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Harold Denton  
USNRC

Dear Sir:

This letter concerns certain aspect of the steam generator corrosion at TMI#1 which make the thiosulphate theory suspect. Consequently the same facts and other facts make the explosion expansion repair of TMI#1 both suspect and dangerous.

I attended the oral presentation of Foster Wheeler and GPU before you on or about the 29th of June at 7735 Georgetown Road, Room 6110. Some of the facts in this letter were heard in that presentation. I also sent a postcard to GPU asking information about the recent tests done on the internals of the Reactor Pressure Vessel at TMI#1. GPU's VP Communications sent me a GPU news release dated May 7, 1982, in answer to my postcard. This news release brought up some of my other objections to the thiosulphate theory.

I have been most suspect of the thiosulphate theory for the following reasons:

1. The thiosulphate theory is not exclusionary. The sulphur compounds seen in the Steam generator do not have to come from the thiosulphate which was or was not inadvertently introduced into the RPV. Further the thiosulphate theory does not look at other sources of sulphur.
2. The thiosulphate theory does not explain the amount and source of chlorine that is also present in the steam generator corrosion.
3. One steam generator has a tilted pattern of corrosion. Again the thiosulphate theory does not explain this phenomena at all.

The above reasons come from the TMI#1 Steam Generator Status Reports.

4. This reason to suspect the thiosulphate theory comes directly from Henry Hukillof GPUNC in the May 7 GPU News Release.

"We are very pleased with the results of the test program, which clearly demonstrate that the corrosion problem has not affected the reactor vessel's internals." The question then arises, "How can the thiosulphate have corroded the steam generators so badly and left no effect on the reactor pressure internals?" Surely there must be at least a trace of sulphur upon the reactor pressure internals?

Consequently these facts and others make the repair of the steam generator tubing a very questionable and potentially dangerous undertaking.

5. The Steam Generator Monthly Status Reports have pointed out that the alloys were sensitized thru outdated heat treatments to intergranular attack. These sensitized materials and alloy will not be removed, but will continue in service if TMI#1 is allowed to operate. This is a most dangerous situation.

6. If the present situation exists at restart, what ever caused the corrosion may not have been discovered and corrected. The above facts suggest that the cause of the corrosion is not thiosulfate, which has been corrected. The uncorrected cause of the corrosion then could easily continue and cause even more dangerous mischief.

7. The explosive expansion repair of the generator tubing will provide only a mechanical seal of the tubing against the tubesheet. This is a new method much different than the former method of expanding an insert against the present tubing. The representative from Foster Wheeler admitted that the present testing is only looking at a difference in temperature between the tubing and the tubesheet of 50F. He also admitted that a difference in temperature between the tubing and the tubesheet of several hundred degrees could cause leaking. I have not seen any analysis to suggest that the difference in temperature between tubing and tubesheet could not and would not get into the hundreds of degrees range during certain transients, such as Ginna has experienced.

8. The effect of steam generator transients upon the PTS problem has not been explored in the Steam Generator Monthly Status Reports. The danger that a poorly repaired steam generator could produce transients that would cause PTS involvement must be explored.

For the above reasons, I respectfully request that NRC does not put its stamp of approval on the TMI#1 steam generator repair.

Very truly yours,

Marvin I. Lewis

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