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1-29-80.

United States of America
Nuclear Regulatory Commission
Atomic Safety and Licensing Board
In the Matter of Metropolitan Edison Company (or its successor
corporation) Docket No 50-289, Three Mile Island, Unit #1.

Continuing Set of Lewis Interrogatories to Staff.

NRC 11. Do you know the location of any FSAR or PSAR for the TMI#1 and #2 reactors in the Phila. area. ? I have had to use these documents in the Harrisburg Middletown area and its very time consuming.

The following questions are prompted by the information in the Staff's SER dated 11 Jan 80 which I received on 1-20-80. I was hoping that the ~~xxx~~ SER would be sufficient to answer these points without putting them in interrogatories. I was disappointed, but the SER does have some very good information in it nonetheless.

NRC 12. On Page C4-6 there is a Paragraph which starts, "Subsequent to the accident,..." This entire paragraph seems to be coached in mystery. I don't understand it. Here are a few of my confusions.

"Subsequent to the accident at TMI-2, the gaseous waste processing system has experienced leakage."

Does this mean that the system did not experience leakage prior to the accident, during the accident ;but only "subsequent to the accident?"

How much is leaking ?

Where is it leaking?

What is leaking?

Why hasn't it been repaired or stopped? (It refers to the leak.)

Is this an indication of a minor breach of containment? If not, why not?

Is this a violation of the TMI#2 operating license ? If not, why not?

"The TMI-1 system was pressure tested in June 1979 and no leakage was noted during the test."

What's analogous mean? Specify dictionary or give definition.

Does analogous mean it has analogous cracks? If not, why not?

Was the part or parts which were pressure tested analogous to or similar to those parts in TMI#2 which were cracked in the vent header?

Helium leak test. I have performed helium leak tests. I have found that the results of helium leak tests are much more sensitive to the preference of the theoperator than to the helium which may or may not leak out.

Since the operator will be the suspended licensee, what checks do you have to control operator preference in this leak testing? Who controls the checks? NRC, Suspendee?

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How extensive was the pressure testing and how extensive will the helium leak testing be? Will all possible leaks in the gaseous waste system be evaluated? Will all parts in the gaseous waste system be tested both ways?

"The vent header system is protected from overpressure by 2 relief valves on the vent header and by water filled loop seals on the overflow of the misc waste storage tank."

If the "TMI-1 gaseous waste system is analogous to that of TMI-2", weren't these safeties in place at TMI 2 on 3/28/80?

If so, why didn't they work?

If these safeties did not work on TMI#2, why do you think that these safeties will work on TMI#1 now?

How did you pressure test the system with ~~xxx~~ the "individual relief valves" set as in the table on Page C4-6?

If these safeties did work properly on 3/28/79, how did the millions of Curies of Xe get out?

Since all of the questions above center upon one paragraph, I have taken the liberty to put them in one interrogatory. If the Staff wishes to subdivide this interrogatory for ease of answering, please do. This interrogatory is complicated because my understanding of the paragraph in the SER is so confused.

NRC 12. Again, I am confused. I hope that the Staff will not only answer questions; but also, try to clarify the situation.

Page C4-7 top, "there are no interconnecting gaseous waste systems or ventilation systems. Since there are no common points, we conclude that decontamination or restoration operations at TMI2 will not affect the TMI1 high level waste gas system, reactor building purge, or auxiliary building ventilation system."

I cannot understand the idea of 'no interconnecting' and 'no common points.'

Consider this scenario:

We have a repeat to the minutest detail of the accident at TMI#2 at TMI#1 some time in the future. Allow one difference. The meteorological circumstances are such that no wind is blowing and there is a downdraft from the cracked vent header to the control room and auxiliary building intacts for ventilation. The outside air is a common point.

Any error at TMI#1 or 2 can affect the outside air adversely. The contaminated air then would be used in the other reactor. ~~XXXX~~ This common point about the outside air is ignored by the Staff, and leads me to believe that there are many other common points ignored by the Staff.

I believe that the filters on the incoming ventilation systems for # 1 and 2 must be upgraded for this eventuality.

If the Staff disagrees with any or all of the above scenario, please be specific in your answer. Show how, why and any technical analysis which demonstrates the basis of your disagreement with the above scenario.

If the Staff disagrees on other than technical points (for instance: It's a basic item of faith that nuclear is safe, or I wanna keep my job), include these other points also.

Please note: The scenario on Page 2 NRC 12 does not disagree with the scenario on Page C4-2. I merely point out that the scenario on Page C4-2 is not comprehensive or definitive.

NRC 13. Filters will have to operate in accident conditions. Are all filter and venting systems seismically qualified and safety grade which may have to operate in accident conditions? Can I get a copy of Regulatory Guide 1.4 and 1.5? Page C8-31. If the hydrogen gas is vented during an accident, how much radiation in curies and by isotope will be released with the hydrogen? Is there a way to filter this to minimize exposure? C8-58.

NRC 14. Page C2-7. " 9. "... to assure that undesired pumping of radioactive liquids and gases will not occur accidentally." "Our evaluation of the licensee's response in this area is contained in NUREG 0578 Section 2.14 and 2.16." I read these sections of NUREG 0578. They speak of "inadequate ~~xxxx~~ in three respects " and 'difficulties ~~if~~ arose not only in safety systems , but also in systems outside the scope of previous "safety grade " requirements.' Nowhere do I see the Staff suggest that the licensee's response to date is adequate in these areas.

My concern is about radioactive gases and liquids. How will I know when the licensee's response is adequate to the Staff on these issues without searching back and forth between documents to find that the licensee's response is not adequate to the staff?

How will I know what the licensee is doing and when and if adequate to the Staff? I refer to the matters relevant to the Lewis Contention.

NRC 15.

Page C8-30 and A-26. Has anything been done to implement a leak reduction and elimination program aside from recommending such a program? All I see so far is recommendations and no action? Is the Staff satisfied merely by recommending things that never happen?

NRC 16 Page C5-2. Can I get a copy of Regulatory Guide 1.110, "How to Trade dollars for Human Lives" or "Cost Benefit analysis for Radwaste Systems for LWRS." If I cannot get a copy, tell me what the date ~~is~~ of the revision which you used.

C5-9 What's Ke in Table 5-2?

C5-10 What's b mean in Table 5-3 following "leakage to containment building."?

C5-11 Does the over 3 order of magnitude jump in the curies of particulates released in total particulates (75 vs 78) suggest overuse of filters as mentioned in Kemeny report?

C5-14 Table 5-8. Which of these items on TMI#2 were in line with the vent header which allowed the Xe to escape?

Is there adequate monitoring on that item now?

NRC 17. KyW AM in Phila. just stated that the Rogovin Report was just released. According to KYW AM, The Rogovin Report states that TMI#2 was within 30 to 60 minutes of a meltdown. If the emergency measure had not been enacted in the limited time and if a meltdown had occurred, would the filters and vent header been adequate or would even more inadequate and dangerous aberrations of these systems be evidenced? In such a situation, would more gaseous effluents be loosed than were loosed in the actual accident on 3/28/80?

NRC 18. I have before me a letter dated 1-17-80 from Robert Reid to R.C. Arnold. It was delivered to me on 1-24-80. This letter refers to "information of a type specified in 10 CFR 2.790 (d) and should therefore be withheld from public disclosure." I am not particularly involved with Safeguards Contingency Plan in this proceeding except where said plan may or may not ~~impinge~~ impinge upon the design, use, or adequacy of the filters and the vent header. Neither I am particularly involved in this proceeding with items "withheld from public disclosure" except where such items may or may not impinge upon the design, use, or adequacy of the filters or vent header.

How can I be sure that some inadequacy of the filters or vent header is not hidden or lost under the cloak of 10CFR 2.790(d)?

How can I be sure to trust the Staff that my and the public's health and safety will be adequately insured, where items are hidden from public scrutiny by 10CFR 2.790(d)?

How can I entrust a Staff with these points which I cannot research when I see people like Ronald J. Clary, NRC, and Marcia Mulkey, Esq., leaving allowing a residue of Tourtelotte's, whose obvious leanings are anti intervenor, to remain?

How can I trust the Staff to research those items protected by 10CFR 2.790(d) adequately as far as vent headers and filters when the Kemeny Commission report states that the NRC is more interested in licensing nuclear power plants than the health and safety of the public?

These are not rhetorical questions. Under the rules, I require written response, specific to the question, and signed by the individuals working on the response.

NRC 19. I just reread "Status Report" dated 1-11-80, and I erroneously called it SER in My questions 11 thru 14. Is this status report an SER or not? If it is an SER, isn't the staff derelict to put out such an obviously inadequate and faulty SER? (See my question on just the vent header.)

NRC 20. I have a letter dated Oct ?? ,1979 from Stello to Arnold ,Subject: Investigative Report Number 50 320 /79-10 which was sent to me recently by the NRC Staff lawyer and received 1-23-80. It was sent out 1-15-80 by Lucinda Low Swartz. I have a couple of questions on the penalties. Was it a violation to operate TMI#2 with a cracked vent header? If not , why not? If so , where is the fine?

NRC 21. This is not only an interrogatory ; but also , a partial answer to Staff's Interrogatories dated 12-27-79 numbers land2 .

I may have to restrict my expert testimony because the amount of material which I am receiving takes all my time to skin; let alone digest. I have very little time to prepare my case. I would like to make the following suggestions and see if it is acceptable to the Staff.
I need at least two witnesses or one knowledgeable in two areas:
Quality control or quality assurance
Filters.

I guess that the staff is planning to present witnesses to assure that the filters and quality assurance at TMI#1 is adequate which would rebut the Lewis Contention.

I ~~would~~ request that the names of these witnesses and the thrust of their testimony be sent to me at the earliest convenience. I shall then attempt to present a great deal of my case thru cross examination.

Would the Staff also send me some references or literature used in the Federal system to familiarize me with cross-examination which would be acceptable to the Board and not a matter of continuous objections.

Would you also supply me with the name of the engineer presently working on filters at TMI#1 in Harley Silver's group? Same for vent header.

NRC 22. Fuel cladding defects produce routine radiological releases .(Koshkonong PWR EIS) The filters are sized or designed to take care of routine radiological release. Are the filters at TMI#1 designed to take care of routine radiological releases if the fuel rods do not meet design requirements?

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USNRC:ASLB: Docket No. 50-289, Three Mile Island #1 Restart Hearings.
Continuing Set of Lewis Contention Interrogatories to Suspended Li-
icensee, Metropolitan Edison or its successor corporation.

SP 17. Gilbert Associates have been doing a very fine job getting the updated amendments to the Restart Report to me. This is a large and complicated document. It would help me greatly if the pages were prepunched for the three ring binder which you so kindly provided.

SP 18. I ~~am~~ am particularly worried about two related issues: Proprietary knowledge protected by Federal Law. Safeguards issues. (10CFR 2.790(D)).

There is no way that I can find out if there is any data about filters, vent headers or anything else protected within these classifications from my discovery.

~~XXXXXXXXXXXXXXXXXXXX~~ Is there a way to alleviate my concern on these issues in this proceeding in a reasonable ~~XXXXXX~~ manner?

SP 19. In the Radiological Data Log Book, information is written in by hand. The information is recorded on Incident Message form NRC Control # R 202. On Form Number R-72 Item 2 there is a statement about a CAM Charcoal filter from the auxiliary building which was too hot to read. Give me the history of this entry:

When it was written?

Where specifically did this filter come from in the Auxiliary building?

What analysis, if any, was done to this filter. If not, why not?

There are many questions which I have on this book. I am limiting myself to the above for ease and ~~XXXXXX~~ brevity. Please attempt to clarify the purpose of this book, who is required to make entries, and where and when are these entries released and to whom.

SP 20. On Page 91 of Metropolitan Edison's Company's Statement in Reply to Notice of Violation, there are two entries:

9/78 78-175 2303 m15A/B Control Room Emergency Ventilation system.

9/78 78-181 2322-A1 Waste Gas and Unit Vent Discharge functional Test.

The titles of these entries suggest that they might have some relationship to the cracked vent header and the filters in the Lewis Contention.

Is this true?

Can I get a copy of these "Surv. Proc. No. " and "Surv. Rep. No."?

I am particularly interested in the results of these particular tests.

I received the above document "Met Ed Statement in Reply to Notice of Violation "dated 5 Dec 79 on or about 23 Jan 80.

SP 21. In the Restart Report on Page 7-15, Paragraph 7.3.5.2 Sample Drains , the vent header is used to isolate the auxiliary building from the radiochemical laboratory drains in a laboratory waste collection modification.

Will this modification work as planned if the vent header is cracked at TMI#1 as it was cracked at TMI#2?

SP22. Page C4-6 of the Status Report dated 11 Jan 80 and Page 7-11 Amendment 4 appear to depend upon each other heavily. The Staff states that the Licensee will perform a helium leak test prior to the TMI # 1 start up and has performed a pressure test on the TMI#1 gaseous waste processing system.

Where in the Restart Report does the Licensee promise to do these tests?

How can I be sure that these tests are performed without undue bias by the technicians doing the test? (Vested interest?)

Can I get the results and procedure of the pressure test referred to on Page C4-6 by the Staff as done by the Licensee. Please send them if possible.

SP 23. On page 7-13 of the Restart Report, there are tests to qualify and maintain Charcoal and HEPA filters.

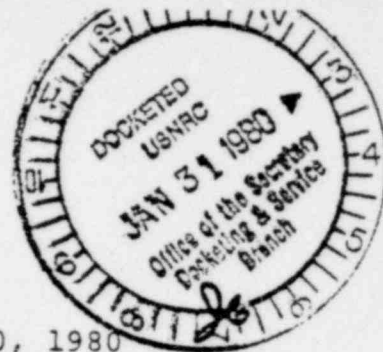
Were these tests used at TMI#2 and did the filters allow the escape of radioisotopes above ~~xxx~~ and beyond the allowables according to 10 CFR 50, 10 CFR 20 , 10CFR 190 anyway ? Please elaborate.

Do you think that preheaters will be needed to make the filters work better at TMI#1 in a repeat of the TMI#2 accident ? If not, why not?

SP 24. In Section III D 2 b of the FES for TMI, Page III 14, Figure 11, which vent header at TMI#2 was cracked; the low pressure or the high pressure?

Figure 10. Which charcoal filters were "too hot to measure"?
(See SP 19)

Which filter sets for Figure 10 do and do not have preheaters?



January 30, 1980

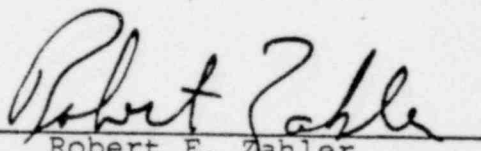
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)
METROPOLITAN EDISON COMPANY) Docket No. 50-289
) (Restart)
(Three Mile Island Nuclear)
Station, Unit No. 1))

CERTIFICATE OF SERVICE

I hereby certify that copies of "Continuing Set of Lewis Interrogatories to Staff" and "Continuing Set of Lewis Contention Interrogatories to Suspended Licensee", which were hand delivered to Licensee at Washington, D.C., on January 29, 1980, were served upon those persons on the attached Service List by deposit in the United States mail, postage prepaid, this 30th day of January, 1980.


Robert E. Zahler

Dated: January 30, 1980

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
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) (Restart)
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