

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

In the Matter of
METROPOLITAN EDISON COMPANY, et al.

(Three Mile Island Nuclear
Generating Station, Unit 1)

DOCKETED
USNRC

'85 MAR -6 P5:20

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH
Docket 50-289

JP

MOTIONS TO ADDRESS FALSE STATEMENTS IN RESPONSES TO
AAMODT MOTION OF JANUARY 15, 1985

Table of Contents

	<u>page</u>
1.0 <u>Abstract</u>	3
2.0 <u>Background</u>	3
3.0 <u>Reply to Licensee and Staff Responses insofar as they</u> <u>are dishonest</u>	5
3.1 <u>There is no way that the Licensee and the Staff could</u> <u>believe that Gerusky "corrected" his May 3, 1979 testimony</u> <u>in an October 1, 1980 interview</u>	6
3.2 <u>The Licensee and Staff conveniently overlooked the</u> <u>testimony of other BRP employees in the May 1979</u> <u>deposition</u>	9
3.3 <u>The testimony of two TMI managers who confirm the BRP</u> <u>testimony was ignored in the Licensee Response and</u> <u>dismissed by the Staff</u>	10
3.4 <u>The fact that the NRC investigations do not reflect the</u> <u>gamble conclusions is of no significance.</u>	12
3.5 <u>The fact that Gamble did not testify concerning the</u> <u>content of his reports is no reflection on the</u> <u>authenticity of the reports.</u>	13

TABLE OF CONTENTS, contd.

3.6	<u>The Staff is wrong, and deliberately so, in excusing its deletions of the Aamodt Motion as clerical errors and attributing this explanation to the Aamodts.</u>	13
3.7	<u>The Staff is wrong, and deliberately so, when it asserts that health effects were not an issue in the TMI Restart Proceeding</u>	15
3.8	<u>The Staff is wrong, and deliberately so, when it asserts that health effects do not bear on any issue in the Restart Proceeding.</u>	15
3.9	<u>The Staff is wrong, and deliberately so, when it refers to the increased cancer mortality in three TMI areas as alleged</u>	17
4.0	<u>Discussion</u>	18
5.0	<u>Motions</u>	19
6.0	<u>Conclusions</u>	20

Exhibit A - Deposition of Thomas Gerusky, William Dornsife and Margaret Reilly, May 3, 1979

Exhibit B - Report Provided by David Gamble as part of his testimony in the Remanded hearing

Exhibit C - Memorandum, December 1, 1981, Fortuna and Gamble advising Cummings of DOJ investigation of NUREG-0760

Exhibit D - Correspondence between Aamodt and Wagner concerning false statements in Staff response

Exhibit E - Letters from Drs. Cochran, Molholt, Berger, Cobb Mayor Reed, and Senator Spector supporting Aamodt health motion

1.0 Abstract

The Aamodts find that the Licensee and Staff responses to their January 15 motion are totally dishonest. They believe that the nature and extent of these deceptions should be fully understood prior to the Commission's decision on the motions. They are motioning for the opportunity to reply to the Licensee and Staff responses and providing the reply at the same time.

The Licensee and Staff have asked the Commission to deny the Aamodt Motion for a reopening of a hearing to consider information concerning serious health problems in residents of the TMI area.

These parties were particularly critical of information provided by the Aamodts that a former NRC investigator concluded that TMI personnel had lied concerning offsite surveillance between 7:30 and 8:00 a.m. on March 28, 1979. After carefully considering all evidence provided by the Licensee and Staff, the Aamodts found that these parties' objections were neither rational nor sincere.

The Aamodts are asking the Commission to censure the Staff for its deliberately dishonest response and lack of appropriate concern about health matters. They are also asking for an internal investigation of Staff policy and actions with regard to the Aamodt motions.

2.0 Background

On June 21, 1984, the Aamodts raised the matter of an excess cancer incidence and mortality in three elevated areas west of TMI where citizens conducted a door-to-door survey. Evidence of radiation-induced anomalies in flora in these same areas were evaluated by a distinguisher botanist. In addition, examples of bizarre experiences of these residents on the early days of the accident were provided.

A letter from a state representative indicated that these experiences were wide-spread in the TMI area and not induced by hysteria since they occurred prior to public concern about the accident. The Aamodts motioned for a full investigation and a stay of the Commission's decision on restart until the matter of health effects was resolved. They now questioned whether GPU had been honest concerning radiation monitoring and reports during the initial days of the accident.

The Commission denied the Aamodt Motion on December 13, citing a review by the Centers for Disease Control which found the information in the Aamodt Motion "insignificant".

On January 15, 1985, the Aamodts petitioned the Commission to reconsider its decision. They provided new information: (1) a verified excess cancer mortality incidence, more than seven times that expected for the post-accident years (1980-1984) for the three survey areas, (2) a critique which revealed the shallowness of the Centers for Disease Control review, (3) Pennsylvania Health Department data which showed a significant drop in neonatal hypothyroidism in Lancaster County from a ten-fold greater than expected incidence in 1979, (4) a review of a key official dose-assessment study which provided an example of the inadequacies present in all studies to date, and (5) a recently-disclosed report, written in 1980 by a former NRC investigator, which concluded that TMI-2 personnel had lied concerning offsite surveillance.

Two parties filed responses: the Licensee on January 25 and the Staff on February 4.

3.0 Reply to Licensee and Staff Responses in so far as they are dishonest

The Aamodts are limiting their reply to those portions of the Licensee and Staff Responses which are clearly untrue.

The Licensee responded on a single issue, asserting that the Gamble reports, a basis for the Aamodt motion for a hearing, was not credible information. The Licensee provided the October 1, 1980 testimony of Thomas Gerusky (pp. 33-41) and claimed that somewhere in that transcript, Gerusky had "corrected" his May 3, 1979 testimony on which Gamble had depended for his conclusion that TMI personnel had lied concerning offsite surveillance of a plume during the early hours of the accident. Nowhere in Licensee's response is a specific cite to the October 1, 1980 transcript provided to show how and where Licensee believes Gerusky corrected his earlier testimony. This is a deplorable violation of NRC rules of practice in responding to a motion, however Licensee could not provide a transcript citation because nowhere in the pages of the October 1980 deposition does Gerusky correct his earlier testimony. On the contrary, Gerusky confirms his earlier testimony, in so far as he is able, eighteen months after the accident, to remember and insofar as he is able to resist the suggestions of the NRC Staff that he change his testimony to bring it in line with what was alleged to be a PEMA log.

There is no way that the Licensee could truly believe that Gerusky changed his testimony or that the evidence they presented showed that he did. Licensee's response is worth no more than the five sheets of paper on which it is printed.

Licensee's response is evidence of a present improper attitude.

The Staff responded superficially to nearly all aspects of the Aamodt motion. The responses were based on false statements, some of which were cunningly contrived. The Aamodts requested a retraction of two statements where were so blatantly factually false, that to allow them to stand unchallenged was intolerable. See Section 3.6, pp. 15.

The Staff reiterated Licensee's argument concerning the Gerusky testimony, and as with the Licensee, provided no transcript citations or quotations. See pp. 3-6.

3.1 There is no way that the Licensee and the Staff could believe that Gerusky "corrected" his May 3, 1979 testimony in an October 1, 1980 interview.

On May 3, 1979, Gerusky testified as follows:

In the meantime, I requested them to try to get their teams somehow to Goldsboro, and they said that the State Police helicopter was there and that they would get one of their teams up in the air and over Goldsboro. We stayed on the phone with them. They found no radiation levels onsite or in Goldsboro that would indicate any kind of a leak. So threrfore, we then notified the Civil Defense to hold tight. This was all before 8:00...

On October 1, 1980, in the second of two interviews which Gerusky described as "briefings", Gerusky haltingly responded concerning the time TMI personnel first claimed offsite surveillance:

No, it was after 7:30. Its a feeling and I really haven't tried to verify it one way or another to determine what these times were in the past year and a half, because I didn't think it was important, but I have a feeling it happened sometime between 7:30 and 8:00. (pp. 59)

I don't know. I think in reconstructing it, or at least the telephone...the PEMA telephone duty log indicated it may have been an hour, which surprised me a little bit the first time I heard that, six months ago in another one of these briefings. (pp. 41)

Did Gerusky "correct" his testimony? Obviously, he did not. Did the Licensee and Staff believe that he corrected his testimony when they provided their responses to the Aamodt motion? No; if they did they would have quoted the specific testimony or provided a suitable reference to the transcript of the October 1, 1980 deposition. As stated above, neither party provided a single shred of evidence. However, they claimed that there was evidence somewhere within the nine pages of the deposition transcript. Their claims are provided below.

The Licensee described Gerusky's testimony in the October 1, 1980 deposition as follows: (pp. 3, 4)

The NUREG-0760 investigators then reinterviewed Mr. Gerusky and explored this inconsistency. Mr. Gerusky told the investigators that the Commonwealth had been informed of the Goldsboro dose rate prediction and of the onsite measurement before 8:00 a.m., but it was in fact an hour later that an actual measurement at Goldsboro was reported to the Commonwealth -- a fact evidenced by the PEMA log ... not surprisingly, therefore, the portion of the NUREG-0760 draft which relied on Mr. Gerusky's first interview was not included in the final report. See NUREG-0760 at 31-33.

It is evident, therefore, that there is neither new nor significant information concerning the Goldsboro dose rate prediction. The statements which might have appeared at one time to provide a basis for the Aamodt's contention -- Mr. Gerusky's 1979 interview -- have long since been publicly clarified by Mr. Gerusky himself.

The Staff's description of the alleged change in Gerusky's testimony in the October 1, 1980 interview: (pp. 4)

However, Mr. Gerusky has acknowledged that his statement, quoted in Attachment 4 to the Aamodt Motion, reflects an error in his recollection, and this error was corrected by Mr. Gerusky in an October 1, 1980 interview by the NRC Staff, where Mr. Gerusky indicated that it was about 9:00 a.m. when the Goldsboro measurement was reported to the Commonwealth. See October 1, 1980 transcript of NRC Staff Interview of Thomas Gerusky, excerpts of which are attached to Licensee's Response to Aamodt Motion dated January 25, 1985. The timing of of Licensee's report is evidenced by the Pennsylvania Emergency Management Agency log. Id.

These amazing interpretations of the October 1, 1980 Gerusky testimony are nothing more or less than dishonest.

If the Licensee and Staff find that the PEMA log is better evidence than Gerusky's testimony, they should say so, and provide that evidence.

3.2 The Licensee and Staff conveniently overlooked the testimony of other BRP employees in the May 1979 deposition

The Licensee and Staff responses made no mention of the testimony of two other BRP employees, William Dornsife, the a nuclear engineer, and Margaret Reilly, a health physicist, who also testified, along with Gerusky, on May 3, 1979. The first 20 pages of this deposition are provided as Exhibit A.

Following Gerusky's statement ("This was all before 8:00."), which referred to TMI personnel's claim that a survey in Goldsboro had discounted high predicted releases, Dornsife said, "The next notes we have is, about 8:30..." and went on to describe his preparations for briefing Lt. Gov. Scranton and a press conference. From this several conclusions can be drawn. First, the times assigned to various events were accurate in that the BRP personnel referred to their notes made at the time. Second, There were no communications significant enough to report to the interviewers for the time period from 8:00 - 8:30 a.m. Third, Dornsife would not have been able to prepare for the activities described (briefing, press conference) without any confirmation concerning offsite surveillance. Therefore, either TMI personnel reported offsite surveillance to BRP prior to 8:00 a.m. or three BRP personnel collaborated to fabricate this assertion.

3.3 The testimony of two TMI managers who confirm the BRP testimony was ignored in the Licensee Response and dismissed by the Staff

Gary Miller, the TMI station manager, and Richard Dubiel, health physics manager, testified between May 21-24, 1979, before the U.S. House of Representatives, Committee on Interior and Insular Affairs, that they did dispatch a team around 7:40 a.m. on State Police helicopter and that this team was in Goldsboro within five minutes. See Exhibit B, Gamble report, pp. 7-10.

Miller stated:

At approximately 0730 or a little before, I had received predictions of an offsite dose of 10 R at Goldsboro. This was based on the Reactor Building dome monitor, which was still increasing and from our past experience with source calculation, we did feel these were really this high, but as a precaution, I dispatched a State Police helicopter with an offsite team along with an offsite team in a car and separately, to the West Shore (Goldsboro).

Then Dubiel confirmed Miller's testimony:

At some point around 7:30, Gary Miller asked me for the status of the offsite teams, and I gave him the information that we had two teams ready to go offsite both available for transportation over to the West Shore. Gary directed me to make contact with the State Police and get a State Police helicopter to get one crew over there in a more timely fashion. He was concerned about the traffic--the early morning rush hour traffic trying to go up over the bridge in Harrisburg and then back down and that it might take an hour or more to get over there. He requested that we send one team in a helicopter and a second team in a car of driving over at a normal pace to back them up. I do not recall exactly who told me that they would get the State Police helicopter. I believe it was George Kunder, I do not remember exactly, but within minutes I had it confirmed to me that the State Police had been notified, and helicopter would be on its way

since they are stationed up at Harrisburg, Harrisburg International Airport. It would be here in a matter of minutes, and that security was notified that this helicopter was coming and would be landing somewhere in the vicinity of the north parking lot, and that they were to allow it to land and make preparations to support its landing in getting our technician on board.

...the timing may be poor but I am estimating 7:40 we had a man in the helicopter and sometime by two to three maybe five minutes later the man was in Goldsboro.

On September 20, 1979, before the NRC Special Inquiry Group, Miller confirmed his earlier testimony:

...I remember as soon as I had the projection, which was high, for Goldsboro and knowing the west---knowing the wind was blowing to the west and knowing that it was seven or eight in the morning, that I know that I asked for a helicopter before seven thirty. ...they picked up one or two of our people and they were flown over there. And readings were back, and as I remember the readings were back before Dubiel had thought the plume had gotten there. In other words, we had gotten over there faster than the radiation would have at the wind speed, which was very slow.

Miller's and Dubiel's testimonies confirm what Gerusky, Dornsife and Reilly testified. The Staff knows this, but the Staff dismissed these testimonies, in responding to the Aamodt Motion, as the Staff had done in its report, NUREG-0760, published in 1981. The Staff characterized the certain, detailed testimony of Miller and Dubiel, provided above, as reflecting "some natural inability to reconstruct the precise series of events based solely on the recollection of individuals." See Staff Response, pp. 5, Footnote 5.

The Staff's conclusion is preposterous. It is even more preposterous that the BRP personnel would have suffered the same "natural inability" in precisely the same way about the same events.

The Staff prefers the subsequent gross changes Miller and Dubiel made in their testimony. The Staff's participation in this change should be a matter of investigation, if it is not already. (The Staff's report, NUREG-0760 was referred to the Department of Justice for investigation in March 1981.) Suddenly, the day after Miller's testimony before SIG, provided above, Dubiel began the apparently uncomfortable change in testimony:

...I don't recall a time. I believe it was an hour later...
I thought one did (concerning the helicopter landing).
I have been led to believe...we requested a helicopter.
Which team got there first I don't know... (Exhibit B, pp. 10,11.)

3.4 The fact that the NRC investigations do not reflect the Gamble conclusions is of no significance.

The development and content of NUREG-0760 has been an open question since 1981. Investigators questioned the appropriateness of NRC Staff non-investigators conducting depositions. DIA referred the matter to the Department of Justice in March 1981. Gamble, and another investigator Roger Fortuna, wrote in a memorandum of December 1, 1981 (Exhibit C) that "the facts warranted prosecution for willful misrepresentations, omissions, or violation of NRC regulations."

The Licensee Response (pp. 2) and the Staff Response (pp.3-4) imply that the failure of NUREG-0760 to include the Gamble reports ("working drafts") is evidence that cuts against the Aamndt Motion. The Licensee and Staff know better.

3.5 The fact that Gamble did not testify concerning the content of his reports is no reflection on the authenticity of the reports.

Licensee stated in Footnote 1 on page 2 concerning the use of the Gamble reports in the Remanded hearing:

...This exhibit to David Gamble's testimony was not admitted for the truth of its contents, but only to show that sections of NUREG-0760 had been drafted prior to the completion of interviews...

The implication is that Gamble does not presently stand by the conclusions of his reports. First, Gamble did not testify concerning the contents because he was not permitted to do so. Second, the fact that Gamble provided the reports as part of his testimony indicates that he would stand by his conclusions, under oath, if given the opportunity.

3.6 The Staff is wrong, and deliberately so, in excusing its deletions of the Aamodt Motion as clerical errors and attributing this explanation to the Aamodts.

The Staff is in triple jeopardy. The Staff provided a false explanation for criminal behavior, and then attributed the explanation to the Aamodts. In its response, at page 6, the Staff stated:

The Staff's intent to influence, according to the Aamodts, is shown by the fact that virtually every other page of the Aamodt June 21, 1984 Motion was not copied and sent to Dr. Caldwell.

The deletions did not follow a pattern of virtually every other page missing. The following analysis shows that the Staff's assertion is wrong:

<u>Order of Missing Page</u>	<u>Identification in Original</u>
Third	Page 2
Fifth	Page 4
Sixth	Figure 1
Ninth	Page 6
Fourteenth	Page 9
Sixteenth	Page 11
Twentieth	Affidavit 2
Twenty-second	Affidavit 4
Twenty-sixth	Affidavit 7
Twent-eighth	Affidavit 9
Thirtieth	Attachment 2
Thirty-first	"
Thirty-second	"

There are only three sequences of every other page deleted, with thirteen possible. In addition, parts of the eighteenth and nineteenth pages (Affidavit 1) were deleted.

It was the lack of a pattern that caused the Aamodts to conclude that the deletions had been performed deliberately

In a February 12 letter to Staff counsel, Mary E. Wagner, the Aamodts asked the Staff to correct its filing. The Staff has refused to do so. Marjorie Aamodt again requested a correction by the Staff in a letter of March 5. This correspondence is provided as Exhibit D.

3.7 The Staff is wrong, and deliberately so, when it asserted that health effects were not an issue in the TMI Restart Proceeding.

In 1981, the Licensing Board permitted the litigation of the matter of an apparent increased incidence of neonatal hypothyroidism in 1979. The Board made findings on the matter in its second partial initial decision (December 14, 1981). The Aamodts took the matter to appeal in 1982. It is incomprehensible that the Staff was so poorly acquainted with the record of the hearing to respond:

...health effects of the TMI-2 accident were not an issue in the TMI-1 restart proceeding. (pp.11)

3.8 The Staff is wrong, and deliberately so, when it asserted that health effects do not bear on any issue in the Restart Proceeding.

The Staff asserted that the excess cancer mortality rate in the TMI area "does not address any issue bearing on a TMI-1 restart decision (pp. 10). The Staff assumes that the cancers could not have been caused by the TMI accident because the latency "cancer occurs after a long latent period.." (pp. 11).

The Staff cited the CDC review as its authority on latency period, which provided no adequate definition or reference of the latent period. The Staff failed to address the Aamodt critique of this portion of the CDC review. It is provided as Attachment C; see pp. 3.)

The Aamodt critique rebutted CDC's view on cancer latency as follows:

...CDC presents no basis for its assumption that a cancer resulting from exposure from the TMI-2 accident must necessarily take at least one year to develop. Neither CDC nor anyone else knows precisely what the active agents may have been.

CDC presents no evidence that cancers cannot occur without a "long" latency period. Short latency periods are known to occur. Note the literature on organ transplants and the effect of depressed immune systems. Could the role of a causative agent emitted from TMI have been to suppress the immune system? (p. 3)

The latency period for cancers in humans is inferred from epidemiological studies, thus providing an average period rather than a minimum. The only truly scientific data on minimum latency is with cells in the test tube, where the latency is six weeks, and in animals, where the latency is three months. (These studies, or an affidavit can be provided.) The Staff position did not allow, in addition, for exacerbation of existing disease by radiation from the TMI accident.

The Staff failed to consider the other health effects of metallic taste, erythema, diarrhea, nausea and vomiting, irritated and watery eyes, respiratory inflammation, disruption of menstrual cycle, skin rashes and blisters, greying and loss of hair, sharp pains in joints, and tingling or itchy skin experiences by hundreds of residents

on the initial days of the accident. (See Aamodt Motion, January 15, 1985, Attachment 3 (Health Study), Affidavits 1,2,4,5,6,7, Attachment 3.)

The residents largely experienced these symptoms prior to the time they knew about the TMI accident or realized a danger existed. These same kinds of symptoms were experienced by Hiroshima victims and are classical radiation-induced health effects. The NRC Staff has admitted this in various communications with residents. (See Id., Attachment 2 (pages from Saxe book); Aamodt Motion, June 21, 1984 pp. 8; NRC letter, Dircks to Commissioner Ahearn, "Draft Letter to Ms. Brenda A. Witmer, June 14, 1983.)

3.9 The Staff is wrong, and deliberately so, when it refers to the increased cancer mortality in three TMI areas as "alleged".

The Aamodt Motion (January 15, 1985) clearly stated its basis for asserting that the cancer mortality incidence had been verified.

pp. 4 ...Death certificates were obtained from the Pennsylvania Department of Health. The population for the areas surveyed was checked by use of the West Shore School District survey, conducted at the approximate time of the citizens' health survey, and tax maps.

pp.4, Attachment 3 : Figure 2 presents the cancer mortality rate analysis. The estimated numbers of persons in all households (the population) for the areas surveyed was verified by the West Shore School District survey conducted about the same time and tax maps. The prior estimate of 457 persons was lowered to 433. Eighteen of the twenty cancer deaths reported were verified by death certificates obtained from the Pennsylvania Health Department. Two reported deaths were dropped; one (cancer) occurred before the accident (1978), and the other was not attributed to cancer on the death certificate. ..One cancer

death certificate was delayed because the place of death was a hospital and not the residence. A cancer death, not obtained in the survey (noone was at home), was discovered in the followup, and the death certificate was obtained. Thus, twenty cancer deaths have been verified as occurring in the areas surveyed during the post-TMI-2 accident period.

Additional verification of the above is provided by a letter of January 14, 1985, Drs. John Cobb and Jonathan Berger to Marjorie Aamodt, provided as Attachment C.

4.0 Discussion

When the Aamodts approached the Commission on August 15, 1984 concerning the elevated cancer incidence in three areas near TMI in the direction of early plumes, the general concensus among the Commissioners was that the cancer deaths should be verified. The presumption was that if, and when, an excess of cancer deaths was verified, this would indicate the need for an NRC investigation.

That verification occurred through the independent actions of the Three Mile Island Public Health Fund at the request of the court. The NRC was provided with the information in the Aamodt Motion of January 15, 1985. It was expected that this information alone would have moved the Staff to support the Aamodt's request of an investigation and a reopening of a hearing. However, it did not.

The Staff's response was literally chilling. This agency on which the public depended throughout the TMI crisis and now, throughout the cleanup operations, professed no interest in health problems and would not even acknowledge that the excess of cancer mortalities had been confirmed.

The Three Mile Island Public Health Fund, the TMI-2 Cleanup Citizens Advisory Committee, Judge Sylvia Rambo, Dr. Thomas Cochran, Dr. Jan Beyea, Dr. Bruce Molholt, Drs. Berger and Cobb, Senator Arlen Specter and Mayor Stephen Reed (Harrisburg) have all expressed interest in the Aamodt health study. Four letters from individuals among those named above are enclosed as Exhibit E.

The NRC Staff pretends to be disinterested and unimpressed.

The fact that the Staff would prefer to resort to false statements, deceptions and other criminal behavior rather than face an investigation of the TMI health problems cannot indicate anything other than a distorted interest of the Staff or the intent to coverup.

It is imperative that the Commission investigate the Staff policy and actions which resulted in the Staff's response to the verified increased cancer mortality rate in the TMI area.

5.0 Motions

- 5.1 The Aamodts motion for permission to reply to the Licensee and Staff responses to their January 15, 1985 Motion.
- 5.2 The Aamodts motion for the striking of the false and misleading statements in the Staff's and Licensee's responses.
- 5.3 The Aamodts motion that the Staff be reprimanded for its attempt to obstruct justice in the Restart Proceeding.
- 5.4 The Aamodts motion that the Staff be reprimanded for its abrogation of duty concerning health effects in TMI area residents.
- 5.5 The Aamodts motion the Commission to initiate an investigation by the Office of Internal Auditor of the policy which has directed the Staff's false response to the Aamodt Motion.

6.0 Conclusions

The Aamodts have asked the Commission for the opportunity to be heard, out of turn, to correct false and deceptive statements in the Licensee and Staff responses to the Aamodt January 15, 1985 Motion. At the same time, the Aamodts have provided their reply since the Commission decision is imminent.

The Aamodts have shown that the Licensee and Staff have no evidence that refutes the Gamble report that TMI-2 personnel lied to the Commonwealth Bureau of Radiation Protection concerning radiation surveillance.

The Aamodts have also shown that the Staff has abrogated its responsibility for public health in its utterly false response to the motion. (The Licensee made no response concerning health issues.)

The Aamodts have asked the Commission to censure the Staff for its attempt to obstruct justice concerning the litigation of health issues and initiate an internal investigation of Staff policy.

Respectfully submitted,



Norman D. Aamodt



Marjorie M. Aamodt

March 6, 1985

EXHIBIT A

Deposition of Thomas Gerusky, William Dornsife
Margaret Reilly, May 3, 1979

Officer at the time. They have a list of our names and phone numbers. It's updated monthly. It states, "I got a call about 7:05 saying that 'Theresa Hile has declared a strike agency. Call back to the control room Unit 2.'" Immediately after that I called Maggie Reilly and wanted to make sure, to see if there was any phone numbers we had directly to the control room. We didn't. She didn't tell me we had any - I guess we did have one to the control room.

REILLY: I just rattled off the switchboard

POWERS: So, I called back through the switchboard and I guess Maggie went ahead and called Tom to tell him to get somebody to get in to take over the office.

REILLY: The first person I called was Malloy.

POWERS: Okay. Well I called back to the plant immediately after hanging up with Maggie, which was about a minute later, and I got the switchboard. The switchboard operator had difficulty connecting me with the control room. She could get the control room, but she couldn't get us together. So finally after a couple of minutes I told her, "why don't you have them call me back at my home." So I gave her the number and about a minute later someone from the control room called me back. I forget, I don't know whether he even told me his name. I guess it was the shift supervisor, whoever was on duty at the time. Things sounded very confused at the

plant. You could hear a lot of noise in the background. I started asking questions and they started answering. They gave me a little bit of blurb, but I didn't write anything down. This is just from memory. I believe he told me that the plant was... it was a transient, the plant was shut down, the reactor had cooled. The system was being cooled normally. The safeguards system was... there was a slight pressure in the containment. At the time, I didn't recall anything concerning the relief valve sticking. They didn't say anything about anything being carried over to the auxiliary building at that time. But they did tell me that there was nothing offsite. They had searched and they couldn't find anything offsite. So I asked a few questions additionally, what I thought was appropriate. I don't really recall but I satisfied myself that the situation was stable.

ESSIG: Excuse me, just for a second, Bill. You indicated that they had told you at that time, this was shortly after 7:00 in the morning, that they had not found anything offsite.

GOINSIFE: Right. They definitely had tears out, they could not find anything offsite.

ESSIG: Okay, sorry. Go ahead.

GOINSIFE: Then I heard in the background, an announcement--"evacuate the fuel handling and auxiliary building."

REILLY: It really makes you feel good. (laughter)

DOONSIFE: All along I was waiting for somebody to tell me it was a drill. When I heard that I figured "oh-oh this is the biggy." Then, the chief supervisor apparently put on a health physics team. When they called me they had to go out, they had no radio or offsite. Right after the announcement he said to me, "I have to go, I really have to go now." Very confused and very upset. "I really have to go now; I'll call you back" and he hung up.

DOONSIFE: This was about what time?

DOONSIFE: This was about...

REILLY: A quarter after seven.

DOONSIFE: Well, in that time frame, quarter after--twenty after, about twenty after, I'd say. He hung up. So I figured, at that point I knew people were coming into the office. I figured there was no reason to try and call him back so I just took off and headed for the office. Oh no, I'm sorry, I called into the office after the plant hung up on me and I told one of the secretaries who was there--I told her, the first person who comes in to get them to call back to the plant immediately. And just briefly told her that there was a problem there, but not to alarm her needlessly, because at that point it didn't seem...the situation seemed to

to inform them, but I don't know if they were telling me. Except, of course, I don't know if I still recall the announcement to evacuate the public from the area...

Q. Now, I believe, like there are, some standard formats in which initial notifications are to be provided to you?

A. Yes, there are. In the emergency plan there is a check-off list, kind of.

Q. Now, that's in the State's PIPAG, or in the State..

A. It's in the annex to the...

Q. Now, it's in the procedures part.

Q. Now, the annex to the Three Mile Island emergency plan?

A. Yeah.

Q. Now, then that information was or was not provided in that format?

A. The way I recall the format, it was not absolutely--someone reading down the whole list--no. It was somewhat disjointed.

1 QUESTION: In looking at that format, is there anything in
2 that format that my husband is able to have been provided that
3 provided?

4
5 ANSWER: No, I don't believe so. The format is pretty general. It talks
6 about a little bit of plant status, you know. I don't really think it
7 is that difficult. I got essentially the information I
8 would've gotten through the checklist by what they told me and with the
9 questions I asked.

10
11 QUESTION: The format in the plan, it's a family of formats actually, that
12 are based on design basis accidents and on anticipated transients. For
13 instance, a LOCA or a loss of AC, or a loss of load, or a fuel rod ejection,
14 things like that, things that have a recognized beginning, and they're
15 essentially developed out of SAR information.

16
17 QUESTION: Bill, the time you received that call did they give you a
18 generic classification of the type of event that they thought that they
19 might have had?

20
21 ANSWER: I believe they told me it was a transient, and that compli-
22 cations had occurred in addition to the normal transient.

23
24 QUESTION: They did not mention anything such as a steam generator tube
25 rupture?

1 JEFF: At that time.

2
3 REILLY: We eventually know that fairly early.

4
5 CORNWELL: Well, we don't get to that later.

6
7 JEFF: Okay. I don't know what we got from that point. I think so,
8 whoever has something to offer from that point.

9
10 REILLY: Okay. At that point I got into the office at 7:10, at 7:10 a.m.
11 Gerusky was already here and on the phone with the plant. And it was
12 around that point that they rolled over from a site to a general. Okay.
13 Meanwhile the rest of our people were coming in. Fairly early in this
14 thing I contacted the Department of Agriculture because we always perceive
15 that there is a good chance of having a dairy problem with a reactor accident.
16 We were disappointed with this one. We didn't really... it continues to
17 blow my mind. Let's see... we got the map out--all that good stuff.

18
19 GERUSKY: No, wait a minutes. Let's stop. I was the first one in the
20 office after the call from Margaret. And the secretary gave me the infor-
21 mation that Bill had called and that I was supposed to call the Island
22 right away which is our normal procedure anyway. The first person into the
23 office calls the Island, calls the reactor control room.

1000

1000

1. *Chlorophyll a* (Chl a) is the primary photosynthetic pigment in most plants and algae. It is a green pigment that absorbs light energy in the blue and red regions of the visible spectrum. Chl a is essential for the light-dependent reactions of photosynthesis, where it converts light energy into chemical energy in the form of ATP and NADPH.

1. The first step is to identify the problem or question that needs to be answered.

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

U.S. DEPARTMENT OF AGRICULTURE

Q: It is a health product, is it not? Yes, it is.

Q. What, or how, is it?

C. [unclear]: I think it was David but I didn't write the name down. Maggie
[unclear] [unclear] [unclear] [unclear] I picked up the phone also, I believe. You
[unclear] [unclear] [unclear] [unclear] didn't you?

1944: 1944, I. 1944: 1944, I.

... I got the asp out. They then said they were going to a general emergency, that they had failed fuel. The dome
was leaking 500 R per hour in the reactor building and they had
units back out checking. They told me the wind was out of 30 degrees in
the north westerly direction. The high pressure injection initiated; some
of the units failed; failed fuel; a high radiation area. And in the
... someone was working on a prediction of dose offsite, based upon
the 500 R per hour reading on the dome monitor. They predicted 10 R/hr
at Goldsboro, based upon the dome monitor and a leak
rate of .2 of a percent per day in the containment.

10 R, was that a time dependent or was that a course of confident projection.

REPLY: L.A. (P.O. Box 7777) 90067

Q: And I think you contacted the State Council of Civil Defense, to inform them of our situation. All, I was finding the information to
to inform them, that this is where the wind was blowing and that we
needed to move to on the west side of the river. In the afternoon I
requested them to try to get their tanks somewhere to Goldthorn, and they
said that the State Police Police had been there and that they had
of their tanks up in the air and over Goldthorn. We stayed on the phone
with them. They found no radiation levels on site or in Goldthorn that
would indicate any kind of a leak. So therefore, we then notified the
Civil Defense to hold tight. This was all before 8:00. From that point
on, we maintained an open line to the Unit 2 control room, and a variety of
people were on the phone including--Bill was on mainly I believe. You were
on the phone with them, and here are your notes Bill.

DOORSIFE: The next notes we have is, about 8:30, somebody came down, I think it was Hittendorf, who is the Deputy Secretary of Environmental Protection, Tom's boss, came down and said that they wanted somebody to go over to the Lt. Governor's office and brief him and to take part in the press conference. So I could volunteer since I probably knew more about the plant status than anybody at that point. So right before I left I

1 called Miller to the plant. I told him I would give a briefing on what
 2 happened and what the status is, but he had to go over and brief the
 3 Governor. So I called Miller on the phone. Only was the station super.
 4 And he told me that they had a turbine trip, and
 5 there was a distribution of the spurs also. I guess he meant by that, I
 6 guess he meant that the distribution of the spurs, but he didn't say that. He
 7 said that there was a distribution of the spurs. He said that the distri-
 8 bution rates were less than 1 million per hour; there was a primary to
 9 secondary trip; the D-200 regulation was locked; there was failed fuel;
 10 there was a low primary fast reactor coolant circulation; the D-200
 11 regulation was 100 W/m; there was 1 lb. pressure in the reactor
 12 building, and it was above atmospheric; that the boron concentration in the
 13 primary was 100 ppm, and they suspected there was a negative feedback from
 14 the secondary to the primary. They got some secondary side water back into
 15 the primary when the pressure was reduced in the primary. High pressure
 16 injection had initiated and they were using high pressure injection to keep
 17 the core covered. And they may have had a bubble in the primary; they
 18 depressurized. Then I went over to brief the Lt. Governor.

19
 20 DE WILSON: At this time did they discuss any releases or any possibility
 21 for releases, at any time in the future?

22
 23 DE WILSON: I just asked for plant status. I guess after that we were in
 24 constant communication. I'm sure that was Miller just briefed me on
 25 the plant status--what had happened, what initiated the transient and what

They: That's about right. They had taken some airborne foliar samples and I had also some, I now have one value south of the observation building. The estimates that they had from the field estimating techniques suggested finding 131 concentrations to the order of 10^{-8} mCi per gram and they wanted to verify this because this was getting into a rather interesting food chain pathway hazard, although not an acute problem. They wanted us to verify their estimate using our counting equipment. In that situation, it was steadily going to pot. Arrangements for this were made between myself and Dick Dufiel. And Mat Ed was going to chopper the cartridge to the heliport at Holy Spirit Hospital and we would send a runner over to get it. I think I must of spent the greater part of 3/4 of an hour trying to get through to whoever at the hospital was in authority to tell them, "there is a helicopter coming with the sample--not to worry." Finally we straightened that out and we ran the sample, and the concentration we observed in that was to the order of 10^{-10} . So...

CONCLUSION: What was the minimum detectable amount on the counting system?

at this time and people can do it. It is on the other side. The time is now 12:03 p.m.

of the conference taking place at the... The time is now 12:13 p.m., May 3, 1979.

I ran out, I had asked you if you could recall the MDA, the activity, for the...

REILLY: I don't... reported, this would not have been a sample from the... I have no knowledge of... on it. Our... 3×10^8 cc sample... our MDA on that is... 14. That would be a routine sample, but I don't know what it would have been for this one.

DEWILDSON: I wonder if you could discuss a little more the rationale the thought process that went back and forth regarding that sample, and whether or not you... any actions or record any further studies on the part of the licensee.

REILLY: Okay. Well, they are... to take air samples and looking for airborne iodines. Based on the... the conflict between their

THEY: I have been thinking about you a lot.

January 1, 1900

ENTRY: 100, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845,

1900: 100, 110, 120...

STACY: So that's I think the only way I'd gonna read in any detail on this is to the newspaper and the radio. You'd get all the pertinent facts, too.

59012: Positive and you pretty sure it was late in the morning hours, as opposed to midday afternoon or that...?

SEILLY: It could have been early afternoon.

CERUSKY: No, it was late morning, because I was here when the decision was made. You were here. I think you were here when we got the information over the wall, we got it while I was here anyway, and after that I went to the Governor's Office in the morning so..

Q: I recall, I recall that it was.

A: All right.

Q: I was going to the press conference, and you called a stop to it. I recall told me that they had found 10^{-8} of iodine in Gold Mine.

A: OK.

Q: What was about eleven.

A: And so it was on its way out.

Q: Yeah, in fact everybody got mad at me over there, because I just got it on the way over--before I went up there and I didn't tell anybody about it. We knew there were small releases. I told the Lt. Governor and everybody that there was nothing detectable offsite. And I told the press that they'd found a little bit of iodine...

GERUSKY: We heard you on the radio.

REILLY: Could hear Bill shouting on the radio eventually.

DONALDSON: Do you recall whether or not, when the result of your counting of that sample had returned and you passed it on to someone at the site,

EXHIBIT B

*
Report Provided by David Gamble as part of his testimony
in the Remanded hearing

* Second of two draft reports

REPORTABILITY OF A PREDICTED
OFFSITE EXPOSURE RATE

At about 0740 on March 28, 1979, the licensee attempted to report to NRC Region I the General Emergency involving known major fuel damage. ^{1/} During telephone contacts with Region I personnel, which began at about 0750, the licensee did not notify Region I of an offsite release calculation which predicted significant exposure rates downwind toward Goldsboro. ^{2/} The reportability of that prediction is the object of this investigation.

Except for minor time variances, matters bearing on the reportability of the offsite exposure rate prediction have been described rather consistently by TMI-2 accident participants and investigators.

Prediction -10 (40 R/hr) R/hr in Goldsboro

Upon arriving at the plant in time to hear a Site Emergency announced at 0655, Howard Crawford, a nuclear engineer, proceeded to the Unit 2 control room, ^{where} ~~upon arrival~~ ^{for} he gathered materials ~~to be used in~~ ^{on the basis of the reactor building dome monitor reading,} predicting ~~exposure~~ ^{exposure} rates, a task he had performed during drills for two years. ^{3/}

Crawford recalls that his ~~first~~ ^{prediction} calculation, completed soon after 0700, ~~showed~~ ^{of 40 R/hr} an exposure rate of 40 R/hr in Goldsboro. Neither the time ^{of day} nor the ^{40 R/hr} result of this calculation has been substantiated by records or ^{the} the recollection of others. ^{4/} ~~However, the early prediction, if it occurred, is not pertinent to this investigation.~~ ^{since a similar, documented}

However, it is not relevant to this investigation to know whether the 40 R/hr prediction occurred.

into the LPZ investigation
prediction (10 R/hr at the Low Population Zone boundary) was performed

before the licensee reached NRC Region I by telephone at about 0750. *The question, is whether this 10R/hr prediction was properly represented,*

documented
9 This prediction (10R/hr at the LPZ) appears to have been performed by Crawford *after 0713, the beginning of* ~~during or after~~ the massive release of radioactive *a material* to the reactor building atmosphere. *5/* ~~which began at 0713~~ *57* Both the time and magnitude of Crawford's dome monitor (HP-R-214) reading (300 R/hr) *, on which the 10R/hr prediction was based,* are uncertain. ~~Acme or not, the 300 R/hr reading formed the basis for the calculation.~~ The time shown on the calculation sheet, 0744, *probably indicates when* ~~when~~ HP-R-214 was read or when the calculation was performed. *Thus,* ~~Therefore,~~ Mr. Crawford's prediction of 10 R/hr at the LPZ seems to have occurred between 0713 and 0744.

Crawford recalls discussing a 40 R/hr prediction with Richard Dubiel, Supervisor of Radiation Protection and Chemistry, and with James Seelinger, Unit 1 Superintendent. *6/7/* Dubiel and Seelinger recall ~~such~~ discussions only concerning the 10R/hr prediction. *8/9/10/11/* *As stated previously,* ~~Agree,~~ this distinction *is* ~~is~~ *unimportant to this* ~~is~~ *investigation.*

a
During ~~the~~ 6/6/79 interview, *7/* Crawford stated:

They both thought it appeared too high and they immediately talked, you know, possible steam damage to the dome monitor...they wanted to get a very good feel to see if they wanted to believe that number....

had
On 5/22/79, Dubiel *had* stated: *9/*

...I don't think we ever had projections that were meaningful and I don't believe at that time we had any projections that indicated anything of a serious nature, even based on the procedures.

This statement appears to have been based on two factors - disbelief of the dome monitor reading and knowledge of low pressure in the reactor building - as indicated in the following exchange ^{on 9/21/79} _{10/}

Q Do you recall doing an off-site dose calculation at approximately 7:10 on the morning of March 28th?

Dubiel I did not do any off-site dose calculations.

Q Do you recall verifying one?

Dubiel I recall verifying one. I recall looking at several during the morning.

Q And specifically, do you recall one that was made by Mr. Crawford based on a reading of the dome monitor?

Dubiel Yes, sir, I do.

Q Do you remember verifying that one?

Dubiel Yes, I do.

Q Am I correct that Mr. Crawford's calculation was incorrect?

Dubiel No, I think Mr. Crawford's calculation was correct.

Q Was it based on an incorrect reading of the monitor?

Dubiel No, I don't believe so.

Q What was the calculation of the off-site dose he came up with?

Dubiel Approximately 10 R per hour gamma at a location which was the center of the town of Goldsboro, which is on the west shore of the Susquehanna.

Q And your understanding is that, based upon the information that he had, he correctly calculated a projected dose of 10 R per hour?

Dubiel Yes.

Q Can you explain how Mr. Crawford could have made an accurate calculation of 10 R per hour as the expected level in Goldsboro when in fact there were no detectable levels?

Dubiel I think that the single biggest factor in that particular

item is that the dome monitor did not respond accurately. The projected levels are based on the dome monitor readings, plus some very conservative assumptions. Since we are trying to do, in defining the procedure for dose projections, there are a lot of parameters which cannot be determined, so that conservative assumptions are made. And, I feel, first of all, that the dome monitor over-responded significantly.

I feel, secondly, that the building pressure of one or two pounds versus the conservative assumption of 55 pounds would add to it.

Earlier, on

On 5/11/79, Gary Miller, TMI Station Manager, ^{had} testified before the U. S. House of Representatives, Committee on Interior and Insular Affairs: 12/

Weaver: What did you think of that? The high reading on that dome monitor?

Miller: I just did not think about it in terms of fuel damage. I knew that it meant there was a potential to release things offsite. My only concern was to get readings.

Cheney: Did you have any question about the values of those readings?

Miller: I thought it was too high, but I did not need to be convinced that it was high enough to be concerned. It was ~~reading~~ ^{reading} ~~40,000~~ 40,000 or 50,000. I mean that was beyond what I had ever envisioned ever seeing on the dome monitor, so you can discuss whether there was shielding and moisture and whether it was beta radiation, and all that sort of thing.

But I did not need to be convinced. What I really wanted was somebody out there with a meter and an iodine kit sampling, and the wind direction. That is real numbers. That is really what someone is going to get out there. So that was our concern.

Onsite and Offsite Monitoring

Mr. Miller's statement reflects a common concern for getting radiation measurements onsite and offsite to supplement the Crawford prediction(4). Upon declaration of a Site Emergency at 0655, efforts to organize and dispatch onsite and offsite monitoring teams began. 8/13/ This seems to have occurred rather clumsily; nevertheless, an onsite team (Alpha) was instructed at about 0730 to measure the radiation level west of the Unit 2 reactor building. 14/15/ During that survey, the wind was westward and very light with minute-to-minute variations of about 10 to 30 degrees. This survey was appropriate, but tardy. At 0746, Alpha Team reported less than 1 mR/hr at Station GE-8 west of the Unit 2 reactor building. As discussed later, this measurement became the basis for discounting ² Crawford's prediction(s) of high exposure rates offsite.

At about 0800 and 0830, respectively, Charlie and Bravo Teams were dispatched by vehicle to Goldsboro. At about 0830, Charlie Team reported less than 1 mR/hr in Goldsboro. Bravo Team reported similarly at about 0940. Given that there had been no significant release from the reactor building, these surveys seem adequate from the exposure rate measurement standpoint. However, had a major release occurred, these surveys would have been too little, too late.

TMI management appears to have realized the need for a quick measurement in Goldsboro to confirm or deny Crawford's predictions(s). In statements following the accident, Miller and Dubiel maintained that a State Police helicopter had flown a survey team to Goldsboro soon after the General Emergency was declared.

To the U. S. House of Representatives, Committee on Interior and Insular Affairs, ^{on May 24, 1974,} Miller stated: 17/

At approximately 0730 or a little before, I had received predictions of an offsite dose of 10 R at Goldsboro. This was based on the Reactor Building dome monitor, which was still increasing and from our past experience with this source calculation, we did feel these were really this high, but as a precaution, I dispatched a State Police helicopter with an offsite team along with an offsite team in a car and separately, to the West Shore (Goldsboro).

0740 - York Haven radiation monitor reading (0) - helicopter
(approx.) at TMI - dispatched offsite teams in helicopter and one

separately in car to West Shore (from G. P. Miller and R. W. Dubiel recall of the incident).

0800 - Offsite team in Helicopter at West Shore (Goldsboro)
(approx.) '0' reading - we actually were ahead of the plume -
plus onsite team at our West site boundary-'0' reading.

Later, to
the NRC Special Inquiry Group *on 9/26/77,* Miller stated: 18/

Q In fact, you or someone called the State Police that morning for a helicopter and you got one very fast, didn't you?

Miller There may be---subsequently I know there's some disparities in my time versus the time the thing landed here or the time it's documented. I remember as soon as I had the projection, which was high, for Goldsboro and knowing the west---knowing the wind was blowing to the west and knowing that it was seven or eight in the morning, that I know that I asked for a helicopter before seven thirty.

~~I knew that that was in my mind and knew that I had the York Haven monitor out over there and I knew I had a guy on the West Shore. That's something that I had practiced and thought about it. Even in the Unit 2 hearings when we discussed the wind blowing west, slow as it was.~~

Q Do you know whether the helicopter actually came on the site and picked up somebody to go over the river?


Miller To my knowledge it was verified to me that they picked up one or two of our people and they were flown over there. And readings were back, and as I remember the readings were back before Dubiel had thought the plume had gotten there. In other words, we had gotten over there faster than the radiation would have at the wind speed, which was very slow.

On 4/24/79, Dubiel^{had} stated: 8/

At some point around 7:30, Gary Miller asked me for the status of the offsite teams, and I gave him the information that we had two teams ready to go offsite both available for transportation over to the West Shore. Gary directed me to make contact with the State Police and get a State Police helicopter to get one crew over there in a more timely fashion. He was concerned about the traffic--the early morning rush hour traffic trying to go up over the bridge in Harrisburg and then back down and that it might take an hour or more to get over there. He requested that we send one team in a helicopter and a second team in a car of driving over at a normal pace to back them up. I do not recall exactly who told me that they would get the State Police helicopter. I believe it was George Kunder, I do not remember exactly, but within minutes I had it confirmed to

me that the State Police had been notified, and a helicopter would be on its way since they are stationed up at Harrisburg, Harrisburg International Airport. It would be here in a matter of minutes, and that security was notified that this helicopter was coming and would be landing somewhere in the vicinity of the north parking lot, and that they were to allow it to land and make preparations to support its landing in getting our technician on board.

...the timing may be poor but I am estimating 7:40 we had a man in the helicopter and sometime by two to three maybe five minutes later the man was in Goldsboro.

By 9/21/79, Dubiel's position regarding the helicopter survey had changed. 

Q Did you have any role in ordering a Pennsylvania State -- or requesting a Pennsylvania State Police helicopter to come to TMI and take a team to Goldsboro to verify what you thought and hoped was the fact, which is that it did not have a 10 R per hour reading there?

Dubiel Yes, I was involved in the determination for the need of a helicopter. I did not make the specific request.

Q Do you know who did?

Dubiel George Kunder made the request via the site protection officer. It might have been a sergeant, someone in the security force.

Q Did the helicopter arrive?

Dubiel The helicopter came in. I don't recall a time. I believe it was an hour later.

Q To your knowledge, did a team go in the helicopter to Goldsboro and take a measurement?

Dubiel I thought one did. I have been led to believe -- when we determined the need for the helicopter, we simultaneously sent a team in a car to drive around. But recognizing the time it takes to get there, we requested a helicopter. Which team got there first I don't know. I know the helicopter was available, because I subsequently used it for other things.

The fact seems to be that TMI management, being concerned about potential exposure rates in Goldsboro, did order a helicopter after declaring a General Emergency at 0724. However, the helicopter did not arrive until 0835, by which time Charlie Team had reported in from Goldsboro and Bravo Team had left by truck for Goldsboro. The helicopter was not used to transport a survey team to Goldsboro.

By 0830, when Charlie Team reported less than 1 mR/hr from Goldsboro, it was clear that a major offsite release from the reactor building had not occurred. But little comfort should have been derived from that knowledge while the reactor building contained an inventory of perhaps 300 million curies of noble gases and other radionuclides.

Reportability and Reporting

The situation was intuitively reportable to NRC under 10 CFR 20.403, which requires immediate notification "...of any incident involving byproduct... material... which may have caused or threatens to cause... release of radioactive material in concentrations which, if averaged over a period of 24 hours, would exceed 5,000 times the limits specified for such materials in Appendix B, Table II...." For Xe-133 the Appendix Table II limit is $3 \text{ E-}7 \mu\text{Ci/ml}$.

~~There~~ There was no reason to believe that the dome monitor (HP-R-214) increase was transient. The "immediately reportable" concentration of Xe-133 ~~was therefore~~ ^{was therefore} ~~1.5E-3 $\mu\text{Ci/ml}$ (i.e., $5000 \times 3\text{E-}7 \mu\text{Ci/ml}$). Using a source term of 1325 Ci/sec and a X/Q of $2.5\text{E-}4$ seconds per cubic meter,~~ ~~not by~~ ^{had} ~~0744, Crawford, used Radiation Emergency Procedure 1670.4, Rev. 3, dated 2/15/78 to calculate~~ ^d a concentration of $0.33 \mu\text{Ci/ml}$ at the LPZ, 220 times ^{the} "immediately reportable" concentration. ^(This concentration is determined as an intermediate step in using Radiation Emergency Procedure 1670.4, Rev. 3, dated 2/15/78 to predict a 10 R/hr at the LPZ.) ~~Using the same procedure, the minimum concentration immediately reportable under 10 CFR Procedure 1670.4, Rev. 3, dated 2/15/78 to predict a 10 R/hr at the LPZ (1.5E-3 $\mu\text{Ci/ml}$) can be found to correspond to an HP-R-214 reading of only 1.4 R/hr.~~

Early in the accident, the licensee logically could have challenged the Procedure 1670.4 calculation on the basis of low reactor building pressure. But as the reactor building radioactivity inventory increased, as measured by HP-R-214, the licensee should have become progressively less concerned about the conservatism of the calculation and more concerned about the magnitude of the potential hazard.

Telephone contact between the Unit 2 control room and NRC Region I was established, after appropriate efforts by the licensee, at about 0750.^{4/} Although earlier contacts had been made with the Region I answering service, this was the licensee's first good opportunity to report the accident in accordance with 10 CFR 20.403.

However, the 0744 prediction of 10 R/hr ^{(0.33 μ Ci/mCi) at the LPZ} was not reported, apparently because the first onsite measurement at point GE-8 west of Unit 2 (1 mR/hr at 0746) had been used to calculate a new source term at 0750. Although this one onsite measurement did not prove that the release was insignificant, the licensee could have concluded justifiably that the release was not as bad as ~~calculated~~ ^{Crawford's prediction had been calculated}. ~~The reporting of the situation~~ ^{remained}, however, in that: (1) the incident still threatened to cause a major release and (2) offsite field measurements had not been completed.

^{apparently} The licensee reported Crawford's 10 R/hr prediction to the Bureau of Radiation Protection but not to NRC. The only identified NRC reference to a high radiation level outside the plant was the following telephone conversation recorded after 10:00 a.m. on 3/29/79 in the NRC Operations Center:

VOICE: The indications are that low levels are being released, we will find out.

VOICE: What is your IDC?

VOICE: There is no question that there was -

VOICE: There was?

VOICE: --released when the incident first occurred.

VOICE: Yeah, I heard somebody, I guess on the radio, I think it was from the Bureau, saying that there were 10 R per hour out the cooling tower.

VOICE: No.

VOICE: Was that emergency services?

VOICE: I don't know who said that.

VOICE: It was somebody from the State of Pennsylvania being interviewed, that's what.

It is unlikely that the licensee inadvertently omitted the 10 R/hr prediction when describing the accident to Region I after 0750. Clearly, from the Crawford and Dubiel statements, the licensee wanted not to believe the dome monitor and Crawford's calculation.

The licensee not only failed to report the 10 R/hr prediction to Region I, but also, according to the following statement of Thomas Gerusky, Director of the Bureau of Radiation Protection, countered the report to BRP with nonexistent Goldsboro survey results. 21/

In the meantime, I requested them to try to get their teams somehow to Goldsboro, and they said that the State Police helicopter was there and that they would get one of their teams up in the air and over Goldsboro. We stayed on the phone with them. They found no radiation levels onsite or in Goldsboro that would indicate any kind of a leak. So therefore, we then notified the Civil Defense to hold tight. This was all before 8:00.

The desire to disprove the 10 R/hr prediction, which could have triggered massive evacuations, is understood. Use of the first onsite, downwind measurement to partially achieve such disproof also is understood. The use of nonexistent offsite survey results to further disprove the prediction is not understood.

Conclusion

Nothing discovered in this investigation relieved the licensee of the requirement to report to NRC all pertinent facts concerning the accident. The 10 R/hr prediction seems not to have been adequately disproved by 0750, when telephone contact was established with Region I. The decision not to report the 10 R/hr prediction was improper. By not reporting to Region I at about 0750 on 3/28/79 that the calculational method described in Radiation Emergency Procedure 1670.4 had predicted a reportable release of radioactive material, the licensee violated the reporting requirement of 10 CFR 20.403(a)(2).

References

1. NUREG 0600
2. Ibid.
3. Crawford Interview IE 48, 5/3/79
4. NRC Special Inquiry Group, Volume II, Part 3
5. Ibid.
6. Crawford Interview IE 48, 5/3/79
7. Crawford Interview IE 174, 6/6/79
8. Dubiel Interview IE 20, 4/24/79
9. Dubiel Interview IE 133, 5/22/79
10. Dubiel Deposition (SIG), 9/21/79
11. Seelinger Interview IE 77, 5/8/79
12. Oversight Hearings, Subcommittee on Energy and the Environment,
May 9, 10, 11, and 15, 1979, Serial No. 96-8, Part I
13. Egenrieder Interview IE 82, 5/8/79
14. Ethridge Interview IE 89, 5/9/79
15. Burkholder Interview IE 99, 5/17/79
16. Leach Interview IE 47, 5/3/79
17. Oversight Hearings, Subcommittee on Energy and the Environment,
May 21 and 24, 1979, Serial No. 96-8, Part II
18. Miller Deposition (SIG), 9/20/79
19. Warren Interview IE 70, 5/7/79
20. Report of the President's Commission on the Accident at Three Mile
Island, Technical Staff Analysis Report on Alternative Event Sequences,
Appendix E, Fission Product Inventory Within the Containment.
21. Gerusky Interview IE 46, 5/3/79

EXHIBIT C

Memorandum, December 1, 1981
Fortuna and Gamble advising Cummings of DOJ investigation
of NUREG-0760



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

December 1, 1981

MEMORANDUM FOR: James J. Cummings, Director
Office of Inspector and Auditor *JD*

FROM: Roger A. Fortuna, Assistant Director for Investigations
Office of Inspector and Auditor *Roger A. Fortuna*

David H. Gamble, Investigator
Office of Inspector and Auditor *David H. Gamble*

SUBJECT: QUESTION OF WITHHOLDING OF INFORMATION DURING TMI
ACCIDENT

On March 5, 1981, at the direction of the Commission, we met with representatives of the Criminal Division, U.S. Department of Justice (DOJ), to present the results of the Office of Inspection and Enforcement (IE) report entitled "Investigation into Information Flow During the Accident at Three Mile Island" (NUREG-0760, dated January 1981, hereinafter referred to as the "IE Report"), for their consideration as to whether the facts warranted prosecution for willful misrepresentations, omissions, or violation of NRC regulations.

At that time we also provided DOJ with a draft of the report prepared by the Majority Staff of the Committee on Interior and Insular Affairs of the U.S. House of Representatives, entitled "Reporting of Information Concerning the Accident at Three Mile Island" (97th Cong., 1st Sess., Committee Print No. 3, dated March 1981, hereinafter referred to as the "HR Report"). We then advised DOJ that we were providing them with both reports because of an apparent difference in the conclusions reached therein regarding whether Met-Ed employees withheld information from the State and Federal Governments on the date of the accident at Three Mile Island. Not having read the HR Report, we were unable to describe for DOJ what discrepancies existed between the two reports. At that time DOJ requested that the Office of Inspector and Auditor (OIA) identify the portions of each report relating to the specific topics so that they could more easily analyze the discrepancies between them. Per your instructions we performed this task by reviewing the IE and HR reports without consulting the results of similar reviews (e.g., by ACRS) or other investigations (e.g., by Rogovin's Special Inquiry Group). In

cc to 822 criminal
12/1/81
12/1/81

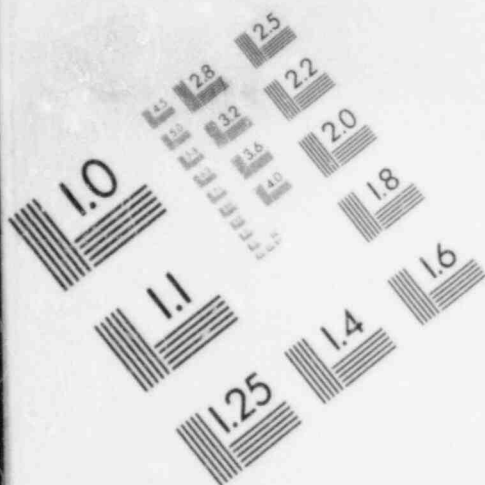
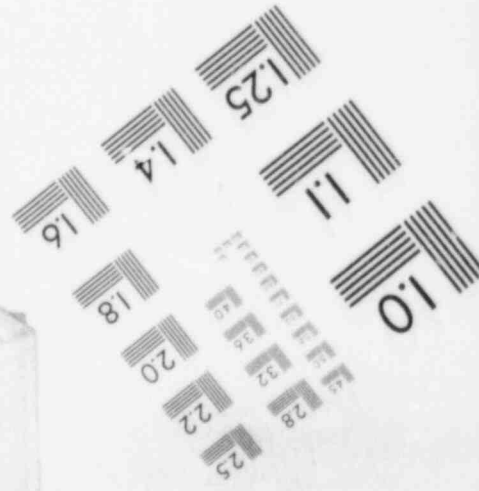
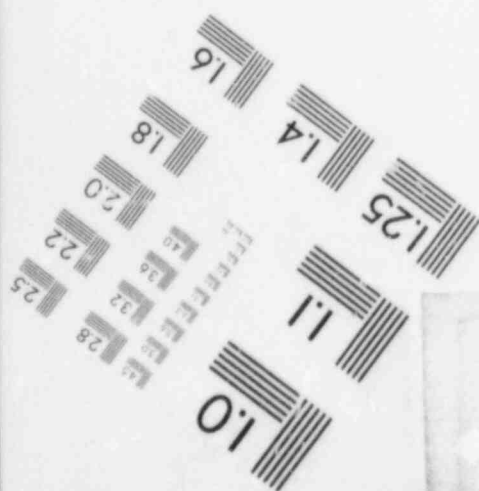
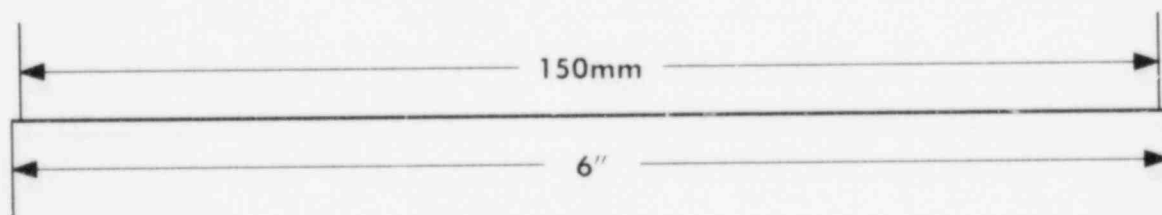
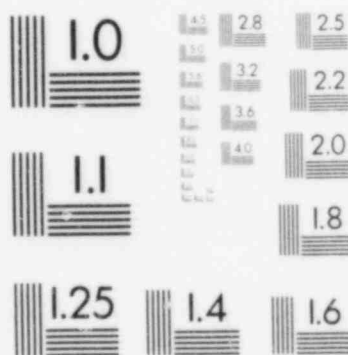
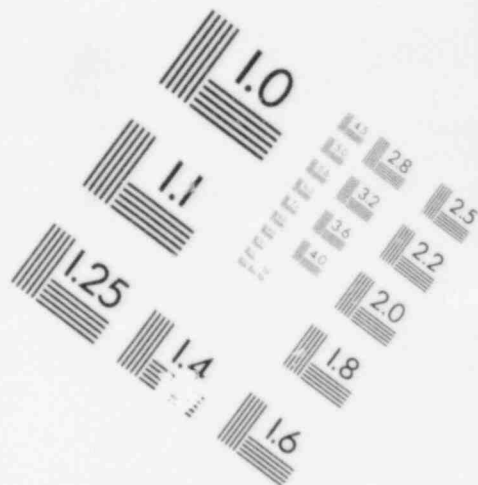


IMAGE EVALUATION
TEST TARGET (MT-3)



this review we have avoided the temptation to characterize the contents of various sections of these reports in favor of referring to specific page numbers in order to insure that DOJ reads the actual words of the reports within their own contexts. The following are the results of our review:

I. Scope of the reports

IE Report - pp. 1-2, 33 par. 3, 35 par. 3, and 39 par. 5
HR Report - pp. 1-3

II. Identification of the primary individuals and organizations

IE Report - p. 33 par 4
HR Report - pp. 4-5

III. Availability and comprehension of information

A. Open PORV/EMOV as cause of low pressure in the cooling system

IE Report - pp. 16-17 and 33 par. 5
HR Report - pp. 6-11 and 93 par. 2

B. Throttling of high pressure injection

IE Report - pp. 13-14
HR Report - pp. 11-14 and 93-94

C. Temperature Data

IE Report - pp. 14-16 and 18-20
HR Report - pp. 14-33 and 94-95

D. Uncovering the core

IE Report - pp. 14-16, 18-20, and 34 par. 1
HR Report - pp. 35-45 and 95-96

E. Uncertainty as to core cooling

IE Report - pp. 14-16 and 18-20
HR Report - pp. 45-54 and 95-96

F. Neutron detectors/count rate behavior

IE Report - pp. 20-22 and 34 par. 1
HR Report - pp. 33-35

G. High radiation levels in containment/Goldsboro radiation dose rate projection

IE Report - pp. 31-33
HR Report - p. 35

H. Hydrogen combustion/containment pressure spike

IE Report - pp. 22-31 and 35 par. 1 (see also OIA Report, "IE Inspectors' Alleged Failure to Report Information re March 28, 1979 Hydrogen Explosion at TMI-2," dated January 7, 1981)
HR Report - pp. 54-92 and 96-97

IV. Information received by the NRC

IE Report - pp. 35-39
HR Report - pp. 103-121

V. Information received by the State

IE Report - pp. 39-45
HR Report - pp. 103-121

VI. NRC reporting requirements

IE Report - pp. 45-52
HR Report - pp. 98-102 and 121

EXHIBIT D

Correspondence between Aamodt and Wagner
concerning false statements in Staff response

200 North Church Street
Parkesburg, Pennsylvania 19365

March 5, 1985

Mary E. Wagner
Counsel for NRC Staff
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Ms. Wagner:

I am in receipt of your February 25 reply to my letter of February 12. You have attempted to provide explanation for two statements in the February 4 Staff filing which I found downright misleading. I do not find your response satisfactory.

You claim that the Staff statement concerning the missing pages in the copy of our June 21 motion the NRC Staff sent to CDC was taken from our January 15 motion. You are wrong. How does your characterization "virtually every other page of the Aamodt June 21, 1984 Motion was not copied and sent to Dr. Caldwell" originate in our statement at page 6:

The intent of the Staff to influence CDC's critique is clearly revealed by the fact that the NRC removed eleven pages and altered an affidavit in the copy of the Aamodt motion sent to CDC.

Even if, we had so asserted, why would the Staff be satisfied to adopt what is not the truth? Setting aside the alterations to an affidavit, the missing pages do not follow a pattern of every other page, or "virtually" every other page, or any other sequential pattern that we have been able to determine. We are attaching a page from our March 5 filing which provides an analysis that debunks the "every other page" (therefore, clerical error) excuse.

Concerning the second statement to which we objected: You reply that you claimed that Gamble's references, not Gamble's reports, were "available for a number of years". That is true. However, it is misleading. You have attempted to switch the basis for our motion from the Gamble reports to the references of the report:

As for the alleged "deception", the testimony of Mr. Gerusky and others, which form the basis for the Aamodt motion, have been part of the public records for years,^{7/} and this basis for reopening should be rejected on timeliness grounds.

(Staff Response, pp. 9,10)

Since our basis was not the testimony of "Mr. Gerusky and others", but a specific conclusion of the Gamble report (available for the first time late last year), you have a false argument based on irrelevant information (footnote 7). We stand corrected on a technicality, but you still owe us the retraction of your false statement (above) which will automatically eliminate the objectionable footnote.

Very truly yours,

Marjorie M. Aamodt



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

February 25, 1985

Marjorie M. Aamodt
200 North Church Street
Parkesburg, PA 19365

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

Dear Mrs. Aamodt:

This is in reply to your February 12, 1985 letter to me in which you claim that there are two errors in the January 15, 1985 NRC Staff Reply to Aamodt Motion for Reconsideration of Commission Order CLI-84-22 and Opening of a Hearing (Staff's Reply).

First, you object to the following sentence from page 6 of Staff's Reply, which you claim is incorrect:

The Staff's intent to influence, according to the Aamodts, is shown by the fact that virtually every other page of the Aamodt June 21, 1984 Motion was not copied and sent to Dr. Caldwell.

Your complaint about this sentence, as described in your letter, is incomprehensible to me. The quoted sentence merely characterizes the claim in your January 15, 1985 motion for reconsideration that the Staff intentionally tried to deceive Dr. Caldwell of the Center for Disease Control by forwarding to him an incomplete copy of your June 21, 1984 motion. I believe the quoted sentence accurately characterizes your allegation against the Staff and, therefore, there is no reason to correct Staff's Reply as you request.

Secondly, you claim that the Staff is wrong when it states in footnote 7 on page 10 of Staff's Reply that the "Gamble draft reports" had been available in the NRC's public document room for a number of years. Footnote 7 does not state what you say it does. Footnote 7 reads as follows:

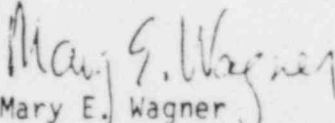
7/ Page 16 of Attachment 4, which page was not included in the copy of the Aamodts' Motion which was served upon the Staff, lists the references used in preparing this

draft section of NUREG-0760. The documents referenced have, to the best of Staff's knowledge, been available in the NRC's Public Document Room for a number of years.

Footnote 7 does not state that the "Gamble draft reports" (Attachment 4) had been available in the NRC's public document room for a number of years. Rather, footnote 7 states that the references ("documents referenced") listed on page 16 of Attachment 4, to the best of Staff's knowledge, have been available in the NRC's public document room for a number of years. The Staff still believes this to be correct. Since you obviously misread footnote 7, and it is correct to the best of Staff's knowledge, there is no reason to correct Staff's Reply on this point.

I hope this rectifies any misunderstandings you may have about the Staff's Reply.

Sincerely,


Mary E. Wagner
Counsel for NRC Staff

cc: TMI-1 service list

EXHIBIT E

Letters from Drs. Cochran, Molholt, Berger, Cobb, Mayor Reed
and Senator Spector supporting Aamodt health motion

Natural Resources Defense Council, Inc.

1350 NEW YORK AVENUE, N.W.

SUITE 300

WASHINGTON, D.C. 20005

202 783-7800

New York Office

122 EAST 42ND STREET
NEW YORK, N.Y. 10168

212 949-0049

Western Office

25 KEARNY STREET
SAN FRANCISCO, CALIF. 94108

415 421-6561

January 7, 1985

The Commissioners
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Dear Commissioners:

I am a member of the NRC's Advisory Panel on the Cleanup of TMI-2. I have not had the opportunity to discuss the contents of this letter with others on the panel and therefore do not speak on their behalf.

At the panel's last meeting with you, we discussed briefly the Aamodt study -- the finding of an excess of cancers as a result of door-to-door interviews with residents of two areas about five miles from the TMI site. Since our discussion, I have received a copy of your Order CLI-84-22, in the matter of Metropolitan Edison Company (TMI Unit 1), Doc. No. 50-289-SP, in which a majority of the Commission concluded that "the Aamodts' informed survey is based entirely on recollections and opinions and has no scientific basis," and that this was "insufficient to raise serious questions about earlier studies."

You should be advised that the TMI Public Health Fund Advisory Board, on which I also serve, has independently checked the Aamodt findings and confirmed the excess cancer mortality found in the Aamodt study areas. We have identified the death certificates of all but one of the people reported to have died of cancer and have independently checked the Aamodts' estimate of the total population in the study areas. We have not yet checked the reported incidence of cancer among living people in the study area. I would be happy to discuss our methodology with any one of you or your staff.

On the basis of our own independent analysis, it would be wrong to conclude that the Aamodt results are groundless. Certainly there now is a scientific basis for concluding that there may be a large excess in cancer mortality in the study areas.

New England Office: 850 BOSTON POST ROAD • SLDBURY, MA. 01776 • 617 237-0472

Public Lands Institute: 1720 RACE STREET • DENVER, CO. 80206 • 303 377-9740

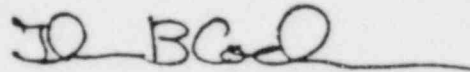


100% Recycled Paper

The Commissioners
Jan. 7, 1985
Page Two

I do not know the statistical probability of finding such a high incidence of cancer in this small study population. I do not know the cause of the excess, although I doubt it is TMI-related. Nevertheless, since your conclusions regarding the Aamodt results are not valid today, I urge you to reexamine this issue. Even if the excess is not TMI-related, surely you recognize how important it is for the Commission to take the lead in ensuring that more careful epidemiological study is undertaken and an effort is made to determine the cause of the excess.

Sincerely,

A handwritten signature in dark ink, appearing to read 'T B Cochran', with a long horizontal flourish extending to the right.

Thomas B. Cochran

cc: Mike Masnik, TMI Program Office
for distribution to Advisory Panel members

50-2895P
400 Cowpath Road
Hatfield, PA 19440
17 December 1984

Dr. Glyn Caldwell
Centers for Disease Control
1600 Clifton Road
Atlanta, GA 30333

84 DEC 26 P1:51

Re: Review of Aamodt Study for NRC

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Dear Dr. Caldwell,

SERVED DEC 23 1984

Your name is mentioned in NRC correspondence concerning CDC's review of the Aamodt cancer mortality study near TMI. I write you concerning the negative review your agency has given the Aamodt study such that the NRC is quoted as calling it "based entirely on recollections and opinions and (has) no scientific basis."

Having reviewed the Aamodt study and having some expertise in epidemiology, I am puzzled as to why CDC dismissed their preliminary findings so hastily. Although obviously in need of followup, the Aamodt study is credible in several important scientific manners:

- 1) All cancer deaths were reconfirmed after the survey was completed.
- 2) Dr. John Cobb has obtained 12 out of the 20 death certificates in question and has found that 12 out of 12 attributed to cancer indeed died of cancer as primary cause.
- 3) The population base was large enough that the SMR of 5 (4 expected, 20 found) is statistically significant at the 95% confidence level.

A true independent review of the Aamodt study by CDC would entail an analysis of cancer mortality frequency since 1979 in a larger area than surveyed by the Aamodts. Obviously, CDC has this capability. It might be fruitful to examine cancer mortality rates for census tracts in the TMI area 1974-79 v. 1979-84.

The surprising fivefold increased cancer mortality rates discovered by the Aamodts in their preliminary survey called into question NRC dose assessments from the TMI accident. Hence, it is circuitous to dismiss their preliminary findings on the basis that low radiation doses make such an increase in cancer mortalities untenable. The Aamodt study deserves careful followup and a truly independent review. I would appreciate it if the CDC would take this mandate seriously, as protectors and advisors to our public concerning their health.

Yours sincerely,

Bruce Molholt
Bruce Molholt, Ph.D.

cc: James O. Mason, M.D., Ph.D.
Nunzio J. Palladino, Ph.D. ✓

Jonathan Berger, MRP, PhD
442 West Schoolhouse Lane
Philadelphia, PA 19144

John C. Cobb, MD, MPH
P.O. Box 1403
Corrales, NM 87048

January 14, 1985

Mrs. Marjorie Aamodt
Snowhill Farm, R.D. 5
Box 428
Coatesville, PA 19320

Dear Mrs. Aamodt:

We would like to report to you the results of our follow-up of your study. These results are our interpretations and do not represent the view of the Public Health Fund.

Your original study reported 20 cancer deaths in a population of approximately 450. This represents, if true, a significant excess over the normal expected number based on the rates for Pennsylvania as a whole or York County. We decided that we could verify your analysis through the Commonwealth of Pennsylvania Vital Statistics and local school surveys and county tax records. After filing an application for confidential records with the Commonwealth of Pennsylvania State Health Data Center for 22 possible decedents, we found that 19 died of cancer, 2 of other causes and 1 remains as yet unchecked because the death certificate is not yet available. We checked the population number in the areas that you surveyed and found that the spring 1984 school census in the area substantiates your number although the evidence suggests that the population for the area may be somewhat smaller. It is our opinion that these data support a significant excess of cancers in your survey area. We have no opinion on the causes of these cancers.

Sincerely,

Jonathan Berger

Jonathan Berger, MRP, PhD

John C. Cobb

John C. Cobb
Professor Emeritus
Preventive Medicine and Biometrics
University of Colorado
School of Medicine

JB/JCC:rjw



DOCKETED
USNR

85 FEB 26 P3:19

OFFICE OF THE MAYOR

CITY GOVERNMENT CENTER
HARRISBURG, PENNSYLVANIA 17101-1678

OFFICE OF SECRETARY
DOCKETING & SERVICE

STEPHEN R. REED
MAYOR

February 22, 1985

SENT FEB 22 1985

Mr. Nunzio J. Palladino, Chair
Nuclear Regulatory Commission
United States of America
7920 Norfolk Avenue
Washington, D.C. 20555

Dear Chairman Palladino:

Today's official confirmation from the operator of Three Mile Island that some meltdown of the core of TMI Unit 2 did, indeed, occur during the 1979 accident, is a very significant admission. It contradicts previous denials of such.

During the TMI accident, a number of stack monitors, the maximum measuring capacity of which was 1000 REMS, were "stuck" at that level for a period of as much as eight hours. This means, simply, as we understand it, that emissions from the plant exceeded that significant emission level.

Locally, the question of short and long term health effects from TMI's accident and its operations before and since the accident have been vigorously debated. Since no conclusive data exists in the Nation to conclusively identify such effects, there is no local "comfort" from known data either.

I believe that it is imperative that the U.S. Government determine the levels and types of contaminants that would have been and were emitted from TMI during the 1979 accident, particularly in view of the fact a portion of the Unit 2 core actually melted under temperatures higher than what were ever previously projected to have occurred.

I further believe that it should not be so easily dismissed that because of the emission of such contaminants into a semi-rural atmosphere that these contaminants posed no threat to public health and safety.

NRC records have established, and enforcement action against the TMI operator have revealed, that omission of information has occurred at TMI regarding data. The need for objective and independent data has therefore been established for quite some time.

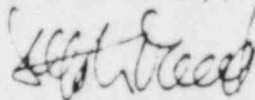
Chairman Nunzio J. Palladino
February 22, 1985
Page Two

It is critically important to the future of TMI and the future of existing and future nuclear power development in the United States that the question of short and long term health effects from TMI be accurately examined. The admission of partial core melting considerably adds to the scope of what possibilities may exist, we are advised, and there should be no reopening of either Unit at TMI until these basic questions are answered. Underlying this issue is the question of whether the NRC, established to both promote and regulate the nuclear power industry as a public agency, will perform its longterm mandate of ensuring public health and safety while providing for a new form of energy for the Nation.

We therefore believe no TMI Units should restart until health and safety issues are resolved, particularly in view of the latest damage confirmation.

We are available to discuss this if you wish and appreciate your consideration of this request and view.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "Stephen R. Reed", written in a cursive style.

STEPHEN R. REED
Mayor

SRR/ra

United States Senate

WASHINGTON, DC 20510

February 12, 1985

Chairman Nunzio J. Palladino
Commissioner Thomas M. Roberts
Commissioner James K. Asselstine
Commissioner Fredrick M. Bernthal
Commissioner Lando W. Zech, Jr.
Nuclear Regulatory Commission
1717 H Street, N.W.
Washington, D.C. 20555

'85 FEB 19 A9:54

0 AE

SERVED FEB 19 1985

DOCKET NUMBER 50-28951
PROD. & UTIL. FAC.....

Gentlemen:

New information has been brought to my attention that reinforces my conviction that serious public safety and management integrity issues have not been adequately addressed by the Nuclear Regulatory Commission, and that consideration of restarting TMI Unit 1 at this time would be inappropriate.

I am referring to the health study conducted by Norman and Marjorie Aamodt and concerns about GPU management that are raised by the Aamodt Motion for Reconsideration of Commission Order CLI-84-22, filed with the NRC on January 15, 1985. These matters were presented to my office by the Aamodts personally.

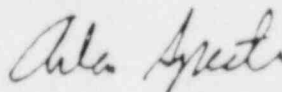
The health study concludes that there is a cancer death rate in three areas around the TMI plant that is over seven times the normal expected rate. According to the Motion for Reconsideration, this data has been verified by death certificates provided by the Pennsylvania State Health Department and other sources of population data.

I understand the Center for Disease Control has raised questions about the methodology of the Aamodt study. While this response may indicate the need for further study with better methodology, I do not see how it can justify completely ignoring the cancer risk issue.

In addition, the Aamodt Motion charges that licensee personnel lied when they told the Pennsylvania Bureau of Radiation Protection at the time of the accident that surveillance teams had been dispatched and had verified that a significant release had not occurred. The Motion cites the testimony of a former NRC investigator in support of this allegation.

As I have stated in prior letters, it is extremely troubling that serious issues relevant to restart remain unresolved six years after the accident at TMI. Expeditious resolution of these two particular issues is essential before the Commission decides whether to authorize restart.

Sincerely,

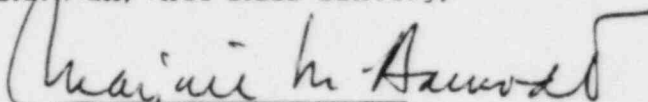


Arlen Specter

AS:ssa

CERTIFICATE OF SERVICE

The document MOTIONS TO ADDRESS FALSE STATEMENTS IN RESPONSES TO AAMODT MOTION OF JANUARY 15, 1985 and a letter, dated March 5, 1985 to the Commissioners were served on the Commissioners by my personal delivery of these materials to the Commission office at 1717 H Street, NW, Washington, D. C. Counsel for the Licensee was served by hand-delivery to their offices. All other parties were served by deposit in U.S. Mail, first class delivery, on March 6, 1985.


Marjorie M. Aamodt

SERVICE LIST

Nunzio J. Palladino, Chairman
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Thomas M. Roberts, Commissioner
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

James K. Asselstine, Commissioner
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Frederick Bernthal, Commissioner
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Lando W. Zeck, Jr., Commissioner
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Atomic Safety and Licensing
Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Docketing and Service Section (3)
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mary E. Wagner, Esq.
U.S. Nuclear Regulatory Staff
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Ellyn R. Weiss, Esq.
Harmon, Weiss & Jordan
2001 S Street, N.W.#430
Washington, D. C. 20009

Thomas v. Au, Esq.
Office of Chief Counsel
Department of Environmental
Resources
505 Executive House
P.O. Box 2357
Harrisburg, PA 17120

George F. Trowbridge, Esq.
Shaw, Pittman, Potts &
Trowbridge
1800 M Street NW
Washington, D. C. 20036

Three Mile Island Alert
315 Maclay Street
Harrisburg, PA

Tom Devine, Esq.
Government Accountability
Project
1555 Connecticut Avenue
Washington, D. C. 20036