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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

February 14, 1980

Ms. Beth Ciulla  
7560 Forest Road  
Cincinnati, OH 45230

Dear Ms. Ciulla,

I am writing in response to your letter to the Environmental Protection Agency in Cincinnati regarding the accident at Three Mile Island. It was forwarded by them to me for reply. I regret that this answer to your letter has been delayed. The accident and its consequences have created a substantial increase in the agency's workload, which has prevented me from responding to you as promptly as I would have liked to.

In your letter, you asked about a hydrogen gas leak. There was no leak, but some hydrogen did accumulate in the reactor vessel. The hydrogen was formed as a result of chemical reactions between steam and the cladding on the fuel.

Regarding your question about the possibility of the Three Mile Island Plant blowing up, there was no possibility of a nuclear explosion such as that which happens in a bomb.

For a few days after the accident, there was some concern that a hydrogen bubble in the reactor vessel might react explosively with the oxygen thought to be slowly accumulating in the bubble. There was concern that such a chemical explosion might break the reactor vessel, breach the containment building, and allow the escape of large amounts of radioactive materials. However, after further consultation with experts, NRC concluded that such an explosion could not occur, because essentially no oxygen would accumulate in the bubble; therefore, there was no time at which the plant could have blown up.

As for the permanent shutdown of the TMI reactors, the Commission has ordered that a public hearing be conducted to determine whether the Unit 1 facility should be operated and, if so, under what conditions restart of Unit 1 would take place. Prior to start of the hearings, the NRC staff will conduct a review of technical information concerning the restart of Unit 1. As part of this review, the NRC staff will conduct meetings with the licensee in the presence of the public, and the public will be given the opportunity to raise questions and to make statements. During the hearing, the technical issues which are appropriate to assure the public health and safety will also be addressed. In addition, the Hearing Board may consider the psychological impact of future operation on the nearby communities. A copy of the Commission Order which outlines the issues to be considered is enclosed for your information.

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February 14, 1980

With regard to Three Mile Island Unit 2, the licensee has not yet sent to the NRC a proposal for plant recovery, although the licensee is conducting feasibility studies. It is not possible at this time to determine when such proposals for recovery may be submitted or how much time will be needed for the required reviews and approvals in connection with Unit 2's recovery. I would note, however, that the licensee's authority to operate Unit 2, except for those actions necessary to keep the reactor shut down, was suspended by Order of July 20, 1979.

I am enclosing a summary of a report (NUREG-0558) that may be of interest to you.

Sincerely,

Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Encls: Copy of Commission Order, Docket No. 50-289  
Summary of NUREG-0558

OFFICE ▶	ANL/TMI	TMI task force	TMI task force	D/TMI-2		
SURNAME ▶	P. Chee <sup>ARC</sup>	W. Oliu <sup>W80</sup>	S. Miner <sup>SM</sup>	R. Sillmer <sup>RS</sup>		
DATE ▶	1-30-80	1/31/80	1/31/80	2/4/80		

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Director of E.P.A  
26 W. St. Clair  
Cinti, Ohio  
45230

April 24, 1979  
Beth Ciulla  
7560 Forest Rd  
Cinti, Ohio  
45230

Dear Mr. Director,

My name  
is Beth Ciulla. I go to Anderson  
High School. I'm in the  
9<sup>th</sup> grade. I am writing  
this as a project for  
Mr. Moulton's class Part A.  
I am writing this letter  
referring to an article  
I read on the Nuclear  
Accident in Middletown P.A.  
It is about the fears  
and mistrusts of the  
public. I would like to  
ask you some questions  
relating to this article.

What caused the hydrogen  
gas leak? What were the  
results of the investigation  
of the reactor? Did they find  
out the cause of the  
hydrogen gas leak? Are the  
rumors true that they might  
close down the reactor  
permanently? Is it also  
true that the reactor  
could blow up? If so how  
~~can~~ come for all these years  
the public has been told

that there is no chance  
of this. If you have any  
more information  
about the reactor or  
your dept. will you  
please send this along  
with your answer.  
Thank you very much  
for your time and  
cooperation.

In appreciation,  
Beth Culla