

September 20, 1999

Mr. David Lochbaum
Union of Concerned Scientists
1616 P Street NW
Suite 310
Washington, D.C. 20036-1495

SUBJECT: REPLY TO LETTER DATED AUGUST 2, 1999

Dear Mr. Lochbaum:

This letter responds to your August 2, 1999, letter which expressed concerns about several events at the Nine Mile Point Unit 2 nuclear power plant. Specifically, you raised concerns that recent challenges to the various safety systems and programs have degraded the "defense-in-depth safety net." As you noted in your August 2 letter, we have increased the Region I oversight activities at the facility in light of these and previous events.

We have examined, both individually and in the aggregate, the recently reported Unit 2 degraded safety systems and program deficiencies identified by Niagara Mohawk Power Corporation (NMPC) and highlighted in your August 2 letter. As my staff has previously discussed with you, the reactor core isolation cooling (RCIC) system was able to be operated in 'manual' on June 24, 1999, and successfully maintained reactor vessel water level. During the June 24 automatic reactor shutdown (scram) and again on July 2, the RCIC system injection check valves exhibited a number of performance problems and were degraded. However, the valves remained operable. The non-destructive examinations and missed system performance testing, involving the high pressure core spray system (HPCS) and automatic depressurization system (ADS), when performed, produced satisfactory results. Inspector follow-up of these individual issues has included an examination of the licensee's identification processes, extent of condition reviews, assessment of safety consequences, analyses of root cause(s), and adequacy of corrective action to resolve the problems and prevent recurrence. I refer you to inspection reports 50-220 and 50-410/99-04, 99-05, 99-06, and 99-07 (to be issued in October), which have documented our findings, observations, and assessments of NMPC's performance.

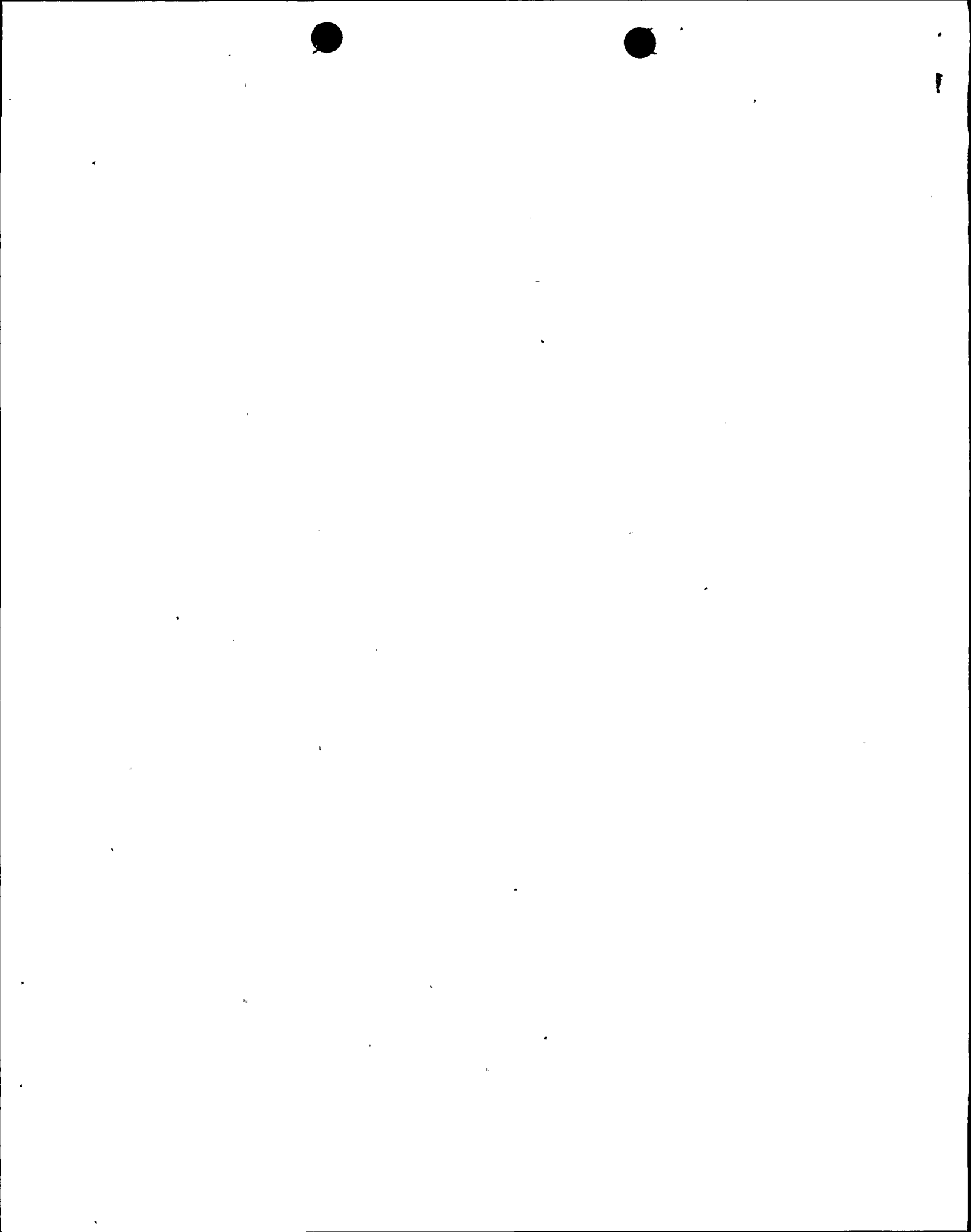
Region I Senior Reactor Analysts have determined that the RCIC system operation in the manual mode following the June 24 scram had an almost negligible effect on the core damage frequency. However, equipment malfunctions associated with the June 24 scram and April 24 scram continue to be assessed for their risk significance in the aggregate. We have had concerns about weaknesses in NMPC's corrective action program and the added burden these equipment problems placed on control room operators. As a result, beginning in June we augmented our inspection efforts with experienced senior resident inspectors from other sites and region-based specialists. We conducted a special inspection examining circumstances surrounding the automatic and planned reactor shutdowns on June 24 and July 2.

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We have conveyed our assessments and concerns to NMPC through our inspection reports and inspection exit meetings. For example, in Special Inspection Report 50-220 and 50-410/99-06, dated September 14, 1999, although we concluded that the overall conduct of plant operations reflected an acceptable safety level, we documented observed weaknesses in maintenance and engineering staff support that contributed to the recent performance shortcomings. NRC regional management personally conveyed this message to NMPC senior management at the inspection exit meeting on site August 23, 1999. We will continue to follow licensee corrective actions and improvement efforts through our inspection program.

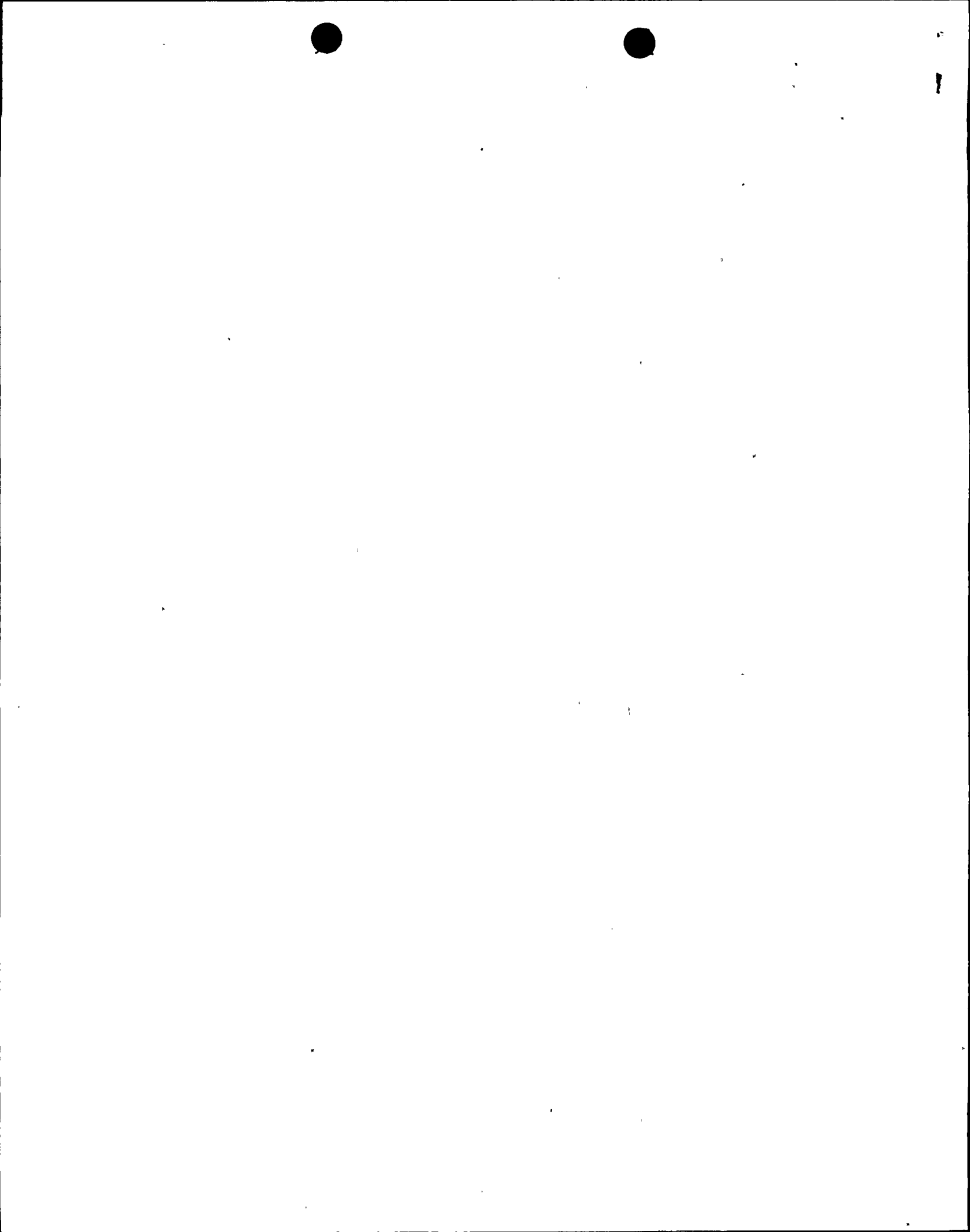
We again thank you for your interest in NRC activities regarding NMPC. Please feel free to call me, the Division Director, or the responsible Projects Branch Chief to discuss any future concerns or insights you have regarding the NMPC units.

Sincerely,

Original Signed by:

Hubert J. Miller
Regional Administrator

Docket No. 50-410



David Lochbaum

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**UNION OF
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August 2, 1999

Mr. Hubert J. Miller, Regional Administrator
United States Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

SUBJECT: 'DEFENSE-IN-DEPTH' IN DEEP TROUBLE AT NINE MILE POINT UNIT 2

Dear Mr. Miller:

By letters dated June 25, June 28, and June 29, 1999, I expressed concern about reduced safety levels at the Nine Mile Point Unit 2 (NMP-2) plant resulting from degraded performance of the reactor core isolation cooling (RCIC) system. Based on a further review of publicly available information, it appears that the safety problems at NMP-2 extend beyond the RCIC system. The 'defense-in-depth' safety net at this facility appears compromised.

The plant's RCIC system problems are well established and resulted in the plant being shut down *after* our June letters so this system could be repaired.

The RCIC system provides an important safety function. However, the operability of this system is not assumed in the plant's safety analyses, except in the event of a station blackout. The emergency system that is assumed to operate in the plant's safety analyses is the high pressure core spray (HPCS) system.

By letter dated June 24, 1999, NMP-2's owner reported that they "did not comply with Technical Specifications Surveillance Requirement 4.0.5.a during the first ten year interval" because "sections of piping and pipe supports in the high pressure core spray system from the condensate storage tank to the pump were improperly exempted" from the inspection program. After discovering this error, NMP-2's owner went out and "examined four of the improperly exempted welds." This spot check represented a whopping 7.5 percent of the improperly exempted welds according to the letter. Considering that inspection program, if properly implemented, only spot checks the welds in the plant, a skimpy spot check of a spot check is hardly reassuring.

By daily event report no. 35973 dated July 30, 1999, NMP-2's owner reported that the check valve in the HPCS pump suction piping from the suppression pool was not being tested by the inservice testing program. The HPCS system was declared inoperable.

Thus, the HPCS system may be impaired. Fortunately, NMP-2 is equipped with a backup for the HPCS system. The plant's safety analyses assume that if the HPCS system is unable to perform, the automatic depressurization system will reduce the pressure inside the reactor vessel so that low pressure emergency pumps can function.



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By letter dated June 1, 1999, NMP-2's owner reported that the "automatic depressurization nitrogen supply system was not being leak rate tested as required by Technical Specification 4.5.1.e.2.e." According to this letter, the original test procedure was inadequate and that deficiency was not identified despite several subsequent revisions. Thus, this test was being performed every 18 months and following maintenance on the equipment, but was proving nothing.

The 'defense-in-depth' safety principle implicitly assumes that the systems, structures, and components purchased using ratepayers' funds and installed to protect the public will be operated, inspected, and maintained by the plant's owner in accordance with regulations. More than simply an assumption, the plant owner is obligated by the facility's operating license to comply with the regulations.

The recent problems at Nine Mile Point Unit 2 are very troubling. These problems involve three systems with important safety functions. Their concurrent impairment represents a serious challenge to the 'defense-in-depth' safety net. This grave situation is worsened by the fact that the impairments were not caused by random equipment failures all occurring at around the same time period (i.e., a "fluke"), but were the result of long-standing programmatic failures. It is far more likely that these programmatic failures have caused as-yet-undetected impairments in other safety systems than it is that the impairments were confined to the RCIC, HPCS, and ADS systems.

I know from conversations with members of your staff that the NRC is aware of the programmatic problems at Nine Mile Point Unit 2 and has escalated its regulatory activities. UCS is concerned that even this heightened effort may not allow the full scope of the problems at NMP-2 to be identified and fixed in a timely manner. Until all of the impairments caused by the programmatic problems are remedied, the public living in upstate New York will not be relying on 'defense-in-depth' for their protection. They will be relying on luck. Gambling has been legalized in portions of upstate New York, but not at Nine Mile Point. UCS urges you to expedite the NRC staff's efforts to restore the necessary safety levels at this troubled facility.

Sincerely,



David A. Lochbaum
Nuclear Safety Engineer

copies: Governor George E. Pataki
State Capitol
Albany, NY 12224

