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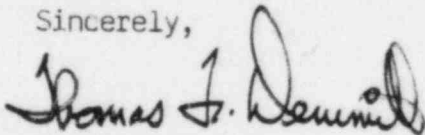
Office of Inspection and Enforcement
Attn: Dr. T. E. Murley
Regional Administrator
US Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Dear Dr. Murley:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Inspection Report 85-16

Inspection Report 85-16, dated September 25, 1985, identified one (1) item of non-compliance. Attached is the GPU Nuclear response to that item.

Sincerely,


F. R. Standerfer
Vice President/Director, TMI-2

FRS/JCA/eml

Attachment

cc: Program Director - TMI Program Office, Dr. B. J. Snyder
Deputy Program Director - TMI Program Office, Dr. W. D. Travers

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STATEMENT OF VIOLATION

The Order for Modification of License, dated July 20, 1979, as amended by the Order dated February 11, 1980, states, in part: "... Pending further amendment of the Facility Operating License, the licensee shall maintain the facility in accordance with requirements set forth in Attachment 1 ..."
(Proposed Technical Specifications, Appendix A, Section 6.8.1 requires, in part, that written procedures be established, implemented and maintained covering activities mentioned in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978. Specific activities referenced in Regulatory Guide 1.33, Appendix A include radiation protection procedures dealing with respiratory protection (R.G. 1.33, Appendix A 7.e. (5)).

1. TMI Administrative Procedure 4213-ADM-4020.01, Revision 0-00, Inspection and Maintenance of Respiratory Protection Equipment, effective June 28, 1985 establishes requirements to ensure the effectiveness and readiness for use of respiratory protective equipment. The procedure provides in Section 4.1.1 that routinely used equipment shall be inspected at least every thirty (30) days.

Contrary to the above, as of August 27, 1985, TMI Administrative Procedure 4213-ADM-4020.01, Section 4.1.1 was not fully implemented in that eighteen pieces of respiratory protective equipment available for routine use were found to have not been inspected within the thirty day required period.

This is a Severity Level V violation (Supplement IV).

GPU NUCLEAR RESPONSE

TMI-2 Administrative Procedure 4213-ADM-4020.01, Revision 0, contains the requirement for the inspection of routinely used respiratory protection equipment at least every 30 days. As stated in Inspection Report 85-16, an NRC inspector found 18 respirators at the distribution points which had expired inspection dates. Upon this discovery, the 18 respirators identified as having past due inspection dates were removed from the distribution point shelves to preclude their use in the plant. The factors which contributed to this situation included:

- o A recent slowdown in the use of respirators at TMI-2. This resulted in respiratory protection equipment remaining on the shelves at the distribution points for longer periods of time than had previously been experienced. As such, some of the respirators remained on the shelves for periods exceeding the required 30-day inspection period. (It is important to note that the 30-day inspection period is based on tests performed by GPU Nuclear on the nickel-cadmium batteries in the MSA Powered Air Purifying Respirators (PAPR's). These tests indicated that the batteries undergo a process of self decay that can become significant after a 30-day period. This process could result in a reduction in the service life of the unit and an inability to maintain the minimum four (4) CFM air flowrate required by 30 CFR 11 for this type of respirator. The application of the 30-day inspection period to the other types of respirators is done only to maintain consistency in the program and does not reflect an upper bound on respirator operability.)

- o The failure to include in the applicable procedures the requirement to inventory respirator distribution points on a regular basis in order to remove from service all respiratory protection equipment with out-of-date inspections.

Following the identification of this problem by the NRC inspector, an investigation was conducted by GPU Nuclear to determine if personnel had used expired respirators and, if so, if the protection of the worker from airborne radioactive materials had been compromised. The method employed in this investigation was to compare Radiation Work Permit (RWP) attachment sheets with respirator equipment history cards for the six (6) week period preceding the identification of the problem. As a result of this investigation, it was determined that there had been 19 instances in which, according to equipment history cards, personnel used respirators with expired inspections. These 19 instances involved 17 individuals. The respirators in question included six (6) MSA PAPRs, 11 full face negative pressure masks and one (1) MSA Duo Flo airline supplied device.

To determine if the use of these devices compromised worker protection against airborne radioactive materials, the respirators in question were reinspected to determine if they could have malfunctioned. For those devices that had already been reprocessed, reinspected and sent back into the field, the equipment history cards were checked to determine if any repairs had been made to the respirator. No abnormalities or repairs were indicated for any of these devices. For those devices that had not yet been returned to the field, the respirator was reinspected and the facepieces were leak tested. All respirators tested satisfactory. One of the negative pressure respirators in question appears to have been inadvertently disposed of with other radioactive waste and, as a result, this respirator could not be inspected. However, based on results of the other inspections, it was assumed that this device had not malfunctioned. Also, the fact that all individuals identified as having used the respirators in question were given whole body counts and that no abnormal result were observed, gives support to the other evidence that the subject respirators had not malfunctioned.

In light of the above, the original protection factors for the negative pressure devices (50) and the airline device (2000) in question have remained the same and have been used in assigning MPC-hrs to the personnel who used the respirators. The protection factors on the MSA PAPRs were reduced from 1000 to 50 and the MPC-hrs assigned to the personnel who used these devices have been recalculated accordingly. This reduction in the protection factor was made to reflect the possibility that the self-decay of the batteries may have resulted in an airflow below the 30 CFR 11 limit. As a result, the units would have operated in a negative pressure mode with a protection factor of 50. The recalculated MPC-hrs are still within regulatory limits.

To prevent recurrences of this event, the following actions have been taken:

- o A Temporary Change Notice (TCN) was issued to Procedure 4213-ADM-4020.01, Revision 0, to require that respirators for which the inspection was or will shortly expire, shall be returned to the Respirator Maintenance Facility. The devices shall be reinspected and reprocessed as necessary and these actions will be documented on the respirator equipment history card. This TCN was issued on September 6, 1985. A Procedure Change Request (PCR) to this procedure has been generated to incorporate the changes permanently. This PCR will be in place by December 31, 1985.
- o A TCN was issued to 9000-ADM-4020.06 requiring the inventory of respirator distribution points, identifying the frequency with which such inventories should occur and how these inventories are to be documented. This TCN was issued on September 6, 1985. A PCR to this procedure has been generated to incorporate the changes permanently. This PCR will be in place by December 31, 1985.
- o A TCN issued to 9000-ADM-4020.06 to require that all respirator distribution points must be approved by the Respirator Protection Supervisor. This change will ensure that respirator maintenance personnel are cognizant of these locations for inventory and inspection purposes. This TCN was issued on September 6, 1985. A PCR to this procedure has been generated to incorporate the change permanently. This PCR will be in place by December 31, 1985.
- o In addition, information regarding this incident has been given to the Radiological Controls (Rad Con) Training Department for inclusion into the cyclical training for Rad Con Technicians.

GPU Nuclear will be in full compliance with the issuance of the above noted PCRs.