UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)

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

'82 JUN -1 P5:04

OFFICE OF SECRETARY
DOCKETING & SERVICE
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AAMODT REPLY COMMENTS TO THOSE OF LICENSEE, NRC, INDIVIDUALS MM, O AND W, AND GARY MILLER

Introduction

Licensee's disclaimers of guilt for each case cited by Judge Milhollin move as the secondhand on a clock, mechanically over clearly defined bounds. The consistent note of innocence heightens the absurdity of the defense, highlighting the blatant fact that an incredible number of instances of questioned integrity exists. We would suggest that the Board consider the well-tuned orchestration of an "I can't remember" defense in the light of Licensee's comment at 39 (of Shipman) "His seven years of unblemished service with Licensee ...belies an unwillingness on his part to be forthright on this question." Quite to the contrary, this portrayal of a loyal employee characterizes the witnesses as a group -- capable of holding the line, stonewalling, covering the truth with convenient memory lapses after careful coaching by management to whom they were loyal. And the bonus each received as the proceeding began could not have been expected to diminish that loyalty.

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Reply to Licensee Comments on the Report of the Special Master

Extent of Cheating.

Introduction, #2-4:

Licensee seeks to excuse the incredible testimony of Licensee's operators as understandable due to true lapses of memory on the part of the operators. Licensee asks the Board to consider the long period of time into the past ("almost three years")and the multiplicity of training and testing situations during that time. Licensee paints a picture of "non-stop" training and testing and operators studying for "literally hundreds of hours".

We find that Licensee's description of the time period under consideration and the training-testing program during this time is exaggerated. While the maximum period under consideration in the Reopened Proceeding was 2¼ years, the operators whose confused testimony Licensee seeks to defend were questioned about training, studying and related tests taken between April 1980 and November 1982, or a period of time less than 1½ years from the time the operators testified. During this period, the maxiumum number of weeks of training would be 9, as each operator at TMI is scheduled for a week in training every sixth week to complete an annual training cycle on seven different subjects. Licensee Ex. 27, at 32. For at least three months each year, there are no scheduled training sessions. Id. at 11-12. Aamodt Findings, March 3, 1982 #363. Each training week and its associated test were separated by at least five weeks from any other training week, thus each training week had individual identity both in

time and subject matter.

Licensee's assertion that the operators studied " for literally hundreds of hours" also lacks support in the record. Licensee's basis in evidence is the testimony of several operators summarizied as studying "quite a bit" and Operator G who testified, "I do not study."

Licensee's argument of reasonable confusion due to memory lapse, introduced for the first time in the Reopened Proceeding in Licensee's Comments to defend the incredible testimony of G, H, GG, W, Mr. Shipman, P and Mr. Husted, does not have any record bases. Licensee's citation of their exhibit 63 provides no basis. For instance, Operators G and H took but 6 weekly quizzes in the 64 weeks covered by Licensee Ex. 63 in addition to the Kelly, ATTS, April NRC and October NRC examinations, all of which had distinctive and distinguishable features./* Licensee's other citation, their exhibit 80, was placed into evidence without cross-examination of the sponsoring witness Mr. Newton, and we question the veracity of the hours of training per operator listed. Aamodt Findings, March 3, 1982 #363-365. Even so, Licensee Ex. 80 attributes from 4½ to 8¼ training weeks to each operator during the "1980 - 1981 training cycle", far short of "non-stop".

In conclusion, Licensee has attempted to color the Board's view of the operators' 'lapses of memory' and other incredible testimony with an untrue description of the situations to be recalled.

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* Operator GG took but 3 weekly tests in the same period.

by the operators. In view of the unique nature of each training week and quiz, the few number of training weeks in the 1½ year span considered and their separation by six of more weeks, and the very distinguishable features of the Kelly, ATTS and NRC examinations (all involving different examiners and proctors), we cannot accept the Licensee's argument that the quality of the operators' testimony was affected by confusion among these tests and their related circumstances.

Messrs. G and H, #5-26:

We find that Licensee has presented no evidence that would refute the conclusions of Judge Milhollin that 5 of the cases where G and H gave identical responses were due to cheating. Contrary to Licensee's assertions, Judge Milhollin did consider whether 'studying together' and 'memorization' of the same material could offer a possible explanation. Judge Milhollin gave G and H the benefit of the doubt where it was possbile. For instance, the first identical answers of G and H, discussed in the Special Master's Report #29-32, were ruled out as cheating because of the possibility of memorization of identical study material. On the second set of identical answers, consider in the Special Master's Report #33-37, memorization was considered "the only way such a list would be studied", yet it was only reasonable to rule out memorization since the identical answers G and H gave did not correspond to the answer key. On the third set of identical answers considered in the report at #38-39 and the fourth set at #40-43, Judge Milhollin found the evidence inconclusive. On the fifth set considered at #44-48, it is too far-fetched to consider that operators would memorize the same totally wrong answer. On the sixth, at #49-52, memorization was considered

however H denied that hypothesis. On the seventh, considered at #53-54, memorization was ruled out as the answers were wrong. On the eight, considered at #55-57, where the same order of a list was produced in identically the same order on two different tests (including a wrong response), Judge Milhollin considered the evidence inconclusive -- giving G and H the benefit of what would appear to be a big doubt. On the ninth, considered at #58-66, 'studying together' was considered, however disproved on the basis of the testimony of G and H which showed a significant difference in knowledge of the topic. There is, therefore, no basis for Licensee to allege that Judge Milhollin did not fully consider how 'studying together' and 'memorization' could have resulted in the identical answers of G and H.

We feel that Judge Milhollin was more than generous in considering the hypothesis the G and H studied together and memorized the same answers in view of G's testimony:

> I do not study. Tr. 25,727. The only time I find myself studying at all is I will be on shift and people I am on shift with they will be studying and then just to keep from being off-and-out I will participate. Tr. 25,728.

Licensee thrashes amongst Judge Milhollin's reasoned consideration of the evidence concerning the sixth set of parallelisms to fault him for rejection of Mr. Husted's testimony which could not, even if believed, have explained why these two particular operators arrived, independently, at an answer that was better than that used by the instructor, Mr. Husted. Licensee Comments #15.

Licensee would have the Board believe the denials of G and H that they sat near enough to cheat to cheated when the Board recognizes the "natural tendency for persons to recall events and to testify in a light favorable to their innocence". Board Memorandum and order, May 5, 1982 at 10.

Licensee would also have the Board accept the self-serving testimony of G and H that the weekly quizzes for their shift were uniquely well-proctored. Licensee Comments #23. Licensee's evidence is a lack of evidence - no operators on G's and H's shift were called to testify. Id. Footnote. Such an unreasonable assumption by Licensee to defend the integrity of G and H cannot be taken seriously. Licensee presented no evidence that the administration of the weekly tests varied from shift to shift -- the evidence is that the tests were 'loosely' administered by the instructors.

We find the entire discussion of whether G and H copied rather ridiculous. There were no impediments to copying on the weekly tests. Aamodt Findings, March 3, 1982 # 256, 286, 163 (last two lines). Under such test administration, what is the likelihood that G and H did not cooperate? We cannot assume that all their copying was word-for-word. The operators discussed the questions and answers. Id. (all of 163). Where the operators had some understanding or received help verbally, you would expect that their responses would not be identical. We only examined identical responses in the Reopened Proceeding so that we could not have examined all possible cases of cheating. We find that G and H cheated in at least the number of instances which Judge Milhollin carefully identified and that Licensee arguments are missing or of no weight.

Messrs. GG, W, and MM, #28-33:

Licensee argues that MM did not cooperate with GG and W on a weekly quiz given on December 19, 1980 because (1) MM's answers were only weakly similar to GG's and W's, (2) the similarities could be explained by memorization, and (3) there was no corroborative evidence that MM was in a position to cooperate or was motivated to cooperate. All of Licensee's arguments are unreasonable.

Concerning Licensee's first argument: We find that every word of MM's 15 word response to Question1(Lessons Learned) appeared in the responses of W and GG and in precisely the same order and contained the same misspelling! On the second question on the

Concerning Licensee's second argument: How likely are memorization and independent recall to have yielded such uniform results? Very unlikely if not impossible that training with an emphasis on memorizations would have yielded 100% uniform recall including the same spelling error. Such a notion was too absurd for Judge Milhollin to consider

Concerning Licensee's third argument: There was corroborative evidence that MM was in a position to cooperate. We repeat our discussion supra (page 6, paragraph 3) concerning the administration of weekly tests. GG testified that such were the conditions on his shift. Aamodt Findings #256, 286, 163; Tr. 25,696. We can only assume that any examinee is motivated to pass a test, and, not knowing the answer, obtain it from someone else when encouraged to do so by the conditions under which the TMI tests were administered, or to provide an answer, given the same conditions. Id.

MM served comments of his own May 18, 1982 upon invitation of the Chairman of the Board. Board Memorandum and Order, May 5, 1982 at 4. We have objected to the introduction of evidence without opportunity to cross-examine. Aamodt Comments, May 24, 1982 at 4. While continuing our objections, we would make the following comments on MM's comments:

MM's Comment 1 - The lack of seriousness with which MM alleges he regarded the test does not support a conclusion that no motivation existed for collaborating with other operators to obtain the correct answer. In fact, if MM did not know the answer, his purposes would have best been met by obtaining the correct answer rather than writing down an answer he was uncertain of.

MM's Comment 2 - Our rebuttal is at paragraph 2, page 7 supra. Further, although 'challenge' may be an easily misspelled word, it is not reasonable to assume that three individuals would independently misspell it in the same way.

M's Comment 3 - MM offers a rebuttal concerning his answer to Question 2, where no rebuttal is needed. Judge Milhollin did not find the evidence conclusive for a finding that MM cheated on this question. Concerning the argument about the training materials which MM feels influenced the answer given to Question 1, we only find that MM offers even more evidence to support Judge Milhollin's conclusion of cooperation. The wording of the documents MM cites is not identical to the three operators' responses; the word 'challenge' does not appear. MM does not present evidence, nor did Licensee, that the Training Department used the documents MM cited and introduced the word 'challenge' misspelled.

MM notes that he was never called to testify and "so had no opportunity to respond to questions from the parties". We noted the failure to call MM (Id. #24), Judge Milhollin's intention to call MM (Id. #22 at page 14), and the acceleration of the hearing which prevented the calling of all the witnesses Judge Milhollin and the other parties had intended to call. Id. #13, 30. This acceleration was unnecessary due to the deterioriated condition of the steam generator tubes at Unit 1, preventing any restart for over a year. However, despite Judge Milhollin's request that he be informed of any conditions which would allow the extension of the hearing, Licensee withheld their immediate knowledge in October of the steam generator problem. Id. #13-15; Commission Meeting, December 21, 1981.

Although the evidence is conclusive that MM cheated, in our opinion, we feel that MM has been denied his right to be heard. Although MM's comments do not provide any defense for him even they cannot/ be made evidence in the hearing. Licensee prevented MM's appearance, and Licensee should, therefore assume that burden.

The insincerity of Licensee's participation as a party in the hearing is clearly demonstrated by their discussion of the GG-W parallelisms. Licensee seeks to explain the identical answers of GG and W to Question 1 as "memorization", consistent with their defense of MM on this question. (This defense is mere speculation and unreasonable as discussed in paragraph 2 page 7 supra.) However, faced with the same kind of identical 14 word responses (including an identical misspelling) of G and H to Question 2,

Licensee admits that copying was probable. Then Licensee seeks to remove the blame from the individual of most use to them (GG) and place it totally on W, the individual who resigned after confessing to extensive cheating on the April NRC examination. Licensee ignores the evidence that inculpates GG : GG's own testimony that discussion of questions was allowed; the crossed-out first word on GG's test - a word unlike any on W's or MM's papers; and the length, complexity and identicalness of GG's and W's responses which would have prevented W from copying without GG's knowledge. Licensee's defense is simply opportunistic; it does not seek the truth and can be of no value to the Board in making their decision to protect the health and safety of the public

Mr. Shipman at the Coffee Machine, #34-41:

Licensee seeks to extricate Shipman from Judge Milhollin's conclusion that Shipman lied under oath in denying that he remembered the identity of his questioner. None of Licensee's objections to Judge Milhollin's discussion of the Shipman evidence are valid. Judge Milhollin found, as did the NRC investigators and Licensee management, that Shipman's recollection of the event was reasonably precise except for the identity of the questioner, the item that would have been most reasonably remembered. Special Master's Report #96-100; Aamodt Findings #45. Licensee seeks to prove that it is totally incongruous for Shipman not to name his questioner if he knows him. The reasons Licensee gives are (1) Shipman's position and record of service

with Licensee, (2) Shipman's voluntary disclosure of the solicitation, and (3) no reason exists, or has been offered, why Shipman would protect the questioner. Licensee Comments #39. We find all three reasons spurious.

Concerning the first, O and W both had longer tenure of service, were considered the 'cream of the crop' and both lied under oath several times. Concerning the second, Shipman only disclosed the solicitation after Mr. Hukill warned the operators that a hearing of the cheating of O and W had been ordered and that all cheating events were sure to be discovered; Shipman did not speak up until more than two months after the cheating incident broke into the news. Concerning the third, Shipman testified that his fellow workers would probably ostracize him if he identified the person who solicited him. Tr. 26,389 (Aamodt).

Licensee is willing to accept Shipman's "memory failure" as a more reasonable explanation than Shipman's withholding of information. Licensee Comments #37. If the Board accepts Licensee's view, the Board must question Licensee's selection of operations personnel since their training for operating the plant depends heavily on memorization.

Although Judge Milhollin does not specifically draw a conclusion of lying under oath from Shipman's testimony concerning the weekly tests, we do. In response to lengthy questioning, Shipman testified that he had not witnessed or participated in any cooperation between operators on weekly tests, that he would be shocked to be solicited for a question on a weekly test and that

the administration of the tests was formal, mostly proctored. Tr. 26,371-26,381. However, Shipman also testified that the NRC and mock examinations were more formal, that he was not shocked at the time he was solicted during the NRC exam, that some of the weekly quizzes are given open book, that training handouts were on the tables, however you could not use them overtly! Id. These responses are produced here for convenience of the Board:

First: The experience I have had is that it is not normal behavior (to receive or give assistance during a quiz). Tr.26,374. No, it is not my experience that that did happen. Tr. 26,372. I do not believe I would have (received or given aid). Tr. 26, 371. Yes, sir (I would have been shocked if someone had asked for assistance). Tr. 26,376. (Was there proctoring?) In general, yes. Tr. 26,374....there is a different atmosphere..for the weekly quiz. Tr. 26,372.

Then: What I was trying to differentiate was between the quiz and an NRC or mock exam type thing. (indicating later exams even more formal) Tr. 26,372-26,373. I believe we have had some of both (open and closed book quizzes). Tr. 26,373. (Handouts were) ..available. They were on the table, I am sure. Tr. 26,374. (Could you use them?) ...not overtly, I do not think. No. Id.

However, under repeated questioning Shipman became less sure that he had witnessed or participated in giving or receiving aid during a weekly quiz.

Did you every see anyone receive or give assistance?) No, I do not think so...Well, the -- I do not think that I have ever seen something like that. Tr. 26,375. (Would you have have provided assistance if solicited?) ..no, I do not think so. Tr. 26,376.

Licensee's Exhibit 63 shows that FF took two weekly quizzes with Operator OO who was certain that the examinees cooperated on the weekly quizzes. Aamodt Finding #163; Tr. 25,968-25,969; 25,671. In view of OO's testimony, Shipman's participation as an examinee with OO, and Shipman's uncertain testimony, we find that Shipman also lied under oath in recalling his experiences taking weekly tests.

We also find that Shipman lied concerning his perceptions of giving and receiving aid during examinations.

Compare Shipman's testimony at Tr. 26,357-26,358 and Tr. 27,378. Shipman stated that he did not consider his provision of an answer to an examinee to be significant until Mr. Hukill identified such behavior as significant. However, later in his testimony, Shipman stated that he considered the solicitation significant shortly after it happened. Id. We believe that Shipman's first response reflects his true attitude, and that Shipman changed his testimony to favor himself. Aamodt Findings #163. While the Board may consider such descrepancies in testimony to be "a natural tendency", we cannot find it excuseable for a person in Mr. Shipman's position. We also cannot find Mr. Shipman's attitude in providing an answer to an examinee to be appropriate for someone in his position. Nor do we find his attitude toward the Lessons Learned test nor his response appropriate. Aamodt Findings #304, 306. Shipman's position afforded him the opportunity to address problems in training and testing. As the engineer who wrote procedures and his relationship to the operations staff, he should bear some of the responsibility for the attitudes and behavior of the operations

staff. We not only question Mr. Shipman's integrity but his competence. We find Licensee's defense of Mr. Shipman too saccharine for the position he holds. Aamodt Findings #250-262; Conclusions of Law 3-5, 11.

Mr. P. and Mr. Husted in the Unproctored Room, #42-53:

We prefer Judge Milhollin's discussion of the P-DD affair. Special Master's Report #101-111. We discussed the P-DD affair at our findings #46-69 and reached the same conclusions: that DD solicited P during the NRC exam, that DD withheld information from NRC during their initial investigation, and that DD and P lied under oath during the hearing. Aamodt Findings #48, 57.

Licensee's defense of Mr. Husted's credibility (Licensee Comments #45) is unacceptable as discussed in our findings #46 (Mr. Ward, after discussing both these interviews with the investigators, concluded that DD's explanation of why he had not answered questions during the first interview was untruthful), #47 (DD's explanation of why he did not answer the investigators' questions in the first interview is clearly not truthful, simply based on a careful reading of the summary of the interview.), #48 (DD developed further evidence of his untruthfulness and withholding of information during his testimony during the hearing.. DD testified that he intentionally did not answer the question ....because he decided that it was not important.), #49-50 (DD stated that he had insisted during his second interview that the investigator write down every question that he asked. DD claimed that he then read the question and wrote his answer down, and he agreed to the answer as it was written down. The Staff

failed to provide such a document in response to discovery requests ....the investigator had no knowledge of such a document.), and #51 (DD did not report proctoring conditions --(there was no proctor for his SRO exam) -- during his NRC interview although specifically asked; he carried a calculator and case into the exam room, but failed to provide this information to NRC question; he changed details of recollection of the conversation he overheard concerning "passing papers" during the NRC exam).

We believe that the matter of P's credibility was settled by P's incredible account of his interview with the NRC. Aamodt Findings #59-61. The matter of when P became concerned about the proctor's absence and when P experienced anger is more complex, we believe, than as represented by Judge Milhollin or characterized by Licensee as "focus on the answer to one relatively innocuous question.." Id. #62-63; 162-163. We agree with Judge Milhollin,however, and disagree with the Licensee concerning the incredibility of P's testimony about the administration of weekly quizzes. however Judge Milhollin need not have limited himself to two examples in discussing P's credibility. We found a number of other instances of note. Id. #66, 68.

Concerning Licensee's Comment 47, Mr. Ward was certain that P had made the allegation of DD's solicitation, and Mr. Ward maintained this certainty despite leading cross-examination by Licensee's counsel. There was no ambiguity in Ward's statements. Aamodt Findings #59, 60. Ward had no self-interest in relating the P allegation, in fact, to the contrary. Since Ward had not reported the allegation in the written reports of the interviews, Ward stood to be criticized by his relating of the P allegation. Id. #155.

Licensee fails to acknowledge that denials by their operators are extremely suspect in view of those of O and W. Licensee also fails to acknowledge the opportunity for DD's solicitation of P, and P's lack of conviction that he would refuse a solicitation. Id.#65, 66.

Mr. U in Mr. Husted's Office, #49-53:

We disagree with Judge Milhollin and Licensee in the matter of whether someone stationed U in Mr. Husted's office. Aamodt Comments at 19-20.

Telephone Call to Mr. KK, #54-55:

We disagree with Judge Milhollin and Licensee; we believe that cheating occurred when U solicited KK on behalf of O. Aamodt Comments at 18-19.

Rumors About Mr. U. #56:

We disagree that the rumors were unfounded. Mr. U admitted that he had use of his briefcase with training materials during mock examinations and the April NRC examination. Aamodt Findings #305; Special Master's Report #131. Two separate sources stated that U had used crib notes, Mr. Polon's wife and Mr. O. Id. #130-131. Neither Mr. Polon or his wife were examined in the hearing, however the authenticity of Mr. Polon's information is recognized by Judge Milhollin. Id.#131.

Telephone Call to Mr. WW. #57:

We disagree. Licensee is too ready to use 'memory' always to its own advantage. Perhaps WW did not state the precise wording of the question on the Kelly exam, however, he was certain

sometime later that it was on the exam. We believe that the conclusion here, as with the call to KK, is that cheating was so commonplace and accepted that solicitations were made to the control room using a circuit which contained a speaker phone, allowing other personnel to overhear. Aamodt Findings #150. We find that WW withheld this information until he knew that the hearing on cheating would take place./ Staff Ex. 28, Encl. 1. We do not accept his reason that he believed that the NRC investigators were only interested in cheating on the NRC examinations./ Id. He certainly could have informed management immediately. In view of his position as an advisor to the operations staff, we find his attitude unacceptable.

Mr. Ross's Conduct, #58-85:

We disagree. Aamodt Comments at 6-14.

Licensee's Response To Cheating

Introduction #86-88:

We note Licensee's Comment #86"...no evidence of significant instances of cheating was uncovered beyond that already identified by Licensee and the NRC" in Licensee's appraisal of the adequacy of their investigations of cheating. We find that Licensee's investigations were an attempt to 'get their first', 'go over the operators', and elicit any information which might come out at the hearing. Licensee had, therefore, time to prepare their defense and to prepare the operators. We found Licensee's investigations to be nothing more. Aamodt Findings #207-212. Licensee's findings and conclusions on the Reopened Proceeding, as well as

Licensee's comments on the Special Master's Report, all corroborate our findings that Licensee's intent was to cover-up all wrong-doing.

Management Constraints on NRC's Investigations, #89-94:

We do not believe that the communications between Mr. Arnold and Mr. Stello we e so sparse that Mr. Arnold did not understand the need for NRC to exclude management. Licensee Comments #90; Aamodt Findings #130. Licensee indicates that it was Mr. Arnold's responsibility to discuss with Mr. Stello the fairness of and need to exclude management. Licensee Comments #90.

We agree with Judge Milhollin that management inhibited the NRC investigations. Aamodt Findings #124-134. Who was more in a position to judge this than the NRC investigators, and they concur. Why would the investigators insist on excluding management during the subsequent interviews if they did not find management's presence inhibiting? Id.

We find it difficult to believe Mr. Arnold's innocence concerning the affect of management's presence -- when the operators may very well have wanted to inform NRC about management-- was genuine. We agree with Judge Milhollin that Arnold acted -- to protect management and not the operators. Arnold, Licensee states, was well-acquainted with NRC investigations and had no reason to expect the operators would be treated roughly. We cannot help but take the next step with Judge Milhollin and find that Arnold had something to hide.

Management's Dealing with Messrs. O and W, #95:

We agree with Judge Milhollin that management knew why O and W cheated, otherwise management would have asked. Arnold was in the best position to get an honest answer from O and W since he had the first 'crack' at them and because of their emotional states. Arnold used the latter as a reason why O and W would not have been able to provide their reasons. (November 12, 1981 transcript - Aamodt cross-examination). Experience tells us otherwise. We discuss the importance of knowing why in our findings #122,-123.

Management's Response to the Shipman Incident, #96:

We can only agree with Judge Milhollin that Licensee was negligent. So was the NRC. And so was the Reopened Proceeding. However, in view of Mr. Arnold's expressed desire to ferret out all cheaters, we note that Licensee has not taken any visible steps to find Mr. Shipman's soliciter despite the concern of Judge Milhollin and the parties. Aamodt Findings#207-212.

Management's Response to Rumors About Mr. U. #99:

We disagree that management waited to investigate the KK report of a telephone solicitation and related rumor until after the NRC had completed its investigation. Nonsense! All KK's information was funneled through Licensee's management and counsel before the investigators heard a word. Aamodt Findings #143-150. Licensee's counsel sat in on KK's interview, knowing it was improper, until KK was 'comfortable'. Id. We believe that management had no need to investigate the rumor -- that they were aware of the rumor because they were aware of its basis. Aamodt Comments at 19-20.

We agree with Licensee that NRC should have pursued the rumor -- and all the related information. Aamodt Findings #139-152. This should not have relieved Licensee from investigating their own affairs.

Management's Response to Cheating on Weekly Quizzes

Introduction #102-103:

We find no argument in Licensee's assertion that their counsel, John Wilson, did not need to take into account the administration of weekly quizzes since Licensee's investigation did not include all weekly quizzes.

We disagree that the Trunk investigation of Licensee-administered tests was adequate Aamodt Findings #200-206. We find that Trunk's investigation of the Kelly test was notably inadequate. Id. Trunk's search for blatant similiarities was too limited in time to assure accuracy. Id. Trunk's assumptions would have caused him to pass over isolated identical responses, "to not get too excited about individual small parallelisms", to reject anything other than word-for-word parallelisms. Id.#206.

Messrs. G and H #104-115; S and Y #116; GG, W and MM #117-120:

We agree completely with Judge Milhollin's discussion of Licensee counsel John Wilson's investigation of cheating. We find that the evidence supported conclusions of cheating in the cases of G, H, MM, W, and GG and that Mr. Wilson failed to evaluate the evidence in an impartial manner.

We endorse Judge Milhollin's view that Licensee molded the operators' testimony to maintain the credibility of its training program. We believe -- and have since the beginning -- that the

operators did not consider cooperation on the weekly quizzes to be cheating. We believe that this attitude included the mock and NRC examinations. Aamodt Findings #162-163; 256-257; 261; 286; 305.

The 1979 (VV and O) Incident, #121-123:

Licensee's arguments do not explain how Licensee's management ranks were filled by a number of individuals, VV, Miller, O, Herbein, whom Licensee is now ready to 'disown'.

LICENSEE'S OPERATOR TRAINING AND TESTING PROGRAM

Introduction, #124-127:

Licensee fails to note that we were critical of the licensed operator training program as was the Commonwealth of Pennsylvania based on findings from the main hearing. Aamodt Comments at 28, 29, 33, 34, 37, 38. Judge Milhollin does not stand alone in being highly critical of the Licensee training and testing program.

We agree that the training program for licensed operators is important, but we cannot agree that it is the most important. Equally as important, in view of health and safety of the public, are the training of auxiliary operators, shift technical advisors, maintenance technicians, radiological controls workers, chemistry technicians, security personnel and radwaste personnel. We would agree that the Reopened Hearing only considered training and testing programs for licensed operators. However we would

not agree that the main hearing developed at length with substantive adequacy the training of all Licensee personnel. The Board admits that the focus of the main hearing was the training and testing program of licensed operators. Board's Partial Initial Decision ¶164. We would not even agree that there was substantive adequacy to the evidence developed on the training of licensed operators. We found the evidence was adequate, however, to conclude that Licensee's programs for licensed operators were poor. Aamodt Comments at 28, 29, 33, 34, 37, 38. The Reopened Proceeding has added to the evidence concerning licensed operators. The Special Master's decision is that the training of licensed operators is poor. Since the design and function of the program for non-licensed personnel is under the same managment as the program for licensed operators, it is not reasonable to assume that the non-licensed program is any better. Aamodt Comments at 37,38. The Board depended on lists of courses presented by Licensee management and witnesses -- and commitments for the future -- in their review of the programs for non-licensed personnel. PID ¶208-224. The Board depended primarily on the testimony of Dr. Long whose testimony in the Reopened Hearing was not credible. Id. Aamodt Findings ¶254, 270, 277, 286, 287. We must conclude that the Board has no evidence that the program for non-licensed personnel is adequate.

We cannot agree that Judge Milhollin's summary description of training requirements of the operations staff to be confusing. Licensee's objections to an exam-oriented training program are absurd. Is Licensee running a 'progressive school'? We find

that Licensee is using a legal ruse to attempt to divorce Judge Milhollin's findings and conclusions from the their training program. Licensee continues this pattern in attempting to divorce the OARP program from the Commission's August 9, 1979 Order -- since Judge Milhollin found that Licensee's training did not respond adequately to the Commission's Order. Licensee states (Comments, Footnote 15) ..."OARP was not prompted by or conducted exclusively in response to the Commissions's August 9, 1979 Order, nor was it limited in scope to the specific issues identified by the Commission in that Order." Hogwash! We direct the Board to Licensee's own exhibit 27 (Report of the TMI-1 OARP Review Committee) which states on page 31 the training requirements of the Commission August 9, 1979 Order and says, "This was the primary motivation for initiating the Operator Accelerated Retraining Program". (OARP) (emphasis added)

We agree that Licensee was successful in preventing a full litigation of the training of the operators in the Reopened Proceeding. The parties were not able to pursue the adequacy of training in their examination of the witnesses. However, Judge Milhollin did and, under the Board's directive, asked questions which were outside the narrow bounds set for the other parties. Judge Milhollin examined the responses of the operators first-hand, and questioned the operators first-hand, an opportunity which the Board did not take. The Board depended exclusively on the self-serving testimony of Licensee's management and paid 'expert' witnesses. PID #225-276. The Board termed the witnesses' testimony as an Independent Review of Licensee's Training

Program. Id. at 126. We find, contrary to Licensee's assertions, that the Reopened Hearing provided the better evidence on which to judge the Licensee's training program.

Administrative Practices, #128-131:

We agree with Judge Milhollin that Licensee has had ample opportunity to devise an adequate training and testing program. Aamodt Comments at 34-37. Didn't Licensee understand the Commission's August 9, 1979 Order? When the Commission specifically addressed the administration of the weekly quizzes, in November 1980, why didn't Licensee respond? Aamodt Findings #282-286. When Dr. Long was asked specifically about this by the Board in February 1981, why didn't Licensee respond? Id. #254. When the evidence of the Reopened Hearing established the need to retest the operators on the Lessons Learned test, why did Licensee use the same training procedures of coaching to pass the test? .."everything that was asked on the test for all practical purposes was also gone over the morning before the test...they just took 20 questions, about, of the contents of what hey had lectured us on..." Tr. 25,746 (G). Why, after defeats of previous testing by cheating, did Licensee use the same test at two testing sessions separated by four days? Aamodt Findings #302. Why would Licensee be satisfied with the Kelly test of Lessons Learned, given over two years ago , without continual proctoring. and with use of reference material? Id. #301-305. The problem is improper attitudes. Administrative procedures will not correct attitudes. See Id. #295.

The Substantive Adequacy of Training, #132-145:

We agree with Judge Milhollin that G's and H's testimony provided the most detailed look at the adequacy of Licensee's training program. We disagree with Licensee that the opinions of the operators concerning the training program is as good evidence. The operators' attitudes toward the training program are important, however they do not necessarily reflect the quality of the program. Other factors play into a student's evaluation. The reasons why the operators held their particular opinions are more valid indicators.

One of the reasons that the operators were satisfied with the training program is that it had improved since the TMI-2 accident! This is certainly a back-handed compliment.

We find Licensee's defense of G's and H's understanding of the questions probed in the hearing to be without merit. Certainly if Licensee is satisfied with this kind of understanding, there is no reason to believe that Licensee would improve their instruction.

Licensee would have Judge Milhollin disbelieve/the first-hand evidence before him in the Reopened Proceeding and look for direction to the operators' opinions, the operators' beliefs and the NRC examiners. Licensee Comments #139 at page 84 (bottom). Judge Milhollin did, in fact, consider these sources and assigned this evidence its proper weight. Special Master's Report #247, 248, 269-287. The Licensee would have Judge Milhollin place total reliance on the NRC examination (in that all candidates have passed), an about-face from Licensee's earlier argument that their training program exceeded any test requirements! Licensee Comments #126,127. It is as if Licensee would recommend

a full physical examination for a corpse!

Concerning the Category T test, we support Judge Milhollin's conclusions. Aamodt Findings #301-305. We agree with Licensee that the TMI Training Department used poor practices in administering the same questions on the make-up Lessons Learned tests until the operators passed. Licensee Comments #140 Footnote 17. We agree that Mr. Brown considered the practice acceptable, but not for the reasons given. Id. We find that the instructors did not take the Lessons Learned requirement seriously. Aamodt Findings 255. We also find that the TMI Training Department misrepresented their commitment to the Lessons Learned requirement in the appearance of Mr. Newton before the Board. Aamodt Comments at 23. We find that, despite the Training Department's recognition of the compromise of a test through the use of the same questions, the Training Department's response -- the November 1981 Lessons Learned test -- used the same test for two testing sessions separated by days. Aamodt Findings #303. This supposedly curative test also suffered from other faults -- invalid subject matter taught by 'coaching' the examinees. Special Master's Report #246. We would also refer the Board to our findings concerning the use of the Kelly Category T test for those who passed to satisfy the Lessons Learned requirement. Aamodt Findings # 301-305. We find that the Licensee has regarded the Commission's requirement with contempt and deceipt. The testimony of those who perpetrated the deceipt, Dr. Long and Mr. Newton in the main hearing, or Mr. Boger, whose interest in Licensee's training program resembles a 'bored yawn', was rightfully not accepted per se by Judge Milhollin. Aamodt Comments at 23; Aamodt Findings #105; Aamodt Findings, May 15, 1981 #1-15.

Licensee notes that Judge Milhollin did not address the issue of the need for the independent administration and grading of exams at TMI. Licensee Comments #145. We refer the Board to our discussion. Aamodt Findings #287. We would, however, note that use of independent auditors would identify, but not correct, the inadequacies of Licensee's training.

Licensee's System for Certifying Operator Candidates, #146-152.

Licensee's discussion of certification is revealing. While Licensee protests that the training program is not geared to prepare the operators to pass tests but to prepare operators to competently run the plant, Licensee evaluates its certification by the pass-rate on the NRC examination.

Licensee also fails to recognize that people not procedures are needed to make valid certification. Those people need the competence, interest and integrity to do the job. We discuss this fully in our comments. Aamodt Comments #29-31; Aamodt Findings #349-376. Corporate management is to be involved -- not just in reviewing training records -- but in the selection, training and qualification of the operators. Id. /NUREG-0585. Shift Staffing #153.

We disagree with Licensee's findings, and in the absence of Judge Milhollin's findings refer the Board to our discussion. Aamodt Comments at 32; Aamodt Findings #328-339

We believe that the issue is moot in view of the finding that Licensee's training program is inadequate, the Commission's Lessons Learned requirements have not been adequately met, and that Licensee's management lacks competence, the proper attitude, and integrity to operate a nuclear facility.

Reply to the NRC Staff's Comments on the Special Master's Report

We reply in general to the Staff's comments as we have addressed the same issues fully in our reply to the Licensee's comments. The Staff, in most cases, adopts the Licensee's position that the Special Master's Report is in error. The Staff slaps Licensee's hand in a few places where it will not hurt. Staff Comments #4(Footnote),5 .

We believe that the Staff's comments must be viewed in terms of the Staff's attitude. Nowhere does not the Staff consider standards that would ensure the health and safety of the public. The Staff's goal is clearly stated as the restart of Unit 1. For instance, the Staff urges the Board to accept the Staff's proposed findings and conclusions so that "the Licensing's Board's prior findings and conclusions would not have to be modified except to permit restart at up to design power". Id.#40. The Staff warns the Board that if the the Special Master's findings are adopted "then certain of the Licensing Board's prior findings and conclusions would have to be modified, and the restart of TMI-1 likely could not be authorized with the Licensee's existing operations staff". Id. The Staff clearly shows its allegiance to the interests of the Licensee. We would urge the Board to reject the Staff's Licensee-serving arguments which earlier led the Board into the error of their Partial Initial Decision.

Staff's allegiance to Licensee is embarrassingly apparent in their defense of Licensee's lawyer John Wilson. While the Staff admits that Mr. Wilson "may not have been as precise as he should have been", the Staff's total concern is for the personal welfare of Mr. Wilson -- not the impact such 'imprecisions' could have on the health and safety of the public. Staff Comments #6-7.

Staff continues their allegiance, characterizing Licensee's paid witnesses as "independent consultants". Id. #12. Staff would have the Board continue to depend on the testimony of these witnesses from the prior hearing, in the face of the impartial decision of the Special Master concerning Licensee's training of licensed operators. Id.

Where is the NRC's regulation of the Licensee in the public's interest? Staff states that they "will continue to audit implementation of the (training) program to ensure that the program as described will be properly implemented and that any weaknesses noted will be corrected". Id. The Staff misleads. The Staff has not audited Licensee's training program. The Staff abandoned such plans and depends on their licensing examination. Aamodt Comments at 38-39. Where the Staff claimed to have looked at Licensee's program, the Lessons Learned test, it was obvious they had not. Aamodt Findings #105.

Even if the NRC promised to faithfully audit the Licensee's programs in the future -- and were competent to do so -- and had the proper attitude -- , we have found NRC promises are made to be broken. The Staff had planned to oversee Licensee's certification of candidates for licensing in the most diligent

manner, according to Mr. Boger's testimony in February 1981, however two months later, another Staff witness testified that Mr. Boger no longer had interest in the certification process. Aamodt Findings, May 15, 1981 #1-15. The Staff notes that Licensee now has certification procedures and criteria which are sufficient -- and Staff should have added not as a result of Staff's regulation but the focus of the Reopened Hearing. (We disagree with Staff's conclusion concerning certification; see page 27 supra.)

The Staff would have the Board overlook the Special Master's criticisms of the NRC exam since this was not an issue in the Reopened Proceeding. Staff Comments #18. The Staff believes that the content of the examination was adequately litigated in the prior hearing and cites the Board's conclusion of adequacy. Id.#21. We disagree; the same remarks at page 21-22 supra concerning the litigation of training in the prior hearing apply here. We asked Mr. Boger some questions which he was not qualified to answer. Aamodt Findings, May 15, 1982 #27. (Mr. Boger did not even know what the terms 'reliability' and'validity' meant in terms of test construction.) Licensee's witnesses Gardner and Christensen were not familiar with nuclear technology. Aamodt Reply Findings June 29, 1981 #130,134.

The Staff would have the Board be satisfied with the licensing examinations given to TMI operators in October 1981 because the proctoring for the October exam was considered adequate. Staff Comments #16. However, the Staff

acknowledges (Footnote 5, page 11) that the content of the NRC examination is presently being questioned by a study currently underway. Although the Staff asserts that this is "continuing activity" in this area and "additional analysis....to further ensure", we note as recently as February 1981, the Staff did not produce a single shred of evidence that this study was underway. We conclude that this study by the Staff is further evidence of the lack of evidence that the NRC exam is valid. Staff had the opportunity to present this evidence in the Reopened Hearing by simply asking. We find that Staff withheld evidence that would have caused the Board to reassess its decision concerning the examinations. We that the Board must question the test by which the candidates are licensed and seek evidence of its adquacy to certify any operators who would staff Unit 1. The health and safety of the public cannot be premised on a lack of evidence.

Reply to Comments of the Operators Named in the Special Master's Report

We only received comments from MM and have replied to them at pages 7 - 9. As MM observed, not commenting would indicate agreement with the Special Master's Comments. MM's Comments, page 1 We adopt MM's position on the failure of the other operators to reply.

Reply to Comments of Gary Miller on the Special Master's Report

We continue to agree with Judge Milhollin's conclusion concerning Gary P. Miller. This conclusion was that Mr.Miller

signed a letter to the NRC dated August 3, 1979 which contained false information and withheld information. Miller admits (page 14-15) that the letter was not accurate and that it contained misinformation. We cannot accept Miller's excuses in view of his position that it was the Training Department's fault, that the letter was substantially correct, and that it did no harm. The VV-O affair was of great concern to Mr. Miller at the time of the accident (Miller FF. 24,358 at 1-6) so we find his failure to notice insincere. Mr. Miller's attitude that he did no harm belies his sincere concern about what VV did.

Reply to the Comments of O and W on the Special Master's Report

We agree with the Findings of Fact and recommendations concerning O and W made by Judge Milhollin as set out in Section III.

With regard to paragraphs 309,310, the arguments centering on the appropriateness of the Special Master's conclusion that these individuals violated two sections of the criminal code and he recommendation for criminal prosecution raise the important question whether O and W might be the 'scapegoats' for Licensee's problems. Although we are convinced that the Special Master did not have this motive, we would call the attention of the Board to the fact that any operators who are prosecuted would indeed become 'scapegoats' if managementwere not similarly charged for their role in the cheating affair. As the Special Master has demonstrated cheating was rampant and of long-standing among the operators. To hold that management did not at the very least condone this behavior would be absurd. The operators, as employees, cannot fairly be caused to bear the burden of guilt alone.

Rather managment should bear the brunt of the burden of guilt because there were in charge. The Board should carry this argument one step farther. The NRC has the responsibility for upholding the integrity of the examination process. They failed not only this responsibility but also their responsibility to audit the training program and to assure that operators who sat for licensing were properly certified and prepared. We also believe that NRC failed their responsibility to investigate the cheating incident thoroughly. We refer the Board to our discussion of the Staff's investigation of the cheating at TMI. Aamodt Findings #100-168.

Respectfully submitted,

Marjorie M. Aamodt

June 1, 1982

Served this day by hand to the Chairman of the Board and by first class mail to the Service List attached.

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