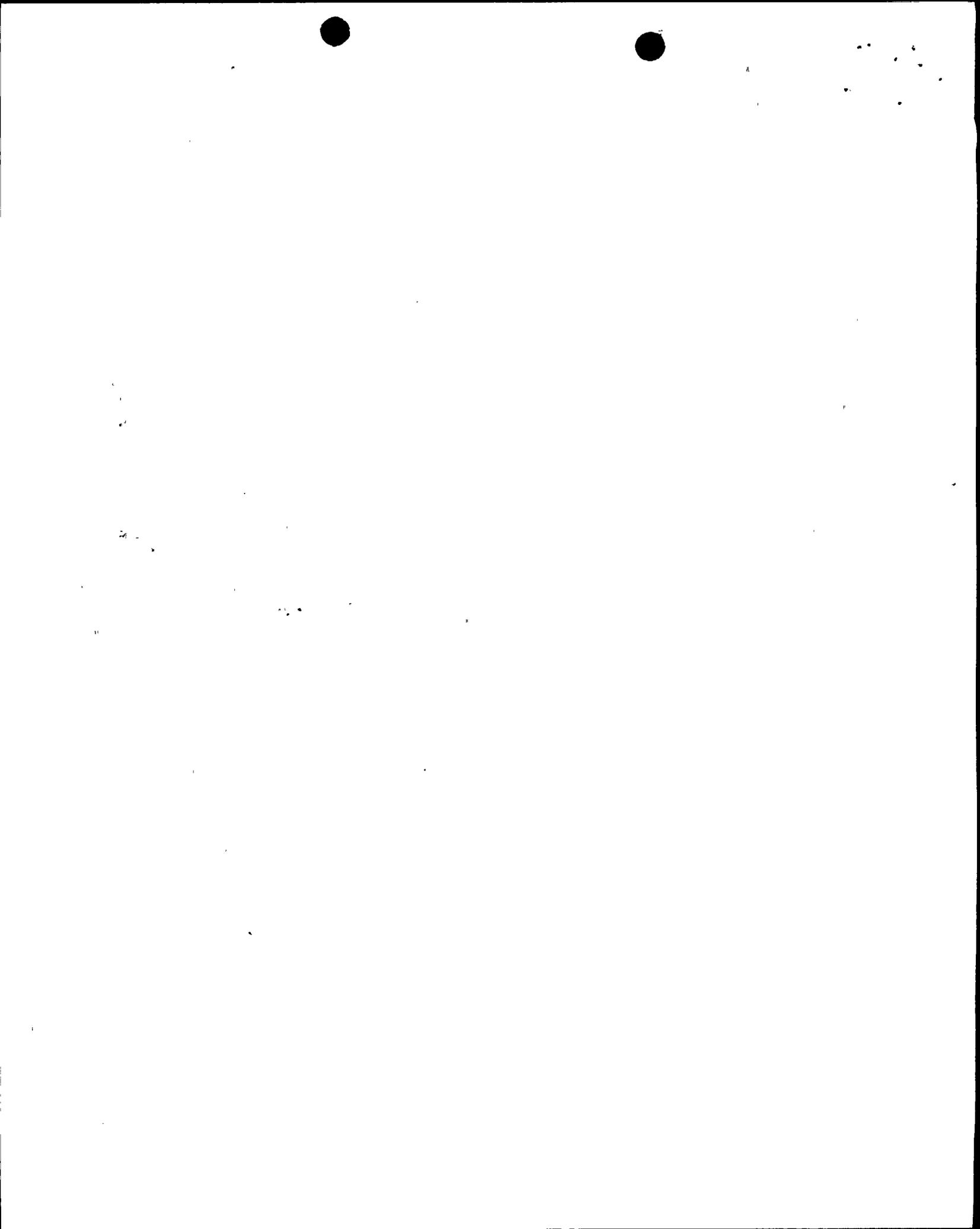
#### Background

By letter dated November 22, 1988, Niagara Mohawk requested a schedular exemption from the requirements of Appendix J to 10 CFR Part 50, regarding leak testing of shutdown cooling isolation valves 38-01, -02, -12, and -13. The letter also requested an exemption from the requirement that the leakage of these valves be included in the 0.60 La acceptance criterion for Type B and C tests. The requested relief was for the period up to and including NMP1's next refueling outage which is currently scheduled for 1992. By letter dated August 29, 1989, the Commission indicated the requested exemption was justified as it was consistent with the common defense and security, presented no undue risk to the health and safety of the public, and that special circumstances were present. Exemption was granted for the period up to and including the next refueling outage (1992) based, in part, on the following:

An attempt was made to perform a local leakage rate test on the shutdown cooling system isolation valves. However, since these valves were not originally designed to meet Appendix J leakage rate testing requirements and had not been locally leakage rate tested in the past, the valves were found to exhibit leakage rates greater than that allowed by Appendix J. Niagara Mohawk determined that these valves cannot be made sufficiently leak-tight to meet Appendix J leakage criteria.

In order to meet the Appendix J requirements, Niagara Mohawk would either replace existing shutdown cooling system suction and return line isolation valves or provide the valves with a seal-water system fluid inventory sufficient to assure the sealing function for at least 30 days at an accident pressure of 1.1 Pa. In either case, major system changes may be necessary in addition to procurement of any replacement or new equipment. As a result, Niagara Mohawk requested additional time until the next refueling outage to design, procure, install, test, operate and demonstrate the new system.

The shutdown cooling system isolation valves are closed during normal operation and are normally placed in operation only



when the plant is in a shutdown condition. This means the system normally is in service only when reactor temperature and pressure are low which minimizes the impact of a LOCA and that these isolation valves are closed prior to an accident.

The shutdown cooling system isolation valves are also normally closed during accident conditions. The shutdown cooling system forms a closed loop with the reactor recirculation system. As a result, if a break inside the containment occurs, leakage will be contained in a closed system. If a break outside the containment occurs, the existing shutdown cooling isolation valves will reduce leakage from the reactor cooling system to the extent that the core will remain covered and fuel damage will not occur. During a water test performed on these valves in 1988, leakage was found to be minor (1.321 gallons/minute). More recent testing conducted in March of 1991 indicated a leak rate of approximately 2 gallons/minute for one of the four isolation valves. Leakage for each of the other three valves was found to be less than 1 gallon/minute.

For a LOCA at NMP1, the decay heat is removed from the containment by the containment spray system. Even if fission products were released to the reactor coolant, the shutdown cooling system would only recirculate the radionuclides through a closed loop back to the reactor coolant system. The containment spray system will reduce pressure and temperature inside the containment. The rapid depressurization of the containment will reduce leakage through the isolation valves.

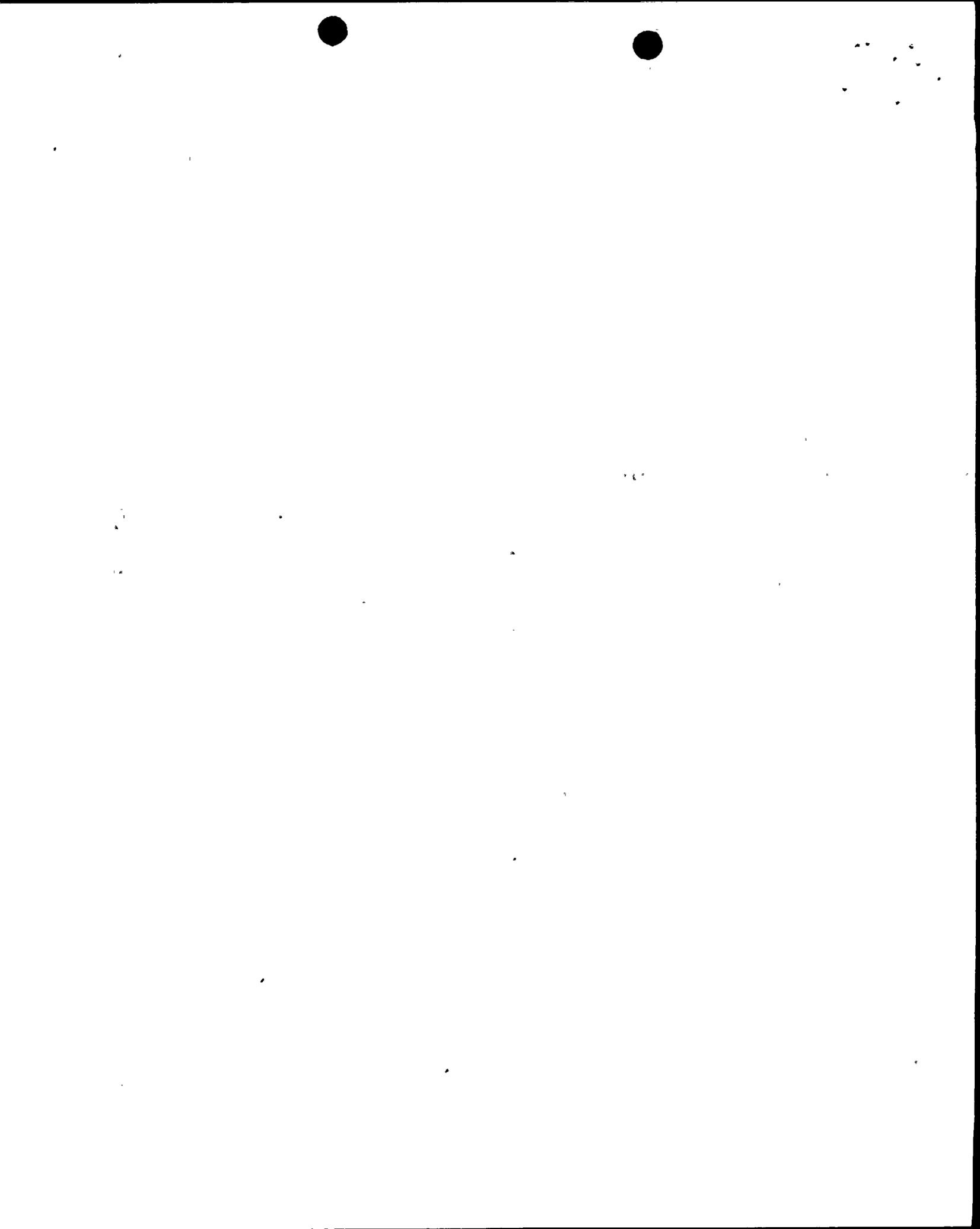
The four isolation valves have process system control valves for backup system isolation; thus further minimizing any intra-system leakage. Any leakage from the closed loop will be within the secondary containment where it will be treated before release.

In addition, the solid wedge valves used as the inner isolation valves have the unique characteristic whereby the accident pressure itself will assist their leakage tightness.

Based on the above, the Commission found that plant operation without Type C testing of the subject valves, and consequently, without adding the result of these Type C tests into the summation leakages for comparison to the 0.60 La acceptance criterion, during the period until the next refueling outage, would not present an undue risk to the public health and safety.

Niagara Mohawk, after evaluating several alternatives to meet Appendix J Criteria, plans to perform the following modifications:

- 1) Replace inboard isolation valves 38-01, -13
- 2) Replace outboard isolation check valve 38-12 with a testable check valve



3) Refurbish outboard isolation valve 38-02

Exemption Extension Request

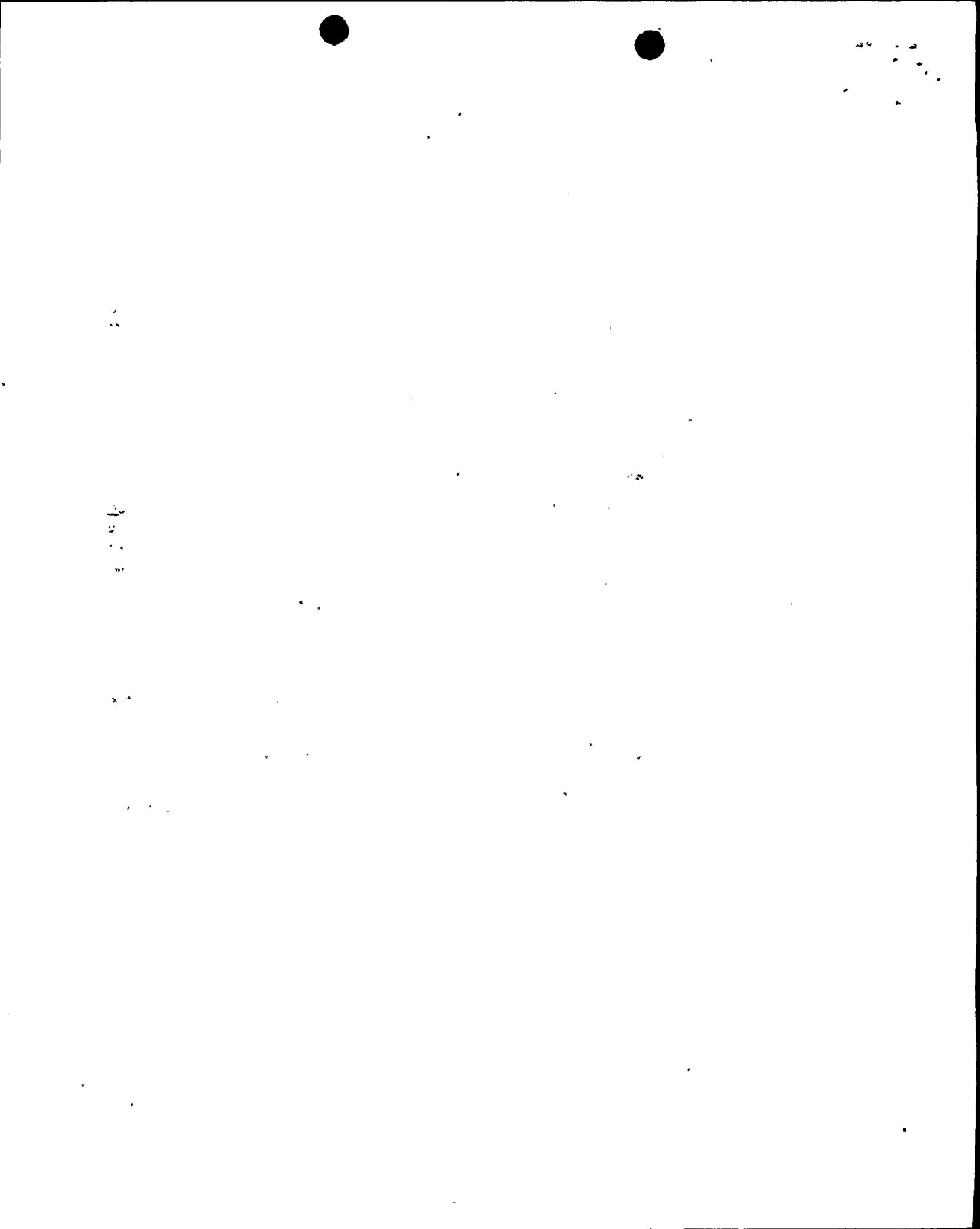
Niagara Mohawk requests that the schedular exemption from the requirements of Appendix J to 10 CFR Part 50 regarding leak testing of the shutdown cooling isolation valves 38-01, -02, -12, and -13, and the requirement that the leakage of these valves be included in the 0.60 La acceptance criteria for the Type B and C tests be extended up to and including the 1994 refueling outage.

As indicated above, the Commission found our original exemption request, up to and including our next outage to present no undue risk to the public health and safety. In summary, this was based on 1) The shutdown cooling system forms a closed loop with the reactor recirculation system and the isolation valves are normally closed. For a break inside containment, leakage will be contained in a closed system. For a break outside containment, the isolation valves will reduce leakage to the extent the core will remain covered 2) For a LOCA, decay heat is removed by the containment spray system resulting in a reduction of temperature and pressure. The depressurization of the containment will reduce leakage through the isolation valves 3) Process system control valves exist for back-up system isolation minimizing intra-system leakage 4) The inner isolation valves are solid wedge valves which would seat tighter under accident pressures.

Niagara Mohawk submits this basis also applies to the period from NMP1's 1992 outage to the 1994 outage. Therefore, extending the schedular exemption from the 1992 outage to the 1994 outage presents no undue risk to the public health or safety.

Furthermore, Niagara Mohawk believes special circumstances exist pursuant to 50.12(a)(2)(v) which justify extending the schedular exemption from the 1992 outage to the 1994 outage. These are as follows:

- ° Niagara Mohawk's 1992 outage philosophy is to focus on safety system reliability with an electrical emphasis. The 1994 outage would focus on the reactor vessel and primary containment with a mechanical/structural emphasis. Therefore, work such as performing Appendix J modifications would more appropriately fit into the 1994 outage work scope. The specific reasons are elaborated below.
- ° The reactor is scheduled to be drained during the 1994 outage. The Appendix J modifications, if performed during the 1992 outage, would also require the vessel to be drained. By deferring the modifications to 1994, the vessel would need to be drained only once. This would more effectively utilize outage related resources and would reduce the volume of radwaste generated and time required to process the radwaste. Deferring the Appendix J modifications to 1994 would also allow plant personnel to focus on the safety system reliability modifications with electrical emphasis planned for 1992.



° The present schedule for completing the Appendix J modifications in 1992 does not justify a chemical decontamination in 1992. In addition, the work currently scheduled for the 1994 refuel outage does not justify performing a chemical decontamination in 1994. However, by performing the Appendix J modifications in 1994, a chemical decontamination (in 1994) is justified. Approximately 100 Person-Rem will be saved for Appendix J work alone.

The engineering work and the procurement of equipment required to complete the Appendix J modifications during the 1992 outage is currently on schedule. Therefore, Niagara Mohawk has shown a good faith effort to complete the modifications which would allow Appendix J testing.

### Conclusion

Niagara Mohawk, for the reasons delineated above, believes that extending the schedular exemption from the 1992 to the 1994 refueling outage presents no undue risk to the health and safety of the public, that special circumstances exist and that a good faith effort has been shown to complete the modifications and perform Appendix J testing. Modifications are required to permit Appendix J testing of the shutdown cooling isolation valves. By deferring these modifications from 1992 to 1994, the following benefits are incurred: 1) The modifications performed in NMP1's 1992 and 1994 outages will be consistent with our current outage philosophy. By emphasizing electrical work in the 1992 outage and mechanical work in the 1994 outage, the complexity of both outages is reduced. Reducing the complexity of the outages allows more focus to be directed to the work planned, thus reducing the potential for human error. Therefore, a potential safety benefit results from deferring the Appendix J modifications to the 1994 outage. Also, this deferral is consistent with our efforts to apply systematic long range outage planning in a more refined manner consistent with the Nuclear Division Reorganization and Business Plan. 2) The reactor vessel will need to be drained only once 3) A chemical decontamination may be performed resulting in a savings of approximately 100 Person-Rem for Appendix J related work.

Accordingly, Niagara Mohawk requests schedular exemption from the requirements of Appendix J to 10 CFR Part 50, regarding leak testing of the shutdown cooling isolation valves for the period up to and including NMP1's 1994 refueling outage.



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