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DESCRIPTION: Ltr trans the following:

ENCLOSURES: Addl Information to Tech Spec Change No. 7 Amdt #1(Air Treatment Systems)..
(1 cye cnel rec'd)

Do [illegible]

ACKNOWLEDGED

PLANT NAME: Three Mile Island Unit 1

FOR ACTION/INFORMATION DHL 12-18-75

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December 11, 1975
GQL 1799

Director of Nuclear Reactor Regulation
Attn: R. W. Reid, Director
Operating Reactors Branch No. 4
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Reid:

Three Mile Island Nuclear Station Unit 1 (TMI-1)
Operating License No. DPR-50
Docket No. 50-289

On November 12, 1975 Dr. D. Bridges and Mr. R. Bellamy of your Office telephoned and requested additional information regarding our technical specification change request on air treatment systems.

Attached please find our response to their requests.

Sincerely,

R. C. Arnold
Vice President

RCA:CWS:tas

File: 20.1.1 / 7.7.4.3.3.1

-Additional Information-

echnical Specifications Change Request #7 Amendment #1
(Air Treatment Systems)

12-11-75

NRC Request: You have specified 48 hours to achieve cold shutdown if Specifications 3.15.1.2 and 3.15.2.2 are not met, we require 36 hours. Justify needing 48 hours.

Response: The time to achieve cold shutdown depends on the following schedule.

1. Evaluation and decision to shutdown. (Involves PORC review, analysis of problem; and notification of dispatcher) - 12 hours

2. 100% power to 10% power (turbine off line and breakers open) - 2 hours

3. 10% power to $10^{-8}$ amps (including filling of the Steam Generators) - 2 hours

4. Time at Hot Shutdown (sample and analyze Reactor Building atmosphere, health physics surveys, and inspect secondary shield for identifiable leaks. Admin. preparation for cooldown is run in parallel) - 6 hours

5. Cooldown to 300 psi, 275°F (includes bypassing and resetting RPS, running in and recocking safety rods, bypassing HPI and LPI. Time here is limited by adminstration, log keeping and assurance that no specifications are violated than physical ability of plant to cooldown). - 12 hours

6. Placing Decay Heat Removal in operation (system lineup, and precautions to ensure all Environmental Specifications are met). - 8 hours

7. Cooldown from 275°F to below 200°F - 3 hours

Total Hours - 45

Note that although Cold Shutdown has historically been achieved in about 36 hours, there have, however, never been any equipment malfunctions which could have resulted in extending the time for cooldown. The above time estimates are also based on the minimum time that should be allowed to accomplish each cooldown phase such that the plant operators are not forced, in any instance, to hurry the cooldown to meet a time clock. Hurried cooldown increases the probability of errors which could be of safety significance.

NRC Request: Justify Specification 3.15.1.3 or comply with cold shutdown in 7 days if one air treatment system is inoperable.

Response: Our potential concern in this specification is that if the carbon fails to meet the laboratory acceptance criteria, the carbon cannot be replaced and tests completed within 7 days.

The NRC argument appears to be that if one of the two systems is inoperable single failure criteria cannot be met.

The TMI-1 Control Room Air Treatment system was not designed to meet single failure criteria and it is our understanding that no back fit is required in order to comply with Regulatory Guide 1.52.

Analysis conducted by our consultants indicate that carbon efficiency can drop to as low as 5% without exceeding criteria 19 for the control room inhabitants during a LOCA. It should be further noted that even with 0% carbon efficiency the control room could be continuously occupied for 30 days following a LOCA without exceeding these dose limits.

The probability of an accident wherein this air treatment would be needed is very low, the probability that both of the control room air treatment systems would simultaneously be incapable of performing adequately to reduce control room dose to within acceptable limits is also very low. In light of these probabilities we believe that our air filter technical specifications as proposed are adequate and prudent.

It is Met-Ed's opinion that the probability of an accident involving radioactive release is much greater when the plant is subjected to transients such as heatup and cooldown when both operators and equipment are subjected to stresses. It is further our opinion that a requirement to go to cold shutdown unnecessarily, as would be required by you, creates more potential for personnel exposure than it would prevent.