

RELATED CORRESPONDENCE

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
METROPOLITAN EDISON COMPANY	)	Docket No. 50-289 <i>SP</i>
	)	(Restart Remand on Management)
(Three Mile Island Nuclear	)	
Station, Unit No. 1)	)	

LICENSEE'S ANSWERS TO INTERVENOR THREE MILE ISLAND ALERT'S  
SECOND SET OF INTERROGATORIES TO GENERAL PUBLIC UTILITIES  
(TRAINING)

Licensee General Public Utilities Nuclear Corporation (GPU Nuclear), pursuant to 10 C.F.R. § 2.740b, hereby submits the following answers to "Intervenor Three Mile Island Alert's Second Set of Interrogatories to General Public Utilities." The provision of answers to these interrogatories is not to be deemed a representation that Licensee considers the information sought to be relevant to the issues to be heard in this remanded proceeding.

Consistent with the NRC's rules of practice, see 10 C.F.R. § 2.740, Licensee has provided an expansive amount of information in an attempt to respond fully and expeditiously to TMIA's discovery requests. While responding as fully as possible to TMIA's discovery requests, Licensee has necessarily limited its

answers to include only that information which is germane to the remanded licensed operator training issue as defined by the Licensing Board in its Memorandum and Order Following Prehearing Conference dated July 9, 1984. See 10 C.F.R. § 2.740(b)(1).

I. GENERAL OBJECTIONS

1. TMIA's interrogatories often request Licensee to provide information dating back to the date of the accident at TMI-2. This time frame is of no significance to the remanded licensed operator training issue. TMIA's interrogatories impermissably attempt to broaden the scope of discovery beyond a reasonable and relevant time frame, thereby creating an exceedingly unnecessary and burdensome task for Licensee. In Licensee's view, all information requested which precedes the close of the training record in the original management proceeding (approximately March, 1981) is too remote to necessarily be relevant to (or to lead to relevant information about) the current licensed operator training program. The production of that information would be unduly burdensome in light of the extensive effort Licensee has already put forth in response to TMIA's interrogatories, and in light of the minimal probative value of information which predates the current remanded proceeding by over three years. Licensee, therefore, objects to the production of information which predates March, 1981 and, generally, may not have provided such information in these answers.

2. Licensee objects to Instruction D to the extent that it requires Licensee to provide any information that cannot be ascertained from the identified document itself. The remaining requirements of Instruction D are clearly unnecessary and unduly burdensome.

3. Licensee objects to TMIA's definition of the term "document" as presented in the last sentence of Instruction G(iv). TMIA seeks to require Licensee to obtain every copy of any requested document that has any dissimilar markings on it. Given the number of copies of documents circulated throughout GPU Nuclear, and the size of that organization, TMIA's definition of "document" would clearly involve Licensee in an enormous search for a vast number of copies of infinitesimal probative value. Such a requirement is clearly unreasonably burdensome. For that reason, Licensee objects to the definition, and application of the term "document" proffered by TMIA in Instruction G(iv).

## II. INTERROGATORIES

1. Regarding any document responsive to Intervenor TMIA's Second Request for Production of Documents of whose existence GPU is aware, or which GPU knew existed in the past, and which is not now within GPU's custody or control, state the following:

- (a) the current location of the document;
- (b) the custodian of the document;
- (c) the title and substance of the document;
- (d) the document request to which the document is responsive; and

(e) if the document no longer exists, the last known location of the document and the circumstances under which the document ceased to exist.

OBJECTION. The documents responsive to Intervenor TMIA's Second Request for Production of Documents will be made available to TMIA in the document discovery room.

Licensee objects to Interrogatory 1 with respect to any documents that are not within Licensee's custody or control. This request is unduly burdensome and goes beyond the scope of reasonable discovery. It is also unnecessarily repetitious of Instruction C of TMIA's request for production of documents with respect to any requested documents that are no longer in existence.

2. Describe the current organization of the GPU "training department organization" established by Dr. Richard P. Coe, referenced on page 10 of the Special Report or the Reconstituted OARP Review Committee ("Special Report"). Include in your description the following:

(a) identification of all persons who are in the training department, specifically all persons in any supervisory or instructor position;

ANSWER. The current organization of the GPU Nuclear Training and Education Department has four training managers reporting to the Director. Three of the managers have the responsibility for training at Parsippany, Oyster Creek and TMI; the fourth manager of Educational Development has corporate-wide responsibilities and assists the other managers in carrying out their charter. Reporting directly to the Manager of Plant Training at TMI are the Operator Training Manager and Simulator Training Manager who share the responsibility for the



overall license and non-license operator training program. Reporting to the Operator Training Manager is a Supervisor of Licensed Operator Training, Supervisor Non-licensed Operator Training, an STA Training Coordinator, a Technical Program Specialist, and an Administrative Assistant. Reporting to the Simulator Training Manager is a Supervisor of Simulator Training. The following incumbents presently serve in the TMI training organization pertinent to TMI-1 licensed operator training, as described above. With respect to the instructors, see answer to Interrogatory 9.

Manager, Plant Training	S. L. Newton
Operator Training Manager	B. P. Leonard
Technical Programs Specialist	F. J. Perry
Supv., Lic. Oper. Trng (Acting)	R. H. Maag
Simulator Development Manager	C. A. Irizarry
Supv., Simulator Trng	D. J. Boltz
Instructors of Oper. Trng	<u>See</u> answer to Interrogatory 9.

(b) state whether it is GPU's position that any such person identified above was involved or participated to any degree in the cheating incidents cited or discussed in Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), Partial Initial Decision, Reopened Proceeding, July 27, 1982 ("ASLE PID") or in Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), Report of the Special Master, Atomic Safety and Licensing Board (April 28, 1982) ("Milhollin Report");

ANSWER. No.

(c) state whether GPU management considered any disciplinary or other action against any person identified in subpart (b) above;

ANSWER. No.

(d) if GPU management considered any disciplinary or other action identify all conversations, discussions or communications concerning such disciplinary or other action;

ANSWER. Not applicable.

(e) identify all documents which refer to, mention, memorialize or relate in any way to disciplinary or other action considered against any GPU employee involved or participating in the "cheating incidents" cited and/or discussed in the ASLB PID or Milhollin Report, and the current location of all such documents.

ANSWER. Not applicable.

3. With reference specifically to Henry Hukill, GPU Nuclear Vice President for TMI-1, identify all communications, conversations, discussions or contacts among GPU management concerning Mr. Hukill's admitted managerial responsibility for the cheating incidents.

Identify all discussions, conversations, communications or contacts among GPU management as to whether or not Mr. Hukill should be disciplined, removed from his current position, replaced or relieved of any responsibilities over training in response to his admitted responsibility for the cheating incidents.

For all such conversations, discussions, communications or contacts identified above, identify all documents which mention, refer to, memorialize, concern or relate in any way to them.

OBJECTION. Licensee objects to Interrogatory 3 on the grounds that the information requested is not relevant to this proceeding in any way nor is it likely to lead to the discovery of any relevant evidence. As the Board stated, the "remanded cheating issue is not about the cheating itself, but rather what do Licensee's consultants make of the need to cheat perceived by the operator license candidates." Memorandum and Order Following Prehearing Conference, July 9, 1984 at 6. Mr.

Hukill's response to the cheating incidents, as well as the Vice President of TMI-1's responsibilities, generally, are res judicata and are outside the scope of the remanded training issue. The TMI-1 training organization reports to Dr. Coe and Dr. Long, not to Mr. Hukill.

4. Identify all discussions, communications, conversations or contacts among GPU management concerning removing John Herbein from his position as Vice President for Nuclear Assurance. State all reasons GPU removed Mr. Herbein from that position and identify all persons in GPU management who supported that decision.

ANSWER. GPU's response to this interrogatory, sponsored by Mr. Clark, involves input or review by Messrs. Arnold, Dieckamp, Herbein and Kuhns. None of these individuals has any recollection of the specific discussions, communications, conversations or contacts among GPU management concerning John Herbein's transfer from GPUN to Pennsylvania Electric Company (Penelec). The minutes of the March 1982 meeting of the GPUN Board shows that Mr. Herbein's resignation was accepted by GPUN at that meeting and that the reason stated was because of his election as a vice president at Penelec.

The recollection of those listed above, as well as Mr. Clark, is that Mr. Herbein was offered the position at Penelec for two reasons:

1. GPU management believed that it was unlikely that Mr. Herbein would be considered for further advancement within GPUN because of the desire to develop new senior managers who did not have association with the preaccident operating organization; and

2. there was a need to strengthen the management of the generation function in Penelec and Mr. Herbein's experience, capabilities, and interest in that effort would enable him to contribute to meeting that objective.

The decision to ask Mr. Herbein to take the Penelec position was supported by the Directors of GPUN and Penelec.

5. Identify all discussions, conversations, communications or contacts among GPU management regarding promotion of Dr. Robert Long to GPU Nuclear Vice-President for Nuclear Assurance. State whether GPU considered in promoting Dr. Long Finding #2047 of the ASLB PID that Dr. Long may not "fully understand that his Training Department failed in its responsibility and that the failure was the principal and proximate cause of the breakdown in the integrity of the training and testing program." ASLB PID at 175.

ANSWER. GPUN's response to this interrogatory, sponsored by Mr. Clark, involves input or review by Messrs. Arnold, Dieckamp, Long and Kuhns. None of these individuals has a recollection of specific discussions, conversations, communications or contacts among GPU management regarding Dr. Long's promotion to Director of the Nuclear Assurance Division except for the following:

1. Mr. Clark met with Dr. Long on March 5, 1982, and discussed Dr. Long's understanding of the job requirements what Dr. Long's approach would be, and the expectation of continued need for emphasis on assuring effective implementation of policies and procedures.

2. Mr. Arnold met with Dr. Long on March 18, 1982, and discussed the requirements of the position, especially with regard to the need for Dr. Long to maintain appropriate awareness



of the details of activities and work assignments within the Nuclear Assurance Division.

3. At the March 24, 1982 meeting of the GPUN Board of Directors, Dr. Long was elected a vice president and named to the position of director - Nuclear Assurance Division. In conjunction with that action, the Board discussed the hearing problems, the shortcomings within the TMI Training Department that contributed to the occurrence of cheating, and Dr. Long's understanding of the responsibility of the TMI Training Department to conduct their program in such a way as to prevent such cheating incidents. During the discussions, consideration was given to whether the failures in the training program administration should be grounds for disqualifying Dr. Long for the Nuclear Assurance position, with Mr. Kuhns expressing the most concern about the appropriateness of the promotion. Following the discussion, the Board voted unanimously to elect Dr. Long to the position of vice president and director of Nuclear Assurance.

Since Dr. Long was elected a vice president of GPUN prior to the issuance of the Board's PID on cheating in July 1982, the specific sentence of the PID referenced in the interrogatory was not considered at the time of Long's promotion. However, as discussed above, the issue identified in the PID citation was considered. The responses to TMIA Interrogatories 11 and 27 discuss GPUN's response to the PID, including the cited sentence.

To GPU

Identify all documents which mention, refer to, memorialize, relate or otherwise concern the discussions, conversations, communications or contacts identified above.

ANSWER

- ° GPUN Memorandum (Arnold) of April 1, 1982, announcing Long's new position.
- ° GPU Nuclear Today issue Vol. 3, No. 3, dated March 1982.
- ° Dr. Long's personal notes from meetings with Arnold and Clark.
- ° GPUN Board of Directors Meeting for March 24, 1982.

To Dr. Long:

Do you agree today with the finding cited above? If so, describe the failures of the Training Department which led to the cheating incidents and the root cause for these training department failures and/or cheating incidents.

ANSWER. Finding 2407 of the ASLB PID states, "The Board could not determine from Dr. Long's testimony that he fully understands that his Training Department failed in its responsibility and that the failure was the principal and proximate cause of the breakdown in the integrity of the training and testing program." I do understand and I regret that I did not effectively communicate to the ASLB through my prepared testimony before the Special Master, and that there was very little opportunity to discuss this issue further during the oral testimony.

The investigations and reviews of training which followed the TMI-2 accident generated a large number of recommendations. These were summarized in Table 10.2 of the Report of the OARP

Review Committee. None of these recommendations addressed the need for control of the examination process. As I began taking on the training responsibilities, my attention was focused on responding to the recommendations and I overlooked the need, clearly identified by the NRC exam cheating incident and subsequent investigations, to critically review the examination and testing processes being used by the T&E Department.

In July and August 1981 the initial response to the cheating incident was focused upon the "mechanics" of Training & Education Department examination and testing processes. Subsequent discussions identified other root cause concerns which had to be addressed. These included the need to restore and maintain credibility in the training programs and personnel management practices of the corporation. The integrity of the entire training process had to be reviewed and more formal procedures developed for test preparation, instructor evaluation, program planning, and training interfaces with all the training "user groups." I recognized from the beginning of my assignment as Director of T&E that instructors can and do influence employee attitudes. Additional steps were taken to stress this impact and to clearly identify the value of the training process to all employees.

6. Identify all discussions, conversations, communications or contacts among GPU management regarding promotion of Samuel Newton to Manager of Plant Training. State whether GPU considered in promoting Mr. Newton that Mr. Newton may have been involved or responsible for some of the failings of the training program which led to the cheating incidents. ASLB PID at 175.

To GPU:

Identify all documents which mention, refer to, memorialize, relate or otherwise concern the discussions, conversations, communications or contacts identified above.

ANSWER. In late April 1983, Dr. Coe initiated discussions with Dr. Long, Mr. Hukill and others regarding organizational changes in the TMI Training & Education section. The proposal included moving Dr. Knief into a new position of Manager-Educational Development and promoting Mr. Newton to Manager-Plant Training-TMI. Dr. Long reviewed these proposed changes with Mr. Clark and Mr. Hukill. Mr. Clark also discussed them very briefly with Mr. Arnold. Mr. Newton's responsibilities for failings of the training program which led to the cheating incidents had been reviewed with him in discussions over the previous two years. His promotion was based on the effectiveness of his response and job performance throughout his entire employment period with GPU Nuclear. Mr. Newton had also served effectively as Acting Manager of Plant Training on several occasions. With the concurrence of Mr. Clark and Mr. Hukill, Dr. Long approved Dr. Coe's recommendation to promote Mr. Newton.

The documents requested in this interrogatory will be available in the document discovery room

To Mr. Newton

Do you agree today that the failure of the Training Department led to the cheating incident? If so, describe all failures of the Training Department which led to the cheating incidents and the root cause for these failures and/or cheating incidents.

ANSWER: What became apparent in the aftermath of the



cheating incidents and the reopened hearings before the Special Master was that the Training Department had been negligent in its failure to satisfactorily safeguard the examination process, to ensure that students knew exactly what was expected of them regarding their conduct on written examinations, and to provide a means of checking both the process and the students' conduct.

The primary element in the failure to safeguard the examination process was the failure to provide full-time proctoring for written examinations. Speaking only for myself, I firmly believe that the reason for this failure as well as for the failure to ensure that students knew exactly what was expected of them regarding conduct on written exams, stemmed not from any disrespect on my part for the examination process, but, indeed, just the opposite. My failure was in not realizing that not everyone was the product of a similar environment and therefore did not have the same level of respect. The fact that one is expected to do one's own work on an examination, that cheating is not only unacceptable, but will result in penalties if apprehended, was imbued in me early in my educational process. Four years at the Naval Academy under the honor concept and almost twelve years as a Naval Officer where one's life depended upon the honesty and integrity of each crew member during submarine operations, were the greatest factors in shaping my beliefs and values. An extension of these views or opinions was that the primary reason to have a proctor for an

examination was to be able to provide clarification for students for questions they might have during the examination, not to be a deterrent from cheating. Finally, at that time, I was unaware of any pre-accident or immediate post-accident training problems which might have shaped operators' attitudes or affected their respect for the training process.

On the other hand, I was not oblivious to the possibilities of cheating. For example, when I proctored an examination, if I was not present the whole time, I made it a practice to observe from outside the room prior to entering, when possible, and to stagger the frequency of my appearances. Furthermore, one objective in restructuring the replacement reactor operator training program in 1980 was to avoid placing too much temptation to cheat in front of the students. I also, with one exception, did away with the practice of providing make-up tests for requalification training to the operators to be taken on shift. That one exception, which events later proved to be a mistake, was the lessons learned or category T test.

7. Identify all discussions, conversations, communications or contacts among GPU management regarding promotion of Edward J. Frederick to Supervisor of Licensed Operator Training. State whether GPU considered in promoting Mr. Frederick whether or not he was involved in or responsible for any of the failures of the training program which led to the cheating incidents. ASLB PID at 175.

To GPU:

Identify all documents which mention, refer to, memorialize, relate or otherwise concern the discussions, conversations, communications or contacts identified above.

ANSWER. Mr. Frederick's promotion to Supervisor, Licensed Operator Training, TMI-1, in March 1983 was based on Mr. Newton's recommendation, which was approved by Drs. Knief and Long. From the time Mr. Brown made known his decision to leave the Training Department in late 1982 or early 1983, discussions took place among these three individuals, both together and in pairs as to who his successor ought to be. Once the internal decision to appoint Mr. Frederick to the position was made, it was discussed by Mr. Newton and Dr. Knief with the operations management (Hukill, Toole and Ross). The pertinent documents will be available in the document discovery room.

Mr. Newton's recommendation was based upon having worked very closely with Mr. Frederick for almost three years. In Mr. Newton's initial contact with him, Mr. Frederick was serving as Acting Supervisor, Licensed Operator Training, for several months, bridging the gap between Mr. Newton and his predecessor. Once Mr. Newton assumed his duties in May 1980, Mr. Frederick reverted to his position of training instructor, which he held until March 1982, when he was promoted to Supervisor, Non-Licensed Operator Training. In each of these assignments his performance was consistently outstanding as reflected by his performance appraisals and other memos for the time periods in question, copies of which will be provided in the document discovery room.

Mr. Frederick was not associated with training of licensed operators at TMI-1 at the time of the cheating incidents.

However, inasmuch as he was an instructor in the training department at the time, he was involved to the same degree as any other instructor in carrying out the practices of the training department, which as stated in the response to Interrogatory 6, contained some faults. It was however, considered to be a group, rather than individual, fault so that it really had no bearing in considerations of a promotion for Mr. Frederick.

To Mr. Frederick:

Do you agree today that the failures of the Training Department led to the cheating incidents? If so, describe all failures which led to the cheating incidents and the root cause of these failures and/or cheating incidents.

ANSWER. With 20/20 hindsight, it could be argued that the Training Department should have been more suspicious of individuals' fallibilities, but I believe that the primary responsibility for the "cheating incidents" rests with the individuals involved.

8. Identify all discussions, conversations, communications or contacts among GPU management regarding placement of Dr. Richard P. Coe in the position of Director of Training and Education.

To GPU:

Identify all documents which mention, refer to, memorialize, relate or otherwise concern the discussions, conversations, communications or contacts identified above.

ANSWER. In early January 1983, Dr. Richard P. Coe was identified as a candidate for the position of GPUN Director of Training and Education. After completion of the GPUN hiring interview process the following discussions, conversations, communications or contacts among GPU management regarding placement of Dr. Coe took place:



On February 14, 1983, Dr. Long met with Mr. Clark to review Dr. Coe's candidacy for the position of Director of Training and Education;

On February 18, 1983, Mr. Arnold indicated concurrence with making an employment offer to Dr. Coe;

On February 22, 1983, Human Resources formally extended the offer of employment to Dr. Coe.

Dr. Coe accepted and began his employment as GPUN Director of Training and Education on March 14, 1983.

The documents which mention, refer to, memorialize, relate or otherwise concern the discussions, conversations, communications or contacts identified above include:

- a. R. L. Long handwritten notes used in discussion with P. R. Clark on February 14, 1983.
- b. Handwritten note from R. C. Arnold to R. L. Long received on February 18, 1984.
- c. Management evaluation sheets.

To Dr. Coe:

Do you agree that the failures of the Training Department led to the cheating incidents? If so, describe all such failures which led to the cheating incidents, and your opinion as to the root cause for these failures and/or cheating incidents.

ANSWER. No, I do not agree that the failures of the Training Department led to the cheating incidents. The cheating incidents that occurred after TMI-2 were the results of many complex issues and not the result of any one individual or department. Cheating, by some researchers, is felt to be a

situational incident and the root cause for such can be so complex that even the individual who is cheating may not fully understand the reasons for his/her actions. Needless to say, cheating did occur and there is no reason for me or any one else to try to excuse it. I am aware of the ASLB PID and Milhollin Report and the steps taken by GPUN to correct the situation. I am personally dedicated, as are my managers and supervisors, to assure that cheating never happens again.

9. Identify all supervisors and/or instructors currently employed in the training program and all supervisors and instructors so employed for the period from 1979 to the present. State for each the length of time he/she served in that position in the training program.

For any person identified above who held any position within GPU at the time of the TMI-2 Accident, identify that position.

State with regard to any person promoted to the Training Department or within the Training Department after the accident, the following:

(a) the reason(s) for such promotions;

(b) the substance or nature of any conversations, discussions, communications or contacts regarding the person's prior role in the Training Department or prior participation or involvement in the cheating incidents discussed or cited in ASLB PID or Milhollin Report;

(c) whether GPU management considered in determining to promote any such individual whether or not he had been involved in or participated in the cheating incidents discussed and/or cited in the ASLB PID or the Milhollin Report.

ANSWER. The following individuals are current Supervisors and Instructors associated with licensed operator training at TMI-1:

<u>Name</u>	<u>Position</u>	<u>Time in Position</u>
Bruce Leonard	Operator Training Manager	15 Mos.
J. Scott Barber	STA Training Coordinator	32 Mos.
Frank Perry	Technical Program Specialist	8 Mos.
Ronald Maag	Instructor IV/(Acting Supervisor Licensed Operator Training)	2 mos/3 wks.
Frank Kacinko	Instructor IV/Acting Supervisor Non-Licensed Operator Training)	2 mos/2 wks.
Daryl Wilt	Instructor II, Licensed Operator Training	29 Mos.
Michael Fuller	Instructor III, Licensed Operator Training	9 Mos.
William Stanley	Instructor III, Licensed Operator Training	1 Mo.
Carlos Irizarry	Simulator Development Manager	29 Mos.
Dennis Boltz	Supervisor, Simulator Instruction	29 Mos.
William Thompson	Instructor III, Simulator Training	5 Mos.
Mark Trump	Instructor III, Simulator Training	3 Mos.
Earl Showalter	Instructor III, Simulator Training	4 Mos.
Robert Parnell	Instructor, Licensed Operator Training (contractor -- 1 year)	1 Mo.
Gerry Wallace	Instructor, Licensed Operator Training (contractor -- 1 year)	2 Mos.

See organizational chart provided in the document discovery room.

The following former Supervisors/Instructors employed by Licensee in the TMI licensed operator training section since March 1979 are no longer involved in licensed operator training.

<u>Name</u>	<u>Former Position</u>	<u>Time in Position</u>
Nelson Brown	Supervisor, Licensed Operator Training	31 Mos.
Edward Frederick	Supervisor Licensed Operator Training	17 Mos.
Charles Husted	Supervisor Non-licensed	15 Mos.

## Operator Training

The individuals identified above who also held positions within GPU at the time of the TMI-2 accident are as follows:

Frank Kacinko - Auxiliary Operator, TMI

Daryl Wilt - Auxiliary Operator, TMI

William Stanley - Licensing Engineer, Metropolitan Edison

Dennis Boltz - Administrator, Nuclear Technical Training

Earl Showalter - Engineer II, Maintenance Engineering, TMI

Nelson Brown - Administrator, Nuclear Technical Training

Charles Husted - Administrator, Nuclear Technical Training

Edward Frederick - Control Room Operator, TMI-2

The following promotions to or within licensed operator training related positions have occurred since March 1981:

Bruce Leonard - promoted from Technical Program Specialist to Operator Training Manager upon promotion of Newton to Manager, Plant Training. Joined GPU in November, 1982, i.e., after the cheating incidents. Basis for promotion was work as Technical Program Specialist, and background in Nuclear Navy where he was the staff training officer at a prototype and had completed qualification as Chief Engineer, over and above that of Engineering Officer of the Watch.

Ronald Maag - promoted to Training Department from position of Shift Foreman in July, 1984. Joined GPU as control room operator trainee January, 1982, i.e., after the cheating incidents. Basis for promotion to training position was rapid



progress from January 1982 to Shift Foreman and licensed as SRO in March of 1984. In addition, had training experience as a prototype staff training instructor in the Navy.

Frank Kacinko - promoted to Training Department from position of Control Room Operator Trainee in September 1981. Had been Auxiliary Operator from September 1978 to February 1981; therefore no potential for involvement in cheating incidents. Basis for promotion to training was auxiliary operator knowledge and experience as well as teaching experience as a high school math teacher for seven years. Was promoted to Training Department originally to teach auxiliary operators. Further promoted from Instructor III to Instructor IV in July 1984 upon completion of SRO Instructor Certification.

Daryl Wilt - promoted to Training Department from position of Auxiliary Operator in April 1982. As an Auxiliary Operator, no potential for involvement in cheating incidents. Was originally promoted to Training Department to teach Auxiliary Operators. Basis for promotions was the high regard in which he was held by Operations for his knowledge and skills as an Auxiliary Operator.

William Stanley - While not actually promoted to the Training Department from within GPU, Mr. Stanley was employed by GPU at TMI-1 as an STA at the time of the cheating incidents. He left GPU in September 1983 for a position at another utility. He was rehired by GPU into the Training Department in July 1984. Mr. Stanley was not implicated in the cheating

incidents. The April 1981 NRC exam was his initial SRO licensing exam, but he was awarded an SRO license as a result of the October 1981 examination. The basis for hiring Mr. Stanley was the opportunity to obtain an instructor with a masters degree in nuclear engineering, who had also recently been an STA and a licensed SRO at TMI-1. Additionally, he was recommended by the Director, Systems Engineering, Technical Functions Division, Mr. T. G. Broughton, who had been in his reporting chain when he was an STA.

Dennis Boltz - Promoted to Supervisor Simulator Instruction from position of Administrator Nuclear Technical Training in April 1982. Basis for promotion was his SRO license, operational experience as both a control operator and shift foreman, and five years of instructional experience. Regarding the cheating incidents, he was involved to the same degree as any other instructor in carrying out the practices of the Training Department; his involvement was viewed as a Department, rather than an individual fault. Additionally, his involvement along with Mr. Brown and Mr. Ross in the review of the April NRC examination had been a subject of the reopened hearings. In that his involvement was deemed by the ASLB to be appropriate, it was not really a consideration in his promotion.

Carlos Irizarry - promoted to position of Simulator Development Manager from position of Supervisor Training and Educational Development in January 1983 (had been acting in that position since April 1982). Mr. Irizarry had no involvement with

operator training at the time of the cheating incidents. The basis for his promotion was his background in computers, training and instructional development, and his extensive nuclear navy experience as a reactor operator and electronics technician.

Edward R. Frederick - answer already provided in response to TMIA Interrogatory 7.

Charles Husted - promoted to Supervisor, Non-licensed Operator Training from position of Administrator Senior in March 1983 when the position was vacated due to Mr. Frederick's promotion to Supervisor Licensed Operator Training. Certainly Mr. Husted's involvement in the hearing process and his conduct during the hearings as well as earlier investigations was the subject of extensive discussions with individuals including Mr. Newton, Dr. Knief, Dr. Long, Mr. Arnold and Mr. Clark. However, it must be noted that he had been counseled by Mr. Newton, Dr. Knief, Dr. Long and Mr. Hukill, and had been the subject of additional evaluations by Mr. Newton, Dr. Knief, and Mr. Ross during the time between the issuance of the PID on cheating and his promotion. The DDL audit team (see TMIA Interrogatory 27) also looked carefully at Mr. Husted's performance. In no instance was there any evidence of a repetition of his behavior during the hearings or of an attitude that was anything but positive. His training experience, and his experience as an auxiliary operator as well as a navy nuclear machinist mate were the principle technical qualifications evaluated in considering him for promotion.

Earl Showalter - transferred to Training Department from position as Safety Review Engineer in TMI-2 in April 1984. Mr. Showalter had been working in Process Support Group, in Unit 2 at the time of the cheating incidents; therefore, no potential for involvement in cheating. Basis for transfer was that it was felt that his experience in various operational support organizations at TMI since 1974 would enable him to license and be a productive member of the simulator training group.

10. State whether GPU agrees with the finding of the Atomic Safety and Licensing Appeals Board in its May 24, 1984, Decision, slip op. at 64, ("ALAB-772") that several individuals who were involved or implicated in the cheating incidents are still in supervisory positions.

State for each such person who was involved or implicated in the cheating incidents who GPU acknowledges is still in a supervisory position whether GPU management had discussed or considered taking any disciplinary or other action against such person; whether GPU in fact has taken any disciplinary or other action; and the reason(s) that GPU either took or failed to take any disciplinary or other action against such person.

ANSWER & OBJECTION. No individual currently serving as a supervisor in the TMI-1 licensed operator training program was involved or implicated in the cheating incidents. Licensee objects to this Interrogatory as irrelevant insofar as it was intended to be broader than Licensee has interpreted it.

11. Identify all persons GPU management considered for the position of Vice-President for Nuclear Assurance and the reason for promoting Dr. Long instead of all other candidates to that position.

Identify all conversations, discussions, communications or other contacts among GPU management concerning taking disciplinary or other action against Dr. Long for his managerial responsibility for the cheating incidents cited and/or discussed in ASLB PID or the Milhollin Report. Describe any disciplinary or other action against Dr. Long and all persons in management who supported the decision to take such action.



ANSWER & OBJECTION. While Mr. Arnold and Mr. Clark discussed other employees of GPU Nuclear to assess whether they were potential candidates for the position of director - Nuclear Assurance, their conclusion was that Dr. Long was the only internal candidate. Hence, their evaluation was directed to the question of whether Dr. Long was an acceptable candidate for the position. Their decision was that he was an acceptable candidate and thus Messrs. Arnold and Clark recommended him for the position to the Board of Directors.

At the May 27, 1982 meeting of the GPUN Board of Directors, the report of the Special Master was considered. At the suggestion of Mr. Dieckamp, the focus of the Board's consideration was, "on ascertaining whether the Special Master's report provided an insight for changes or corrective measures by the Corporation." Messrs. Arnold, Clark, Hukill, Long and Wilson discussed the findings of the report with the directors and responded to questions of the directors. As a result of the discussions, "the Board concluded that no organizational or personnel changes should be made at this time."

The Board reviewed, in detail, the understanding of Training Department managers of training deficiencies, as set forth in the ASLB's PID, at its October 27, 1982 meeting utilizing Clark's memorandum of October 27, 1982. That meeting included a discussion by the Board directly with Dr. Long of his understanding of why the cheating occurred and his managerial responsibility for the incidents. The Board was satisfied

that Dr. Long understood "that his Training Department failed in its responsibility and that the failure was the principal and proximate cause of the breakdown in the integrity of the training and testing program." The Board decided that it was not appropriate to take disciplinary or other action against Dr. Long. Mr. Kuhns expressed the strongest concerns during those discussions as to whether Dr. Long's answers and insights were adequate, but at the completion of the discussions agreed with the Board decision that the actions taken by GPUN in response to the PID were appropriate.

Prior to Dr. Long joining the October 1982 Board meeting, Mr. Arnold had a brief discussion with Dr. Long to identify to him what issues he should address before the Board, and described in general the Board's concerns. Mr. Arnold also met with Dr. Long briefly after the Board meeting and discussed with him the Board's reactions to Dr. Long's views and assessments on why the cheating occurred and the steps yet to be implemented to respond fully to the ASLB's PID.

Licensee objects to the first paragraph of Interrogatory 11. The persons considered but not chosen for the position of Vice-President for Nuclear Assurance and the reason for selecting Dr. Long for that position has no bearing on the adequacy of the licensed operator training program to prepare the TMI-1 licensed operators to operate the plant safely. Absent any such relationship, TMIA's interrogatory goes beyond the scope of the remanded training issue as defined by the Licensing Board's order of July 9, 1984.

12. GPU has stated that Mr. Frederick is spending full-time studying for his operator's license at the same time he is Supervisor for Licensed Operator Training. Former TMI-2 Station Manager Gary Miller has testified that the Training Department suffered in the past because former Acting Supervisor Richard Zechman spent full-time studying for his license in the period prior to the TMI-2 Accident. B&W Trial Record, Exhibit 360 at 29.

How does GPU justify repeating a similar situation with regard to Mr. Frederick when it has admitted this practice weakened its training program in the past?

ANSWER. It should be noted that on August 24, 1984, Mr. Frederick was removed from the position of Supervisor, Licensed Operator Training. However, while similar in nature the situations of Mr. Frederick and Mr. Zechman were significantly different. In the first place, in Mr. Frederick's case the time frame was approximately two months, while in Mr. Zechman's case it was approximately six months. In the second place, the licensed operator training staff currently is significantly larger than it was when Mr. Zechman was involved, so there were more individuals able to assume Mr. Frederick's duties and responsibilities. Thirdly, the programs are better defined so that other individuals could more easily assume the duties and responsibilities. Fourth, a full-time administrative assistant for operator training assumed many of the administrative responsibilities formerly assumed by supervisors. Finally, and perhaps most important, there were three levels of supervision above Mr. Frederick, whose responsibilities are dedicated solely to training, including the Operator Training Manager who is dedicated solely to operator and STA training, whereas there

were no training supervisors senior to Mr. Zechman at TMI who had exclusively training duties.

13. Describe in detail all duties and responsibilities of Mr. Hukill regarding the training program.

Identify all additional training or experience he has acquired since the TMI-2 Accident which would qualify him for his present position with supervisory responsibilities over training.

ANSWER. Mr. Hukill is responsible to ensure that he has an adequate number of licensed operators properly trained to operate the plant safely and in compliance with all regulatory requirements. He and his staff accomplish this by working closely with the Training Department in establishing requirements and procedures for licensed operator training. He ensures that there is close coordination between the TMI-1 plant staff and the Training Department in all matters relating to licensed operator training. He and his staff review the Training Department procedures and instructional material to ensure appropriateness for licensed operator training. Mr. Hukill and his Staff determine the training and qualification status of their licensed operators through close personal on-the-job observation, observation of the licensed operators during simulated casualties and exercises at the simulator and through review of the licensed operators' performance in training, including the annual requalification examination. Mr. Hukill and his Staff also evaluate the effectiveness of the licensed operator training program and the presentation of the training through periodic participation and first-hand



observation of training. Mr. Hukill has no supervisory responsibilities over training.

14. Answer Interrogatory No. 13 above with respect to Dr. Long.

ANSWER. The duties and responsibilities of Dr. Robert Long regarding the training program are described in the following quotations from the Vice President-Nuclear Assurance Position Description:

"The Nuclear Assurance Division of GPUNC is charged with the responsibility of implementing a corporate quality assurance program and ensuring that employees are trained in the skills needed to carry out functional responsibilities. The primary emphasis of the Division is to provide an overall company focus for nuclear safety. [This includes] developing Training Programs to provide personnel with the skills and knowledge needed for quality work performance."

The principal accountabilities for training are as follows:

"MAINTAINS AND DIRECTS AN EFFECTIVE TECHNICAL STAFF through recruitment, motivation and training of qualified personnel.

DEVELOPS AND IMPLEMENTS EFFECTIVE AND TIMELY EDUCATIONAL AND TRAINING PROGRAMS to establish and maintain job qualifications and to improve job performance."

Since the TMI-2 accident, Dr. Long has served in the following positions:

1. 1979-80 ' Director-Reliability Engineering having responsibility for the Quality Assurance, Nuclear Safety Assessment, Information Management, and Systems Laboratories Departments of the TMI Generation Group.
2. 1980-82 Director-Training and Education having responsibilities for the Training Sections at TMI, Oyster Creek, and Corporate Headquarters. In addition, he served as Acting Division Head of the Nuclear Assurance Division from its formation in January 1980 until September 1980. During that time the Division included the System Laboratories and Information Management Departments as well as the current Departments of Training & Education, Quality Assurance, Emergency Preparedness, and Nuclear Safety Assessment.

Also since the TMI-2 accident, Dr. Long has attended and made presentations at a number of technical conferences addressing topics in his areas of responsibility. In September and October 1982 he completed the Edison Electric Institute four-week Executive Management Program.

15. Answer Interrogatory No. 13 above with respect to Samuel Newton.

Mr. Newton's duties and responsibilities with regard to licensed operator training are detailed in the following program descriptions and procedures: (1) Training Department Organization, 6210-ADM-2600.01; (2) Control of Examinations, 6200-ADM-2600.01; (3) Control of Examinations for Units I & II, 6210-ADM-2604.01; (4) Instructor Evaluation Procedure, 6210-ADM-2631.01; (5) Operator Training Instructor Indoctrination/Qualification Training Program, 6210-ADM-2610.02; (6) Licensed Operator Training Program Description, 6211-ADM-2611.01; (7) Replacement Operator Training Program Description, 6211-ADM-2611.04; (8) TMI-1 Senior Reactor Operator Training Program, 6211-ADM-2611.02; (9) Simulator Training Instructor Indoctrination/Qualification, 6211-ADM-2610.03; and (10) TMI-1 Director Senior Reactor Operator Training Program, 6211-ADM-2611.03. A copy of these documents will be available in the document discovery room.

Most of Mr. Newton's training or experience qualifying him for his duties as Manager, Plant Training occurred during his nearly twelve years of active duty as a Naval Officer, from 1968 to 1980, which had no relationship to the timing of the TMI-2 Accident.

Since his employment at TMI in April 1980, Mr. Newton has undergone the following training considered pertinent to his supervisory responsibilities over licensed operator training:

Instructor Development Program	Sept. 8-12, 1980
Testing and Evaluation	Feb. 9-10, 1983
Performance Appraisal Training	Sept. 21, 1982
EOF Operations	Aug. 10, 1982

NEOF Communications  
ED/ESD Course Part I  
Participated in following  
Emergency Drills:

Nov. 2, 1982  
Sept. 21, 1983

Mar. 24, 1982  
June 24, 1982  
Dec. 15, 1982  
Feb. 24, 1983  
Mar. 24, 1983  
June 21, 1983  
Oct. 19, 1983  
Nov. 16, 1983  
Aug. 29, 1984

Completed 2 weeks Simulator Training  
Course at B&W resulting in Operator  
Startup Certification

April 9-12, 1984  
April 16-20, 1984

Observer at Operator Training for  
ATOG procedures at B&W Simulator

Jan. 24-27, 1984

Observer at Operator Regualification  
Training at B&W Simulator

Jan. 3-7, 1983

Mr. Newton's biggest area of growth since arriving at TMI has not been in technical and managerial aspects of training, but in the educational aspects of training. In this area, the greatest teacher has been the experience of working with Drs. Knief, Long, and Coe, especially Dr. Knief since May of 1980.

He has also been involved with the Mid-Atlantic Nuclear Training Group and the Babcock and Wilcox Owner's Group, Operator Support Subcommittee, and attended meetings and conferences at the Nuclear Regulatory Commission, the Institute of Nuclear Power Operations, Westinghouse, and the American Nuclear Society, where the focus has been on training and training-related activities.



16. Answer Interrogatory No. 13 above with respect to Edward Frederick.

In the position of Supervisor, Licensed Operator Training, Mr. Frederick was responsible for coordinating and supervising the development and implementation of comprehensive Senior Reactor Operator and Reactor Operator Training and requalification programs for the respective units which comply with regulatory and corporate requirements. The duties of the Supervisor, Licensed Operator Training, include, but are not limited to:

- ° General supervision of the development and conduct of the Replacement SRO Training Program.
- ° Approval of the development, coordination, scheduling and administration of the Replacement SRO Training Program, including course outlines, lesson plans, student handouts, simulator training, and evaluation exams.
- ° Scheduling classes, students, classroom and facilities necessary to conduct the training program.
- ° Interfacing with the Operations Department in all matters impacting the training programs.
- ° Assuring that the program content is updated and revised to meet current requirements and supervising revision of the program content, descriptions, lesson plans, and exams.

- ° Evaluation of course instruction and license candidate progress to determine the effectiveness of the training program and reporting these evaluations to the Operator Training Manager.
- ° Maintaining the necessary records and reports of training.
- ° Evaluation of candidate critiques of the training received.
- ° General supervision of the development and conduct of the Replacement Operator Training Program.
- ° Approval of the development, coordination, scheduling and administration of the Replacement Operator Training Program, including course outlines, lesson plans, student handouts, simulator training, and evaluation exams.
- ° Monitoring and conducting spot checks on the quality of OJT.
- ° Developing, scheduling and conducting oral exams.
- ° Determining the scope of the Fundamentals Review and Operational Proficiency Lecture Series.
- ° Determining mandatory attendance requirements at regualification lectures based on weaknesses on previous annual regualification examination.

- ° Designating those abnormal and emergency procedures to be the basis of the quiz questions for each six weeks' cycle such that all abnormal and emergency procedures are tested biannually.
- ° Designating individuals to conduct overall evaluation of the annual lecture series and resolving problems described in these evaluations.
- ° Resolving problems identified by evaluation of lecture series training sessions.
- ° Preparing notification for plant and training management and the Director, TMI-1 of unsatisfactory performance as directed by this program.
- ° Specifying changes and modifications to be analyzed for review in the operational review program.
- ° Determining expanded coverage of plant design changes, equipment modifications, procedure changes, and technical specification changes in the Operational Proficiency Lecture Series.
- ° Specifying in conjunction with Technical Functions, operating experience to be analyzed for training purposes and integrating the information into the training program.
- ° Designating personnel to prepare and grade the annual written examination, review the examination and answer key and review the graded examination for grading techniques and consistency.

- ° Designating personnel to review and update the examination question file.
- ° Identifying significant licensee performance deficiencies requiring accelerated requalification programs.
- ° Formulating individual accelerated requalification programs and designating individuals to conduct the associated examinations.
- ° Preparing recommendations to plant and training management and the Director, TMI-1 regarding the permanent removal from licensed duties or additional upgrading efforts to be considered for those individuals failing to meet the standards of the accelerated requalification program.
- ° Conducting an annual requalification program review and evaluation, submitting a report on this review, and taking immediate corrective action where necessary.
- ° Establishing the requalification program.
- ° Review of lesson plans for implementation of this program.

Mr. Frederick's experience which related to his duties as Supervisor, Licensed Operator Training is extensive and includes many years of Naval and commercial operating experience prior to the TMI-2 accident. Since the TMI-2 accident, Mr.



Frederick has held the following positions which lend additional experience:

Control Room Operator	(1975)	to	6/79
Instructor	6/79	to	2/82
Supervisor, Non-Licensed			
Operator Training TMI 1 & 2	2/82	to	3/83
Supervisor Licensed			
Operator Training	3/83	to	7/84

Training accomplished by Mr. Frederick is also extensive and, as shown below, includes acquiring a Senior Operating License on TMI-2 and completion of the Senior Operator License program in TMI-1.

Completed Training Programs:

- Supervisory Development \*
- Decision Analysis \*
- Instructor Development \*\*
- Performance Appraisal Training
- Testing & Evaluation Training
- Training System Development Training
- Senior Reactor Operator Training Program TMI-2 \*\*\*
- Senior Reactor Operator Training Program TMI-1
- Emergency Director Training \*

- \* As Part of SRO program
- \*\* Also Participated as instructor in this program
- \*\*\* Licensed by NRC 1/82

Additional experience in the below listed activities contributed to Mr. Frederick's qualifications as supervisor of licensed operator training:

Participation in Emergency Drills: 02/24/83  
03/24/83  
06/21/83  
09/15/83  
10/19/83  
11/16/83  
04/05/84  
05/24/84

Observe/evaluate operator training at simulator (B&W)  
Participated as author/reviewer in TMI Training Program

Development

Participated in INPO Job Task Analysis Development (1981)  
Attend meeting/conferences focusing on training with the following groups:

Mid-Atlantic Training Group  
Operator Training Review Team (TMI)  
Nuclear Regulatory Commission  
Institute of Nuclear Power Operations

Additional development as a supervisor/instructor has been achieved by working with experienced educators and managers including Dr. Ronald Knief, Dr. Robert Long and Samuel Newton.

17. Identify all communications, conversations, discussions or contacts among GPU management regarding taking disciplinary or other action against Mr. Husted for his involvement and/or participation in the cheating incidents identified in the ALSB PID or Milhollin Report. Identify all persons in GPU management who supported taking disciplinary or other action against Mr. Husted.

Identify all positions Mr. Husted has held at GPU from 1977 through the present and the reason(s) for any transfers and/or promotions of Mr. Husted.

ANSWER. See response to Interrogatory 9, concerning Mr. Husted. Mr. Newton does not recall any conferences regarding disciplinary action against Mr. Husted, except as related to the management initiative in June 1983 regarding the actions taken with regard to individuals involved in several investigations and those whose involvement with training were objected to by the Commonwealth of Pennsylvania. It was at this time that Mr. Husted's SRO license was removed. This action was ultimately concurred in by all levels of training management as well as corporate management. As pointed out in the ALSB PID, Mr. Husted's actions found to be objectionable were not cheating, but rather a failure to cooperate with NRC

investigations and a seeming lack of respect for the entire process as exhibited by his demeanor at the reopened hearings. Furthermore, there was a concern that, being an instructor, Mr. Husted had opportunities to convey his "attitude" to trainees. Since Mr. Husted had been thought to be a good instructor, disciplinary action was not the focus of conversations between Mr. Newton, Dr. Knief, and Dr. Long. Instead our concerns were that Mr. Husted recognize his errors and understand our concerns for the effect that he could have on trainees if he displayed an improper attitude towards regulatory agencies in front of his trainees. To this end he was counseled by the individuals mentioned above and by Mr. Hukill. Additionally, it was determined that Mr. Newton and Dr. Knief should conduct additional, more frequent evaluations of Mr. Husted's classroom performance. Mr. Hukill directed Mr. Michael Ross to make similar evaluations.

Mr. Husted's positions at TMI since 1977 through the present has been as follows:

- ° Auxiliary Operator - 1977.
- ° Control Room Operator - 1977 - July 1978 - bid for this job through the established process between the bargaining unit and management.
- ° Administrator Nuclear Technical Training - July 1978 - March 1983. According to Mr. Richard Zechman, Mr. Husted was promoted to this position due to attrition in the Training Department as well as his experience at the plant.

° Supervisor, Non Licensed Operator Training -  
March 1983 - June 1984 - see response to Interrogatory 9  
regarding reasons for promotion to this position.

° Risk Analysis Engineer - June 1984 - present -  
assigned to this position as a result of concerns expressed in  
ALAB-772 regarding the appropriateness of his promotion to the  
position of Supervisor, Non-Licensed Operator Training.

18. Answer Interrogatory No. 17 including all subparts  
with respect to Mr. H.

OBJECTION. Licensee objects to Interrogatory 18 on the  
grounds that the information sought is neither relevant, nor  
likely to lead to the discovery of relevant information.  
Licensee's management decisions regarding Mr. H, a former reac-  
tor operator at TMI-1, have nothing whatsoever to do with the  
quality of Licensee's past, much less present, licensed opera-  
tor training program. Moreover, pursuant to a stipulation be-  
tween Licensee and the Commonwealth of Pennsylvania, Mr. H, who  
has been reassigned to the TMI-2 Waste Shipping Department,  
will never again operate TMI-1. Metropolitan Edison Company  
(Three Mile Island Nuclear Generating Station, Unit 1), ALAB-  
772, slip opinion (May 24, 1984) at 23. Thus, Mr. H is not  
subject to the licensed operator training program at TMI-1.

19. State GPU's position, e.g., agreement or disagree-  
ment, with respect to the Appeal Board's statement in ALAB-772  
that "one-fourth of those who took the April 1981 NRC examina-  
tions (9 out of 36) either were directly involved in cheating  
of some sort or were implicated in a way that could not be sat-  
isfactorily explained or resolved." Slip. Op. at 64.

Identify all persons whose participation or in-  
volvement in any of the cheating incidents could not be



satisfactorily explained or resolved by GPU by July 27, 1982, the date of the ASLB PID. Identify any investigation, inquiry or other action taken by GPU to resolve and/or determine the participation or involvement of all persons identified above.

OBJECTION. Licensee objects to Interrogatory 19 on the grounds that the information requested is neither relevant nor within the scope of this proceeding. Licensee's opinion concerning the Appeal Board's statement regarding the number of persons involved in the cheating, the identity of those persons, and Licensee's investigation thereof to determine which persons were involved in the cheating have nothing to do with the quality of its licensed operator training program. TMIA's inquiry goes to the question of who cheated and Licensee's reaction thereto. As the Board clearly stated in its Memorandum and Order Following Prehearing Conference dated July 9, 1984, the cheating itself is not at issue in this proceeding. The issue, as framed by the Board, is what Licensee's consultants make of the need to cheat perceived by the operator license candidates. Id. at 6. TMIA's inquiry addresses the former rather than the latter issue and is therefore clearly neither relevant to, nor within the scope of, the issues involved in this proceeding.

20. With regard to each member of the Reconstituted OARP Review Committee, identify the following:

(a) his educational background and work experience if not otherwise stated in the Special Report;

(b) all work, as a consultant, contractor or employee of GPU which he has performed for GPU during the last 10 years, excluding his work on the Special Report;

(c) his preparation to research and/or write the Special Report, including but not limited to the following:

(i) identification of all documents he reviewed;

(ii) identification of all persons contacted and the substance or nature of all such contacts;

(iii) all facilities or locations visited and/or inspected, and the purpose for each such visit or inspection;

(iv) identification of all persons consulted with respect to the conclusions and/or evaluations expressed in the Special Report;

(v) identification of all communications, written or oral, with GPU management, including GPU attorneys preparing this hearing;

(vi) identification of all documents which refer to, memorialize, mention, relate to, or concern in any way the contacts identified in subpart (ii); the visits or inspections identified in subpart (iii); the persons identified in subpart (iv), and the communications identified in subpart (v); or

(vii) any other work done to prepare, research and/or write the Special Report.

ANSWER. (a), (b) The information requested in subparts (a) and (b) of Interrogatory 21 is contained in the resumes of the members of the Reconstituted OARP Committee, a copy of which will be available in the document discovery room.

(c) (i) see Table A-2 OARP Special Report

(ii) see Table A-1 OARP Special Report

(iii) see Page 2 OARP Special Report

(iv) The Reconstituted OARP Committee consulted with Dr. Richard P. Coe, Director of Training and Education,

for factual accuracy of the information on which the conclusions and/or evaluations are based that are expressed in the Special Report.

(v) See Table A-1, A-2, Reconstituted OARP Special Report.

(vi) See Reconstituted OARP Special Report, previously referenced tables, and notes from Dr. Long's contacts with Committee members which are in the document discovery room.

(vii) See drafts of Reconstituted OARP Special Report, available in the document discovery room.

21. Describe the arrangement according to which GPU has retained each member of the Reconstituted OARP Review Committee. State the following with respect to each such member:

(a) whether GPU anticipates or intends that he be a witness in this proceeding;

(b) whether GPU anticipates or intends that he prepare, research or write any other report for use in connection with these reopened management hearings;

(c) whether GPU anticipates or intends that he be given a position in GPU at any time in the future; and

(d) whether GPU anticipates or intends that he be retained for any work for GPU in the future.

ANSWER. (a) GPUN does anticipate use of the Reconstituted OARP Committee as witnesses in this proceeding.

(b) No.

(c) No.

(d) At the present time, we do not know.

22. State GPU's position as to the reason(s) it was appropriate that Dr. Long be promoted to a position of significant responsibility for training when he was Director of Training and Education during the cheating incidents and in light of the comments of the Appeals Board. ALAB-772 at 71, n.56.

23. State GPU's position as to the reason(s) it is appropriate that Samuel Newton be promoted to the position of Manager of Plant Training when he held the position of Manager of Plant Training during the cheating incidents and in light of the comments of the Appeals Board. ALAB-772 at 71, n.56.

24. State GPU's position as to the reason(s) it is appropriate that Edward J. Frederick be promoted to the position of a supervisor of Licensed Operator Training when he was in the position of a control room operator assigned to TMI-2 at the time of the accident and at the time of the cheating incidents, and in light of the comments of the Appeals Board. ALAB-772 at 71, n.56.

OBJECTION. Licensee objects to Interrogatories 22, 23 and 24 on the grounds that they are redundant and irrelevant. The information requested in Interrogatory 22 is duplicative of that requested in response to Interrogatories 5 and 11; Interrogatory 23 is duplicative of Interrogatory 6; and Interrogatory 24 is duplicative of Interrogatory 7. Therefore, Interrogatories 22-24 are unnecessary and burdensome. Moreover, Interrogatory 24 seeks to factor Mr. Frederick's involvement with the accident at TMI-2 into this proceeding. Any information related thereto is irrelevant to the current licensed operator training program.

25. Describe the strategy developed by Dr. Coe for an integrated training program for instructors referenced on page 20 of the Special Report.

Include the following:

(a) identification of any other nuclear projects, utilities, corporations, educational institutions or other projects where a similar instructor training program has been utilized, and any documented evaluation of such programs;

(b) identification of all persons and documents which Dr. Coe consulted to develop his strategy;

(c) any other strategies or options considered for developing or establishing the instructor training program.

ANSWER. In May of 1983, the Director of Training & Education created the Educational Development section headed by a manager reporting directly to him. The purpose of this new section was to uniformly administer generic efforts of GPU Nuclear Training & Education Department. One such program was the Instructor Development Program cited in the Special Report.

(a) There are probably large centralized organizations such as the military, state universities, etc., that use a similar strategy, but I did not pattern this organization after any of those cited.

(b) Dr. Long, Dr. Knief and various members of the T&E Department.

(c) In addition to the GPUN T&E Instructor Development Program, consideration is given to the use of appropriate outside resources in the development of our instructors.

26. Identify all individuals whom GPU believes were involved or participated in any of the cheating incidents cited and/or discussed in the ASLB PID or Milhollin Report.

For each individual or cheating incident identified above, state the reason(s) the person participated in the cheating incident or that the incident occurred.

Identify all root cause(s) for the cheating incidents cited and/or discussed in the ASLP PID or Milhollin Report.

OBJECTION. Root causes for the cheating incidents are discussed in a number of other interrogatory answers. Licensee



objects to the remainder of Interrogatory 26 on the grounds that the information requested is not relevant, nor likely to lead to the discovery of relevant information. Interrogatory 26 in part seeks to ascertain information pertaining to the cheating itself which is not at issue in this proceeding. As the Licensing Board stated in its Memorandum and Order following Prehearing Conference, July 9, 1984 at 3: "there will not be a new cheating litigation on remand." Interrogatory 26 is therefore irrelevant because it requests information concerning the cheating which is outside the scope of the proceeding on the quality of Licensee's current licensed operator training program.

27. Identify all investigations, inquiries, studies, research or reports GPU has conducted to determine the root cause(s) for the cheating incidents cited and/or discussed in the Milhollin Report and/or ASLB PID. For each such investigation, inquiry, study, research or report identified above, identify the following:

- (a) its purpose;
- (b) all persons who participated in it;
- (c) the manner in which it was conducted;
- (d) recommendations, suggestions, conclusions or results reached in such investigation, inquiry, study, research, or report identified above;
- (e) all documents which refer to, mention, concern, memorialize or otherwise relate to any investigation, inquiry, study, research, or report identified above; and
- (f) any action taken by GPU management in response to any investigation, inquiry, study, research, or report, or their recommendations or suggestions, identified above.

ANSWER. There are four efforts which fall within the scope of what GPUN understands to be the intent of this interrogatory. (A fifth effort, documented in the "RHR Report," may be within the scope of the intent of the interrogatory but is not addressed here since it is covered in response to TMIA document request (second set) #32). The four efforts are:

1. The July-October 1981 investigation by GPUN (Wilson/Trunk) to identify any cheating on Company administered tests subsequent to the accident.
2. The review of the TMI-1 training program by Data Design Laboratory in June-August 1982.
3. Reviews initiated by Arnold and Clark in August-October 1982, with Training Department management to assure full recognition by them of the causes of the cheating and the necessary corrective action.
4. A meeting with Dr. John Landy of Pennsylvania State University in January 1982 to acquaint Training management with the behavior scientists' understanding of reasons for cheating, the significance of a willingness to cheat in predicting the reliability of performance on the job, and the appropriate response by the Company to the problem.

Wilson/Trunk Investigation - Information requested by this interrogatory relating to the first effort listed was provided in response to discovery requests and interrogatories from TMIA prior to the reopened hearings in 1981 before the Special Master. (See Licensee's Response to TMIA's First Set of Discovery Requests of Licensee in Reopened Hearing of Cheating Incident

(as modified by Agreement) dated October 15, 1981; the Supplement to that Response dated October 26, 1981; and, Licensee's Response to TMIA's First Set of Interrogatories Addressed to Licensee (as modified by Agreement) dated October 26, 1981.

DDL Assessment - In June 1982, GPU Nuclear contracted with Data-Design Laboratories (DDL) to conduct an independent assessment of selected TMI-1 training programs including operator training programs. The information requested in Interrogatory 27 (a)-(d) is contained in the report of this assessment, entitled "Assessment of Selected TMI-1 Training Programs," Volumes 1 - Assessment Report and Volume 2 - Supporting Materials, Data-Design Laboratories, Cucamonga, CA, September 10, 1982.

In addition to the report referenced above, documents which relate to the DDL assessment include:

- a. File folder labeled, "Data Design Lab," which contains correspondence between GPUN and DDL.
- b. Pocket file folder labeled, "Transmittals to DDL - Draft Sections," which contains drafts of the DDL report with annotations.
- c. File folder labeled, "P.O. No. 190069."
- d. File folder labeled, "DDL Status Reports," which contains notes and summary reports on the response to the DDL recommendations.
- e. Notes taken by R. L. Long during the organization and conduct of the DDL assessment.

The actions taken by GPU management in response to the DDL Report recommendations are described in Memorandum DAR/84/038, "DOL Report Summary," from D. A. Ross to R. P. Coe, dated August 7, 1984.

T&E Department Reviews - By Interoffice Memorandum on August 6, 1982, R. C. Arnold asked that R. L. Long and each of T&E Section Managers review in detail the TMI-1 ASLB PID of July 27, 1982. Each individual was asked to provide, "...an independent written report as to what each of you believes to be the lessons learned from the problems discussed in the Decision." The copy of this memorandum and the four responses from R. L. Long-Director-Nuclear Assurance, R. A. Knief-Manager - Plant Training-TMI, D. A. Ross-Manager - Corporate Training and D. P. Gaines-Manager-Plant Training-Oyster Creek indicate the lessons learned and the responses planned. R.L. Long summarized the key lessons to be learned, as identified by the four respondents, in a Memorandum to File dated October 6, 1982. This summary memorandum was reviewed with P.R. Clark and follow-up discussions were held with the Office of the President, R.L. Long and the T&E Managers in February, June and October 1983 and January 1984.

As part of this overall effort, additional reviews of the ASLB PID of July 27, 1982 were performed by Director-Special Projects D.E. Hetrick for Dr. Long and Manager, QA Program Development & Audit M.J. Stromberg for Mr. Arnold. These were used to review and evaluate the lessons to be learned from the

cheating incidents and the GPUN response to these lessons. Copies of the relevant documents will be available in the document discovery room.

Landy Meeting - On January 6, 1982 a meeting was scheduled at TMI with Dr. Frank J. Landy, a management consultant. Individuals participating included R. Long, J. Herbein, H. Hukill, A. Brinkman, J. Berg, J. Wilson, and R. Lloyd. Items discussed and the general content of the discussion are identified in a letter from Dr. Landy to E. L. Blake, dated January 6, 1982. This letter identified proposed further actions with Dr. Landy's assistance.

In addition to the letter mentioned above, documents which relate to this meeting include:

- a. File folder labeled, "Landy Meeting - TMI, 0900, 6 Jan. '81."
- b. Notes taken by R. L. Long during the meeting.

The inputs from the discussion and subsequent letter were considered in the overall GPUN response to the cheating incidents, but no further contacts with Dr. Landy occurred. The documents referred to above are provided in the document discovery room.

28. Identify all criteria GPU has established for training instructors since the ASLB PID, including but not limited to those referenced on page 21 of the Special Report.

Identify all documents which contain, refer to, mention, recommend or otherwise concern the criteria identified above.

ANSWER. Each Training and Education Department instructor is required to receive training in instructional theory and skills. Specific requirements by discipline (e.g., Operator



Training) have been established in qualification and certification procedures which also address technical knowledge, skills, and experience. These procedures set requirements for initial certification to teach, completion of the basic 40-hour instructor course, and attendance at special-topic advanced courses as available.

The following Instructor Development courses have been conducted:

- ° Basic Course (40 hours)
- ° Testing and Evaluation Workshop
- ° Training System Development (TSD) Overview

The Basic Course addresses theory and skills needed by new instructors with a significant focus on presentation. Formal lectures are supplemented by "small group" interactions in which a supervisory-level member of the training department guides the group through practical and policy matters and evaluates and critiques the three presentations made by each student. Since the course is conducted entirely by Training and Education Department management, supervisory, and instructor personnel, the subject matter is continuously translated into the context of nuclear plant training.

The advanced instructor training modules on TSD and on Testing and Evaluation have been the first elements of continuing training. The TSD overview expands the discussion of performance-based training that was introduced in the Basic Course and which is consistent with INPO and NRC emphasis on

systematic training. The Testing and Evaluation course combines instruction on test construction methods with a workshop on test planning. The workshop leads to development of a taxonomy of cognitive skills that reflects the elements appropriate to nuclear training. This exercise emphasizes the need to plan tests that cover both the whole range of subject areas and a distribution of cognitive levels (e.g., recall, comparison, analysis, and diagnosis). The documents which discuss these criteria will be available in the document discovery room.

29. Describe in detail the duties and responsibilities of the Director of Training and Education, the Managers of Training, Section and Group Supervisors, examiners and proctors, as referenced on page 25 of the Special Report.

Describe the scope and substance of interviews conducted by the Vice-President/Director of TMI-1 with all operators, as referenced on page 25 of the Special Report. Identify in your description the following:

- (a) any instructions, directions or guidance given the operators in the interviews;
- (b) any information obtained from the operators during the interview; and
- (c) any documents memorializing, mentioning, referring to, or otherwise concerning these interviews.

ANSWER. With respect to the duties of the training personnel referred to on page 21 of the Special Report, see (i) Control of Examinations Procedure, 6200-ADM-2600.01; and (ii) Control of Examinations for Units I and II, 6210-ADM-2604.01.

The Vice President of TMI-1 interviews all licensed operator candidates prior to certifying them for their initial

license or relicensing. At a minimum, each licensed operator is interviewed by the Vice President of TMI-1 annually, whether or not he/she is applying to be relicensed during that year. The following subjects are discussed and instructions and guidance given to the operators during these interviews:

- Importance of their duties to the safety and health of the public and their fellow employees.
- Requirement for procedural compliance.
- Importance of the NRC examination process in licensing operators.
- Duties and responsibilities of the Company and its employees as a regulated industry.
- The essentiality of honesty and integrity in all aspects of plant operation and maintenance, including training and the examinations associated therewith.
- The cheating that occurred in 1981, including possible causes therefore and the corrective measures taken.
- The requirement to openly address all nuclear safety related questions or problems with management, and if they are not satisfied with the answers thereto from management, their personal responsibility to bring them to the attention of the NRC.
- Current events, schedules, problems and incidents.
- The difference between honest mistakes and intentional/willful violation of procedures and rules. Included is a discussion of the bases for procedures, rules and regulations.

Each operator is given the opportunity during the interview to ask questions or raise issues and/or problems with the Vice President. The Vice President attempts to resolve through his Staff any issues or questions raised by the operators. There have been no significant safety issues raised by the operators

interviewed in the past two years. Questions raised have included items such as the brightness of indicating lights at the control panels, CPR training for licensed operators, paving of the parking lot, lights for the parking lot, career progression, and suggestions concerning improvement in training.

In February of 1984, the Training Department initiated a formal form to document all interviews of licensed operators conducted by the Vice President of TMI-1. Prior to this time, the Vice President of TMI-1 indicated completion of the interviews for initial license and relicensure candidates on the official certification form maintained by Training. Records of the dates of all interviews conducted by the Vice President of TMI-1 were also maintained by his secretary. No notes or other written material of the items discussed during these interviews were maintained either by the Vice President or by the licensed operator being interviewed. Mr. Hukill, however, does make notes on a scratch pad for himself of issues that arise on a daily basis until they are resolved, at which time he throws out the notes.

30. Describe all security procedures developed and implemented by GPU to prevent cheating, as referenced on page 25 of the Special Report. Include in your description any portion of the program which concerns preparation, storage, or administration.

State whether these security procedures are the primary method by which GPU intends to prevent cheating on operator examinations in the future. If your answer is yes, explain the factual basis for your answers.

For all security procedures described above, identify the following:

- address;
- (a) the problem or finding it was designed to address;
  - (b) the date on which it became effective;
  - (c) all actions GPU has taken to implement the procedure since the procedure became effective; and
  - (d) all documents which mention, refer to, memorialize, or otherwise concern any such action identified above;
  - (e) any documented evaluation of whether the action taken has in fact been effective in resolving the problem and/or finding.

ANSWER. There are three documents which establish exam security procedures. A copy of these documents will be provided in the document discovery room.

- (1) Control of Examinations Procedure, 6200-ADM-2600.01.
  - a. The Control of Examinations procedure was written to implement the examination safeguards process and to provide guidance for instructors and supervisors regarding actions to be taken should the process be compromised. It also promulgated an examination cover sheet.
  - b. Rev. 0 of this procedure had an effective date of October 20, 1981.
  - c. GPU has taken the actions required by the procedure to implement it. Furthermore, use of the procedure and its importance is a discussion topic for each new instructor as part of his qualification process.
  - d. Operator Training instructor qualification card; Simulator Training instructor qualification card; Control of Examinations for Unit I and II.



- e. The evaluation that the procedure has been effective is best found in the records of collusion reviews performed on each examination in licensed operator training. These collusion reviews were established by the Control of Examinations Procedures for Units I and II and since their inception there has been no evidence of collusion in examinations taken by licensed operators or licensed operator trainees.

(2) Control of Examinations for Units I and II,

6210-ADM-2604.01.

- a. This procedure was written to expand upon the Control of Examinations procedure for the operator training section of the TMI Training Department and to address the need for guidance and examination grading and review to respond to the finding by the ASLB requiring such guidance.
- b. The effective date of Rev. 0 was December 1, 1982.
- c. See 1(c) above.
- d. Operator and Simulator Instructor qualification cards.
- e. See 1(e) above.

(3) R.A. Knief memo, 6211-82-0194.

- a. Written to require the use of yellow paper for materials used in the preparation of exams and for exams themselves.

- b. Date of memo - June 7, 1982.
- c. We use yellow paper.
- d. None' known.
- e. There really was not a problem to be resolved, but we wanted to avoid the potential for a problem. The use of yellow paper was designed to provide a heightened sensitivity to examination materials so that they would not be left unattended or so that if they were, somebody, hopefully another instructor, would notice the situation more quickly than if regular white paper was being used. There have been no problems identified in this area. There was one occasion where an examination for a licensed operator was voided because an instructor left the completed, but ungraded exam on another instructor's desk. The operator had to take another, different examination, and the instructor was formally reprimanded in a letter.

The following memos by Mr. Bruce Leonard, Dr. Richard Coe, and Mr. Edward Brown are additional documents which pertain to the procedures discussed above:

- (4) Leonard memo 6211-84-0065, dated January 27, 1984, "Operator Training Comprehensive Exam Construction, Guidelines For";

- (5) Leonard memo 6211-84-0194, dated March 7, 1984, "Administration of Exams";
- (6) Leonard memo 6211-84-0198, dated March 8, 1984, "Examination Administration";
- (7) Coe memo dated April 9, 1984, "Administration of Examinations"; and
- (8) Brown memo 6211-84-0297, dated April 13, 1984, "Administrative Functions".

A copy of documents (4) through (8) will be available in the document discovery room.

These procedures are the method by which GPU provides the mechanics designed to reduce or eliminate the opportunity to cheat and to detect it if it should occur. However, the primary method by which GPU intends to prevent cheating is to keep the issue squarely in front of our people and to ensure that new hires are indoctrinated such that the lessons learned from our experiences in the 1980-81 time frame are not repeated. We will continue to rely on our people's integrity and their awareness and sensitivity to this issue.

31. Describe the procedures used by instructors to check for "suspicious degrees of parallelism" while grading Category 1 exams, and the procedures used to investigate any such incidents found, both referenced on page 27 of the Special Report.

ANSWER. See Control of Examinations Procedure, 6200-ADM-2600.01, Control of Examinations for Units I and II, 6210-ADM-2604.01, and response to Interrogatory 29.

32. Describe all GPU Responses to the OARP Review Committee Report dated July 1, 1980, if not otherwise specified in the Special Report. If specified in the Special Report, identify each response by the page number on which it is described.

ANSWER. GPUN responses are referred to on pp. 28-37 of the Special Report of the Reconstituted OARP Review Committee, June 12, 1984.

Recommendation	A - pp. 28-29
"	B - pp. 29
"	C - pp. 30
"	D - pp. 30
"	E - pp. 31
"	F - pp. 31-32
"	G - pp. 32-34
"	H - pp. 34
"	I - pp. 34
"	J - pp. 35
"	K - pp. 35
"	L - pp. 36
"	M - pp. 36
"	N - pp. 37

33. Explain how GPU Nuclear has used the INPO task analysis to develop the BPTS Program, as referenced on page 36 of the Special Report.

ANSWER. Members of the Simulator Development Section of TMI training examined the INPO task list and selected those generic elements of the list applicable to TMI-1 for which a simulator (the BPTS or the replica) would provide the most appropriate training method. The results were assigned relative priorities (based in INPO and in-house judgments) and stored in the BPTS computer for future reference.

After the BPTS was delivered to TMI, preparations for the first training session identified tasks which could be addressed individually or in groups during the planned plant start-up evolution. The lesson plan, generated and stored on

the computer, includes selected task items consistent with priority and available time. Future BPTS lessons will be able to draw from this same task data base.

34. With respect to each current training instructor or supervisor in the Training Department, state whether or not he has a reactor operator license or a senior reactor operator license. If any training instructor or supervisor does not hold a reactor operator license or senior reactor operator license, explain the reason(s) GPU has maintained him in that position even though he does not hold a license.

With respect to each current training instructor or supervisor in the Training Department, state whether or not he currently holds a college degree.

For all operators, training instructors or training supervisors who do not currently hold a college degree, state his/her qualifications, training, and prior work experience.

Identify all operator, training instructor or training supervisor positions which are currently open (not filled) in the Training Department.

ANSWER. See resumes of instructors and supervisors associated with licensed operator training for TMI-1, a copy of which will be available in the document discovery room.

Those instructors or supervisors who do not hold a reactor or senior reactor operator license are either in training for a license or will commence training programs after those currently in training obtain their licenses or certificates. However, there is no requirement that an instructor have a license. The requirement stated in NUREG-0737 is that an instructor who teaches certain subjects such as plant systems, integrated plant response, plant transients or is a simulator instructor shall have demonstrated his competence by passing an SRO examination. The SRO certificate has evolved from this



requirement. Also, there are other subject areas such as reactor theory, radiological controls, chemistry, and heat transfer, fluid flow and thermodynamics, where this requirement does not apply. In short, an instructor does not have to hold a license or certificate in order to make a meaningful contribution to licensed operator training.

The following positions associated with licensed operator training are currently open:

a. Supervisor, Licensed Operator Training - this position is being filled on a temporary basis by Mr. R. H. Magg, one of the licensed operator training instructors, due to the removal in August 1984 of Mr. Frederick.

b. Simulator Program Development Specialist

c. Simulator Instructor (3) - two of these positions are currently being filled by control room operators (RO) on loan from the Operations Department. The present intention is for them to return to Operations for restart and the training and testing program. Following this, if all parties concerned agree, they will be transferred to the Training Department to complete their instructor qualifications including SRO licensing or certification. The third position is vacant.

35. Describe the audits done by management, referenced on page 45 of the Special Report. Include in the description the following:

(a) identification of all persons who performed the audits;

(b) the manner in which the audits are documented;

(c) the criteria and/or standards according to which the audits are conducted;

(d) the purpose of the audits;

(e) the total number and frequency of the audits conducted up to this time;

(f) the results and conclusions of all audits conducted up to this time;

(g) identification of all audit reports or other documents generated in connection with these audits and their current location.

Explain why these audits would "give operators . . . confidence that management is truly concerned that the training activities are carried out effectively."

ANSWER. The audits of training conducted by management are done in the following fashion:

- Unannounced spot visits; a process in which a manager arrives unannounced in class for the purpose of merely observing.
- Planned visit; a process in which a manager interested in a specific subject plans to attend that program and informs training management of such.
- Invitation; a process in which a manager is invited by Training to observe the training on a specific topic.
- Planned evaluations; a process in which a manager attends a training session for the purpose of evaluating, and feeding back to training the observations and recommendations.

(a) Audits are not restricted to any particular segment of management; but normally, TMI operator training is audited by training and operations management and the Vice Presidents of Nuclear Assurance and TMI-1.

(b) For the most part, audits are not documented; when they are the observer usually completes a standard evaluation checklist or provides a written summary sent to the training manager.

(c) If a documented audit is conducted, the criteria or standard used is specified on the evaluation checklists, copies of which are available in the document discovery room. If a written summary is generated, it is a recap of what the observer saw and heard with appropriate recommendations.

(d) The basic purpose of the audits are:

- Management visibility
- First-hand observation of training
- Evaluation of training

(e) The total number and frequency of the audits cannot be measured in that many audits are conducted unannounced and undocumented. Documented audits have been recorded and are provided in response to TMIA's document requests.

(f) The results and conclusions of all audits are, for the most part, fed back to training except for those audits of special interest in that a manager feels that they have seen what they came for, are satisfied with the results and there is

no further need for communication. Other vehicles are verbal feed-back from the auditing manager to training management or as previously stated written documentation that is fed-back to training.

(g) If necessary, a secondary audit may be conducted as a result of the findings of the first audit and the recommendation of the auditing manager. This may be done by having a training supervisor go in to observe the same class and concur or dispute an observation. Most times this is conducted on a one-on-one verbal exchange and no documentation is generated. On the other hand, there may be a need to conduct a more formal audit, and this process can be put in motion by the Manager of Plant Training. A third vehicle may be the establishment of a review committee to look at a specific concern and this is usually followed by a written report filed with the Training Manager. The Operator Training Review Committee at TMI-1, initiated by the Director of Training and Education, is an example of this type of audit.

Unless specified for formal evaluative purposes, the management auditing of training programs at TMI is not required. GPU Nuclear management are frequent visitors to the TMI Training Center and as such are visible to the students in the classes. The fact that GPU Nuclear management is there and that students can have first-hand discussions about their training provides them with a confidence that there is concern by their management that the training activities are carried out effectively.

36. What is the number of licensed reactor operators and senior reactor operators required by the Nuclear Regulatory Commission for operation of TMI-1? State the factual basis for your response including a citation to all relevant NRC requirements.

OBJECTION. Licensee objects to Interrogatory 36 on the grounds that the information requested is not relevant, is not likely to lead to relevant information, and is publically available to TMIA. The number of reactor operators required by the NRC for operation of TMI-1 is in no way related to the quality of the licensed operator training program. Furthermore, this information is publically available to TMIA, which may ascertain the answer to the requested information as readily as Licensee could proffer it.

37. Explain why the fact that most TMI training instructors have reactor operator or senior reactor operator licenses gives credibility to the training program.

State the total number of TMI training instructors who currently do not hold reactor operator or senior reactor operating licenses.

ANSWER. If an instructor holds a license or certificate on TMI-1, there is more of a sense among his students that he has a better understanding of what they need to know. This sense is heightened if the instructor has come from the ranks of the operators themselves. Acceptance is perhaps a better word than credibility.

For information on numbers of training instructors associated with TMI-1 licensed operator training who do not hold licenses, see the resumes associated with Interrogatory 34.

38. State all supporting evidence for the statement on page 46 of the Special Report that the operators have "high



morale." Explain why the fact that only one operator has resigned in the past two and one-half years demonstrates "high morale."

ANSWER. Because operators are in great demand, the Committee believes that low turnover in this profession is a fairly reliable indicator of morale and job satisfaction. It is of course only one of several variables contributing to this situation. Interviews with GPUN Operations and Training management, discussions with other personnel, and our own personal observations of the atmosphere in the training area contributed to the Committee's statement in the Special Report. Also, of course, in making its statement about high morale, the Committee did not have any evidence to the contrary.

39. Identify the INPO evaluation finding which led to additional training for Auxiliary Operators, referenced on page 47 of the Special Report.

OBJECTION. Licensee objects to Interrogatory 39 on the ground that the information requested is neither relevant nor within the scope of this proceeding. The referenced INPO evaluation concerns Auxiliary Operators. These operators are not licensed operators; hence, any information regarding them can have no relationship to the quality of the licensed operator training program, which is the limited subject of the remanded training issue.

40. Identify all corrective actions and steps taken to prevent recurrence which GPU took in response to the NRC's Notice of Violation and Imposition of a Civil Penalty, dated February 29, 1984. Identify all root causes of the violations and any generic concerns GPU has identified related to these violations. Explain all reasons for GPU's position that none of the violations were attributable to failures in the training program. State whether or not the NRC Staff has accepted GPU's response as adequate.

OBJECTION. Licensee objects to Interrogatory 40 on the grounds that the information requested is neither relevant nor within the scope of this proceeding. Neither the violations enumerated in the referenced NRC Notice of Violation and Proposed Imposition of Civil Penalty, causes thereof nor corrective measures taken were in any way related to the licensed operator training program. See Notice of Violation and Proposed Imposition of Civil Penalty, 50-289/83-140 (February 29, 1984). Hence, any information related to the requested information would not be relevant to or within the scope of the issues associated with the remanded training issue. In fact, none of the violations cited involved any licensed operators at all.

41. State whether or not GPU agrees with the opinion of the Appeals Board that training becomes even more important for the safe operation of the plant when a licensee such as GPU has been cited for failure of its personnel to follow proper operating procedures. ALAB-772, at 76, n.61.

OBJECTION. Aside from the fact that Interrogatory 41 misleadingly paraphrases the Appeal Board's comments regarding the importance of operators being fully conversant with plant design and procedures, ALAB-772, n.61 at 76, the requested information is neither relevant to the issues involved in this proceeding nor within the bounds of proper discovery. Licensee's opinion regarding the Appeal Board's comments is in no way relevant to the quality of its licensed operator training program. Licensee, therefore, objects to Interrogatory 41.

42. Describe Mr. Kelly's evaluation of the 1982 and 1983 TMI-1 licensed RO and SRO regualification programs. Identify all reports and documents generated in the course of that evaluation.

ANSWER. The evaluation of the 1982 and 1983 licensed RO and SRO requalification program was done in conjunction with the ROARP Committee's TMI site visit on May 31 and June 1, 1984. At that time, Mr. Kelly obtained, for review, copies of one Reactor Operator and One Senior Reactor Operator annual TMI requalification examination and answer key for each of the 1982 and 1983 annual requalification cycles. These examinations and answer keys were reviewed for scope and content. He also reviewed the results of the 1982 and 1983 annual written examinations. Additionally, Mr. Kelly briefly reviewed the topic selection for the training concluded for the 1982 and 1983 requalification cycles. His conclusions are presented in the Special Report.

43. State whether or not GPU agrees with the NRC Staff's conclusion in I&E Inspection Report No. 50-289/84-05, at 4-5, that due to lack of use operators' skills have declined during the period of plant shutdown. If you agree, explain why GPU has not instituted a special restart training program as recommended by the NRC Staff.

ANSWER. Even though no "special restart training program" was recommended by the NRC Staff, as implied in the interrogatory, GPUN has completed the necessary operator training upgrades in the areas recommended by the report. These upgrades consisted of designated classroom training and an additional simulator training period during April and May of 1984. Our response to the NRC detailing the plan which is now completed was forwarded to the NRC Staff as Licensing Memo No. 5211-84-2119. See answer to Interrogatory 44, below.

44. Explain how the actions outlined by GPU on page 52 of the Special Report will sufficiently upgrade operators' skills which have deteriorated during the period of shutdown. Specifically, explain how the actions will address each of the 13 areas of weaknesses' listed at pages 4-5 of I&E Report 84-05.

ANSWER. An Operational Readiness Evaluation (Inspection No. 50-289/84-05) was conducted at TMI-1 on February 8 and 9, 1984. Based on the results of this evaluation, thirteen (13) topics were identified which were indicative of inexperience with an operating facility. These topics were recently addressed in the operator requalification program.

Following is a list of the topics included in the requalification program between April 9, 1984, and May 18, 1984, as classroom lectures:

1. Calculation of the boron change required for a power change (No. 4).
2. Manipulation of the Makeup and Purification System to reposition Control Rods (No. 8).
3. Predicting Indication of NIs during a reactor startup (No. 13).
4. Calculation of Heat Balance without a Computer (No. 5).
5. Construction and Operation of an RCP Seal Package (No. 12).
6. Logic and Control of Control Rod Drive Circuit Breakers (No. 11).
7. Basis of Limit Settings Incorporated into the Integrated Control System (No. 9).

8. Transient Analysis for Loss of Main Feedwater and a Deboration (Moderator Dilution) Accident (No. 2).

9. Reactivity Coefficient Effects at Power (No. 1).

In addition to the training conducted as described above, classroom instruction and simulator training were conducted at the Babcock and Wilcox simulator in Lynchburg, Virginia. Topics covered there were:

10. Plant maneuvering when placed in a situation not covered by procedures (No. 3).

11. Methods of controlling the plant cooldown rate following Reactor Trips (No. 6).

12. Methods of controlling xenon oscillations (No. 7).

Formal classroom training was not conducted on Item No. 10, Control Functions of the Electrohydraulic Control System. Instead, each operator reviewed the TMI-1 Operations Plant Manual Section (H-6). They were subsequently examined on that system in their regularly scheduled requalification program quiz.

An NRC audit of the training conducted on these topics produced two comments for followup. These comments were presented verbally to the Manager of Training on August 30, 1984. In summary, the training on the Electrohydraulic Control System was completed, but the method of evaluation was not followed up sufficiently. Performance on this topic was treated



equally with other topics on the quiz and was not evaluated separately. NRC tabulation showed several trainee's grades on EHC System were less than 70 percent. A more specific evaluation and follow-up was suggested. The BPT exercise conducted on "predicting conditions of NI's during startup" had initial conditions which the NRC said were not what they intended. They suggested repeating one exercise from the beginning of the approach to criticality (source counts) procedure instead of the startup procedure (10-8 amps).

The training listed above, along with the many other aspects of the current operator requalification training program have served to sufficiently upgrade operator's skills and knowledge to provide an excellent basis for TMI-1 restart operations.

45. Describe the amount and type of additional training for the operators at the B&W simulator referenced on pages 53-54 of the Special Report. Explain the ATOG Philosophy as compared to an "event-related" approach.

ANSWER. Refer to lesson plans and scenario packages for ATOG Training, Tube Rupture Training, and Startup Training, copies of which are provided in the document discovery room.

The ATOG philosophy is to have the operators respond to a plant transient depending on the symptoms they observe, rather than trying to immediately determine the exact event if it is unknown. Prescribed actions are intended to respond to and alleviate the symptoms or conditions presented and restore the plant to a stable condition.

Quoting from Part II pgs. 4 and 5 of the TMI-1 ATOG Manual published by Babcock and Wilcox, "In the past, emergency procedures and operator training concentrated on single event accidents. But accidents do not usually happen with only single failures; several things often go wrong at the same time. These guidelines have been developed so the operator can understand what has gone wrong in order to circumvent failures and keep the core cool with the available equipment. When failures of equipment occur, they frequently cause a change in the heat transfer from the core to the steam generators. When the reactor is operating normally all the heat produced by the core is being removed by the steam generators; primary and secondary system pressures, temperatures, and levels are stable. Heat transfer is balanced. Any transient will cause an upset in the heat transfer from the core to the steam generators. Heat transfer will be affected in different ways depending on what equipment has operated incorrectly. When the heat transfer changes, the effects will show up in primary and secondary system pressures, temperatures, and levels. Pressures and temperatures are parameters from which three basic symptoms of improper heat transfer can be derived and used to discover what has gone wrong. These guidelines will use those heat transfer symptoms as the source of information for the operator action. Recognition of just three basic heat transfer symptoms will give the knowledge needed so the operator can restore and maintain adequate core cooling. These symptoms are: 1. loss of

adequate subcooling margin, 2. lack of primary to secondary heat transfer, 3. excessive primary to secondary heat transfer."

46. Identify all sections of the Operations Plant Manual which have not yet been completed. Identify the amount and type of training given each operator on the Operations Plant Manual, specifying how much training has been given on each of the 101 sections of the manual which have been completed.

The following list indicates those sections of the Operations Plant Manual which have not yet been completed:

<u>Section Designation</u>	<u>Title</u>
(i) A-5	Main Generator
(ii) N-2	Heat Transfer, Fluid Flow & Thermodynamics
(iii) N-3	Mechanical Fundamentals
(iv) N-4	Physics
(v) N-6	Reactor Physics & Theory
(vi) N-7	Reactor Control & Fuel Performance
(vii) N-8	Safety Analysis
(viii) N-9	Chemistry
(ix) N-10	Metallurgy
(x) N-11	Instrumentation & Control
(xi) O-6	Operational Considerations

It is not the intent of the department to schedule training on each and every section of the manual. It is to be used as a reference manual, not a collection of lesson plans.

The scope and/or specific topics presented to each type of operator can be found in the Training Program Descriptions. Lessons listed below have Operations Plant Manual sections which were used as references for the lesson. In some cases only a portion of the Operations Plant Manual section was used.

REQUALIFICATION PROGRAM:

84-1

Manipulation of Makeup System to Reposition Control Rods (B-5); Construction and Operation of RCP seal package (B-2); Basis for limit setting in the Integrated Control System (F-3).

84-2

ICS Review (F-3); Operation of Electrical Switchgear (A-1); ESAS (F-6).

REPLACEMENT OPERATOR PROGRAM:

Non Nuclear Instrumentation (F-5); ESAS (F-6); Nuclear Instrumentation (F-4); Integrated Control System (F-3); Control Rod Drive System (F-1); Plant Electrical Systems (A-1, 2, 3); Makeup System (B-5); Radiation Monitoring System (F-7).

47. Identify any conclusions of the Reconstituted OARP Review Committee as to the root cause for the cheating incidents cited and/or discussed in the ASLB PID or Milhollin Report.

ANSWER. The root cause of the cheating that occurred is a complex issue and the reasons for an individual cheating as such may never be known. The fact that anyone cheated on examinations is of course inexcusable. The Committee has reviewed the cheating cited and discussed in the ASLB PID and Milhollin Report and has no further insight as to the root cause of the cheating.

48. State whether GPU agrees with any conclusions or evaluations of the Reconstituted OARP Committee stated in response to Interrogatory No. 47 above.

ANSWER. Yes.

49. State whether GPU agrees with the statement on pages 56-57 of the Special Report that the format, content and conduct of the industry and NRC examinations did not encourage and were not to any degree the cause for the cheating incidents cited and/or discussed in the ASLB PID or Milhollin Report.

ANSWER. GPUN agrees with the statement in the Special Report that indicates, "...that the present format content and especially the security procedures discourage cheating."

50. Explain the basis for the statement on page 57 of the Special Report that the present format, content and especially the security procedures discourage cheating." State whether it is the security procedures which are largely the protection against cheating occurring on the licensee and NRC exams.

ANSWER. The Committee believes that its statement on page 57 addresses the mechanics of discouraging cheating. It is, however, the present overall attitude of the GPUN personnel and corporate integrity that is largely the protection against cheating.

51. State whether it is the Reconstituted OARP Review Committee's understanding that only one incident of cheating occurred and was proven to occur, as indicated on page 65 of the Special Report. If this is not the Committee's



understanding, state the Committee's understanding of the number of individuals who cheated and the cheating incidents which occurred. State the factual basis for this understanding of the Committee as to the individuals who cheated and the cheating incidents which occurred.

ANSWER. The Committee is aware of the admitted cheating incident by the two principals (O & W) and is also aware that the Licensing Board found other incidents of cheating dealing with VV, G and H, GG, and one (possibly two) unidentified individual(s). See LBP-82-56, 16 N.R.C. 281, 289-90 (1982).

52. State whether it is the Committee's basis for its opinions expressed in Section C that the motivation for cheating will never be known and in this case need not be determined or investigated.

ANSWER. The Committee believes that the motivation for any individual to cheat is a complex one and the reasons for its occurrence may not even be fully understood by that individual. There is no disagreement that cheating occurred and was inexcusable. The Committee is also aware that the cheating incidents were extensively investigated.

53. Explain the factual basis for the statement on page 66 of the Special Report that management of the Training and Education Department feels a "keen sense of their responsibilities" for the cheating incidents, including but not limited to identification of management statements, corporate admissions, or testimony supporting this statement.

ANSWER. The Committee was impressed with one prevailing theme evidenced during its visits. Interviews (with Hukill, Long, Coe, Newton, Leonard and Shalikashvili), conversations, and documented management statements show that GPUN management from senior levels through training supervisors have a keen sense of their responsibility for the cheating that occurred and a firm dedication to see that cheating will not re-occur.

54. Explain the Committee's statement on page 67 that GPU has responded adequately to the cheating incidents by removing those individuals whom the NRC Staff, the ASLB, or the ALAB has requested it remove. State whether the Committee believes an adequate management response can be measured solely by GPU's agreement to obey orders and/or guidance from regulatory adjudicatory boards or the NRC Staff.

ANSWER. The Committee did not make the statement contained in the first sentence of TMIA Interrogatory 54. See page 67 (paragraph 1) of the Special Report. The Committee's response to the second sentence of TMIA Interrogatory 54 is "No".

55. Explain the basis for the Committee's statement on page 67 that "GPU Nuclear may be 'overreacting' in removing certain employees."

Explain all disagreements of the Committee with the findings of Judge Milhollin in the Milhollin Report, since such disagreements have been referenced in the Committee's apparent disagreement with his reliance on the demeanor of witnesses who appeared before him. Special Report at 67.

ANSWER & OBJECTION. It is the Committee's position that, for the most part, there is no one right answer when dealing with personnel-related issues. Our concern, expressed in the Special Report, relates to the fairness of the actions taken that are the results of the implications arising from the PID and Special Master's Report. The Committee's position is that GPUN management has acted responsibly in the handling of these issues. The Committee, however, is not convinced that in all cases, the evidence merited the actions taken; however, we respect the rights of GPUN management to exercise its judgment.

Licensee objects to the last paragraph of Interrogatory 55 on the grounds that it is unduly vague and requests information

that is not relevant to this proceeding nor likely to lead to relevant information. Licensee is unable to determine what disagreements between the Committee and the findings of Judge Milhollin TMIA is referring to. Specifically, there are no references to Judge Milhollin, or the Milhollin Report on page 67 of the Special Report as intimated by TMIA. Licensee can not be expected to aimlessly seek out each disagreement between the Committee and Judge Milhollin. Moreover, any disagreements between the findings of the Committee and those of Judge Milhollin bear no relationship to the adequacy of the training program. This information merely reflects the difference of opinion that exists between two independent evaluators. TMIA may readily identify any disagreements by simply comparing their reports. To require Licensee to identify every disagreement between Judge Milhollin and the Committee would therefore be unnecessary and extremely wasteful of Licensee's resources in light of the lack of relevance of the requested information and the ability of TMIA to ascertain that information on its own.

To Dr. Gardner:

56. Explain the basis of your statement on page 70 of the Special Report that the cheating incidents would not change your evaluation of the training program in any way.

Is it your opinion that the integrity of the training instructors and the operators is not relevant to an evaluation of their ability to operate TMI-1 safely?

If not, explain why the fact that the integrity of the training instructors and the operators was put into question by the cheating incidents did not change your opinion of the training program?

ANSWER. The issue as presented is entirely hypothetical. There was no evidence of cheating at the time of my evaluation of the OARP training program. Hence my response on page 70 of the Special Report was a general discussion of a hypothetical question. If I had known of the cheating, I would certainly have taken it into account, as well as any additional information that might have been relevant to the evaluation of the program itself.

There are two important sets of variables involved in operating TMI-1 safely:

1. One set consists of cognitive variables e.g., knowledges and skills.

2. The other set consists of affective variables. For example, truthfulness, honesty, etc. The first set can be taught and evaluated in a good program. It has been found difficult, if not impossible, to teach the second set directly. Character and integrity are taught and learned throughout life, with special importance occurring during early life. A professional acquires integrity as part of becoming a professional. A program and management can promote integrity but cannot guarantee that individuals in a specific situation will not cheat or lie. Safeguards should be set up in examinations to make cheating as difficult as possible to protect the large numbers of innocent examinees and to assist the few in avoiding temptation.

57. Identify all information GPU gave to the Reconstituted OARP Review Committee in order for them to answer the

questions raised by the Appeal Board. In particular, identify all information, including all briefing papers, opinions, or reports concerning the cheating incidents, and all evaluations of management of the cheating incidents.

ANSWER. See Table A1 and A2 in the Special Report.

58. Identify the factual basis, including any documentary or testimonial evidence, interviews, visits, inspections or observations, which support the Committee's opinion on page 73 of the Special Report that it does not agree that the training instructors and operators at TMI-1 have a poor attitude.

OBJECTION. Licensee objects to Interrogatory 58 on the grounds that it is vague, incomprehensible, and unduly burdensome. The referenced material purportedly located on page 73 of the Special Report simply is not there. Licensee, therefore, is at a loss as to the specific statement(s) of the Committee to which TMIA seeks a response.

59. State how if at all the opinion of the Reconstituted OARP Review Committee would change if it were stipulated that the facts underlying the Notice of Violation ("NOV") citing the licensee's failure to implement OARP properly were correct. State the basis for the Committee's conclusion that the factual basis for that NOV is in dispute.

OBJECTION. Licensee objects to Interrogatory 59 on the grounds that the information requested is not relevant and will not lead to relevant information. Interrogatory 59 poses a hypothetical which calls for a speculative response from the Reconstituted OARP Committee. As such, there can be no factual relationship between the hypothetical response sought and the quality of the training program as it was originally or subsequently assessed by the Committee. Hence, Interrogatory 59 is wholly irrelevant to the remanded training issue.

60. State whether the Reconstituted OARP Review Committee is in agreement with ALAB-772 that failure of communication



between top management and the training program led to failures in the training program.

ANSWER. The Committee agrees it is reasonable to conclude that the failure of the communication between top management and training may have been a contributing factor to the cheating that occurred.

61. State which of the procedures or means of communication listed on pages 75-78 of the Special Report were instituted after issuance of the Milhollin Report. Specifically, for each procedure or means of communication listed, state the following:

- (a) the person(s) who instituted that procedure or means of communication;
- (b) the stated purpose of instituting such a procedure or means of communication;
- (c) the date on which it was instituted;
- (d) any evaluation of whether or not it was effective;
- (e) any document mentioning, referring to, concerning or otherwise related to the procedure and/or means of communication.

ANSWER.

1. Vice President of TMI-1 formal interviews with each licensed operator annually were instituted after issuance of the Milhollin Report.

a. The GPUNC Board of Directors ordered that this program be instituted and procedures were established by the Vice President, TMI-1.

b. The purpose of the program was to improve communications with licensed operators, ensure that licensed operators fully understand the importance of their duties and

responsibilities, and were kept up-to-date on major issues affecting them and the plant. Also, see answer to Interrogatory 29.

c. The program was first instituted in October 1982.

d. The program has been very effective in improving communications with licensed operators and ensuring that licensed operators fully understand management's emphasis on honesty, integrity, procedural compliance, professionalism, and the health and safety of the public and employees.

e. See response to Interrogatory 29.

2. Licensee examination certification and requalification certification processes were formalized into an Administrative Procedure prior to issuance of the Milhollin Report.

a. S. L. Newton initiated the procedure for approval by H. D. Hukill.

b. Establish formal procedures for initial license examination certification and relicensing certification.

c. The procedure was instituted on February 3, 1982.

d. The procedure has been very effective.

e. The procedure is documented in Administrative Procedure 1058.

3. The Management Interface Meeting Program was formalized in August of 1982. The attendance of either the Vice

President, the Operations and Maintenance Director, or the Plant Engineering Director at each meeting was not implemented until early 1984. Prior to this time, these individuals could and did participate on a periodic basis, but were not required to be in attendance at each meeting. Initial requirements called for two managers to attend each meeting.

a. The program was instituted by the Operations and Maintenance Director, TMI-1.

b. The purpose of the program was to make employees aware of programs and policies being implemented that affect their daily work patterns, and to ensure management is aware and appreciates the end result of changing policies on the worker.

c. The program was instituted in August 1982.

d. Based on feedback from many employees, the program has been very effective in achieving its stated purpose.

e. The directive implementing this program was submitted as part of the documentation requested by TMIA.

4. Vice President of TMI-1 has committed to attending four hours of training classes per month.

a. This program was implemented by the Vice President of TMI-1 in response to the audit by Admiral Rickover.

b. The purpose of this program is to monitor the effectiveness of the training programs, and as a side benefit, provides individualized training for the Vice President. This program is not necessarily limited to licensed operator training.

c. This program was implemented in January 1984, with the first training attended in February 1984.

d. This program is effective in keeping the Vice President up-to-date and informed of the quality of training.

e. H. D. Hukill memorandum to P. R. Clark, dated January 17, 1984, documents this program.

5. Biweekly reports of activities, including training;

a. This procedure was instituted by the President of GPUNC, R. C. Arnold.

b. The report was instituted to keep the Office of the President, the Chairman of the GPU Board, and the President of GPU up-to-date on conditions and status of the plants.

c. The requirement for the report was established on October 4, 1983, and the first report was submitted October 19, 1983.

d. The report has been effective in achieving its objective.

e. GPU Nuclear Corporation Staff Meeting Minutes of October 4, 1983, Item 3A, established the requirement for subject report.

6. Vice President of TMI-1 held periodic meetings with operators as a group prior to issuance of the Milhollin Report.

a. H. D. Hukill, Vice President of TMI-1, instituted this practice.

b. The purpose of this practice was to improve communications with operators, explain management's policies and

goals to operators, and to receive feedback from operators concerning problems and issues.

c. There is no documented date when this practice was instituted, but from the best of our recollection, it commenced some time in 1981 and has been carried on since that time.

d. This practice has been effective.

e. There is no document establishing or recording these meetings.

Dr. R.L. Long initiated Nuclear Assurance Division (NAD) Employee Meetings for the purposes of (1) encouraging and fostering better understanding of Division employees regarding activities of the various Division Departments, and (2) encouraging and improving NAD relationships with other GPUN Divisions. The first group of meetings were held on February 18, March 4, and March 13, 1983 respectively at Parsippany Headquarters, Three Mile Island, and Oyster Creek. Effectiveness of the Employee Meetings are reviewed by the NAD Department Heads with input from Section Managers and employees. The Meetings have been well-received by employees and have been continued at approximately six-month intervals. Each Group of Meetings is announced by Memorandum and the speakers are identified in agenda prepared for the Meetings at each location.

7. Vice President of TMI-1 participated in seminars as part of the Management and Supervisory Development Training Programs prior to issuance of the Milhollin Report.



a. John Jones, of the Training Department, basically coordinated this program.

b. Improve management and supervisory abilities of employees through formal training.

c. The program was first initiated on April 1, 1981.

d. The program has been effective.

e. A program document describing the training and schedules of the training conducted are available.

8. Off Shift Tours by management were implemented prior to issuance of the Milhollin Report.

a. H. D. Hukill, Vice President of TMI-1, instituted this program.

b. The purpose of this program is described in response to Interrogatory 62.

c. The program was instituted on January 20, 1981.

d. The program has been effective.

e. All documentation relative to the program has been furnished in conjunction with a request for documents by TMIA.

9. The practice of senior managers from Nuclear Assurance, Operations, and Training to attend simulator sessions, at Lynchburg, to evaluate training being conducted by B&W was instituted prior to the issuance of the Milhollin Report. However, the practice of having one of the four Emergency Directors administer an operational evaluation of each crew did not formally commence until early 1983.

a. This practice was instituted by senior staff members of Nuclear Assurance, Operations, and Training, including the Vice President of TMI-1.

b. The purpose of this practice was to evaluate B&W's training at the simulator and to evaluate our licensed operators and licensed operator candidates performance on the simulator.

c. The date on which this practice was instituted cannot be determined, but it was conducted at least as early as the fall of 1980.

d. The practice has been effective.

e. Documentation relative to the program has been furnished in conjunction with a request for documentation by TMIA.

10. Approval of training programs, schedules, and content by Operations for licensed operator training.

a. Program approval instituted by Newton and Ross when the former was Supervisor, Licensed Operator Training. Schedule and topic approval for requalification training was instituted by R. J. Toole in meetings he and Dr. Knief implemented which were held prior to the start of each requalification six-week cycle. Approval of learning objectives for the topics was instituted by Leonard and Ross.

b. The purpose of these actions is to ensure that Operations and Training Management are in agreement over these areas.

c. Program review and approval started in 1980. The first program actually signed by Mr. Ross was the Replacement Reactor Operator Program in January 1981. Schedule and topic approval for regualification training started in 1981. Approval of learning objectives for regualification topics started on a regular basis in April 1984, although it had been done for special training, such as that conducted for steam generator tube rupture training in 1983. Additionally the sections of the Operations Plant Manual have received reviews and/or approvals by both Operations and Training. This process started in 1983.

d. We have learned that the more mutual involvement that takes place in training, the better-focused that training becomes, and the operators are thus more receptive.

e. The respective training program descriptions require dual approval of programs. Guidelines published by Operations for the creation of the Operations Plant Manual detail the review and approval procedures. A memo by Mr. Leonard discussed the current plans and practices pertaining to regualifiction scheduling, and topic and learning objective approval (6211-83-1035 dated December 8, 1983).

11. Weekly meetings during regualification training.

a. Instituted by R. W. Zechman when he was Supervisor of Operator Training and Newton was Supervisor of Licensed Operator Training.

b. Purpose - refer to page 78 of the Special Report.

c. Date - the meetings were first held in 1980.

They have always been somewhat informal and minutes were not often kept before Mr. R. Harbin assumed the duties of Operations Training Coordinator in 1982. Nor have they always been held every week, depending, for example on availability of the following week's Shift Supervisor or Foreman, at the end of the sixth week of training, or if no one had anything to contribute. They have been held with greater regularity during Mr. Harbin's tenure.

d. The practice has been varied as to effectiveness, but overall, it has proven worthwhile. Weekly meetings with six different shift supervisors have produced varied comments on the same subject matter, i.e., some liked it, some didn't, some felt their crews needed the training, some didn't, etc. They have helped training to focus on more specific needs of different crews regarding the same subject areas. Basically we have found that as long as criticism is kept objective and constructive the meetings have been beneficial. We have also found that we sometimes develop a common thread over six weeks which enables the training to be done better the next time it is scheduled.

e. References - see response to TMI production request #27 C.

12. The Manager of Plant Training has been attending the Vice President's Managers Meetings prior to issuance of the Milhollin Report.

a. H. D. Hukill, Vice President of TMI-1, requested the Manager of Plant Training attend his Managers Meetings.

b. The purpose of the Manager of Plant Training attending these meetings is to keep him abreast of ongoing events and to discuss/resolve training matters with the Vice President and other managers in attendance.

c. The Manager of Plant Training has been attending Hukill's Managers Meetings since the first meeting in October of 1980, one month after Hukill took over as Vice President.

d. This means of communication has been effective.

e. Documentation is available certifying Manager of Training attendance at the Vice President's Managers Meetings.

62. Describe the off-shift tours by management referenced on page 77 of the Special Report. For each such tour state the following:

- (a) the purpose of the tour;
- (b) the area inspected or visited;
- (c) the person(s) leading the tour;
- (d) the person(s) taking the tour; and
- (e) any document or report generated during or as a result of the tour.

State all problems observed during such tours and the corrective action taken to solve all such problems.

ANSWER. The following information provides answers to the questions concerning the Off Shift Tours by management.

- (a) Purpose of the tour:
  - Ensure that rules are being enforced.
  - Ensure that proper standards of performance are being maintained.



- Determine plant cleanliness and material condition.
- Learning experience for managers that do not normally work in the plant on a day-to-day basis.
- Ability for managers to see firsthand what is really going on during the back shifts.
- Opportunity to get to know the personnel in the plant better and vice versa.
- An indication to our people that management is interested and vitally concerned about them and the problems they face on a day-to-day basis.
- Monitor shift turnovers for completeness and formality.
- Monitor Control Room environment for formality and professionalism.
- Review logs and records.
- Monitor for serious deficiencies, such as personnel asleep, not alert, significant procedural violations, significant violations of AP-1029 (Conduct of Operations), and major violations of radiological control procedures.
- An opportunity for management to discuss with individuals in the plant the effectiveness and/or problems in their particular area of expertise, such as training, modifications, maintenance, etc.

(b) The entire area of the plant is open for inspection on any tour, including the out buildings. It is up to the individual making the tour to determine exactly where he will go; however, considerable emphasis has been placed on monitoring for formality and professionalism of licensed operators in the control room.

(c) Each tour is conducted by an on-site manager selected from all divisions. The schedule for tours is prepared by the Vice President of TMI-1.

(d) See answer to (c) above.

(e) A report is submitted by the individual making each tour to the Operations and Maintenance Director, with copies to the Vice President, the Operations Manager, the Maintenance Manager, the Plant Engineering Director, the Radiological Controls Manager, and others as appropriate. Problems noted during these tours and corrective actions taken are indicated on the individual tour forms, which were submitted as part of the documentation requested by TMIA.

63. Identify all corrective actions GPU has taken in response to the problems and violations identified by the NRC Staff in I&E Inspection Report 50-289/83-18; 50-320/83-10.

Identify the root cause for the problems identified by the NRC Staff with regard to fire brigade training and any generic concerns GPU has identified.

OBJECTION. Licensee objects to Interrogatory 63 on the grounds that the information requested is neither relevant nor likely to lead to relevant information. The issues discussed by the NRC Staff in Combined Inspection Report No. 50-289/83-18; 50-320/83-10 relate to Licensee's fire brigade training program which is in no way associated with either Licensee's licensed operator training program nor the remanded training issue.

64. State GPU's position today regarding the adequacy of GPU Attorney John Wilson's investigation of the cheating incidents. Identify specifically all findings in the Milhollin Report or the ASLB PID concerning Mr. Wilson's investigation with which GPU disagrees.

If GPU believes that Mr. Wilson's investigation was to any degree inadequate and/or misleading, state the reason(s) for such inadequacies.

OBJECTION. Licensee objects to Interrogatory 64 on the grounds that the information requested is not relevant and is not likely to lead to relevant information. Licensee's opinion of Mr. Wilson's investigation of the cheating incidents and its agreement or disagreement with the Milhollin Report or the ASLB PID's findings concerning same bear no relationship to the quality of the licensed operator training program. Thus, Interrogatory 64 is wholly irrelevant to the remanded training issue.

65. Identify the reason or purpose for which GPU commissioned the "RHR Report," "Priority Concerns of Licensed Nuclear Operators at TMI and Oyster Creek and Suggested Action Steps," Paul F. D'Arcy, Ph.D. and John R. Sauer, Ph.D. (March 15, 1983).

ANSWER. GPUN commissioned the "RHR Report" to assist GPUN in the evaluation of the attitudes of GPUN employees, particularly licensed operators, toward such topics as the regulatory process and corporate management philosophy pertaining to safety requirements. (July 2, 1982 letter from Contracts (Morris) to RHR (D'Arcy).)

66. Identify all corrective or responsive actions GPU has taken in response to the RHR Report.

Specifically, state whether GPU has taken the following Safety Action Steps listed in Table 1 of the RHR Report: Increasing "hands on" experience; increasing time of trainees in plant and with equipment; increased coaching from shift supervisors; defining and instituting efforts to keep instructors of trainees and licensed operators current in plant equipment, instrumentation and procedural changes; and all Training Action Steps listed in Table 4.

For any actions recommended by RHR which GPU did not take, explain the basis for failing to follow those recommendations and any alternative or substitute actions taken by GPU to remedy the problems outlined in the RHR Report.

ANSWER. See status report of progress on (RHR) "Primary Concerns of License Nuclear Operators." 12/16/83, a copy of which is provided in the document discovery room.

67. Does GPU agree with the following findings of the RHR Report:

(a) About one-third of all operators believe that the process of licensing operators does not necessarily promote safety.

(b) About 40 percent of all operators believe the content of the exams was not job relevant.

(c) About two-thirds of all operators believe that the oral portion of the exam does not test how one will act in an emergency.

(d) A number of operators resent the precautions against cheating taken during exams and believe that they were carried to undue lengths and are demeaning.

(e) A significant minority of operators believe that requalification does not necessarily promote safety.

(f) A strong majority of operators believe the volume of material covered during requalification is too broad.

(g) A majority of operators believe they need relief from the comprehensive requalification exam.

(h) A significant majority of operators are dissatisfied with the training for licensing and the training for requalification.

(i) A majority of the operators believe the training department is not oriented to the needs of the operators.

(j) A majority of the trainees and senior reactor operators at TMI do not believe that the quality of the training staff is good.

(k) A large majority of operators do not believe there is adequate training on plant conditions.

(l) A slight majority of operators believe that training overstresses thermodynamics, heat transfer and fluid flow theory.

(m) Three-quarters of the operators believe their training does not prepare them for what they actually do.

(n) A majority of the operators believe that training prepares them to pass exams and does not prepare them adequately to operate the plant.

(o) A majority of operators believe that training instructors need more operational experience and more up-to-date experience.

(p) A majority of operators believe that shift supervisors need to be more involved in giving "hands-on" training to shift members.

(q) Operators believe that not enough time is devoted to requalification training and that there is not a set schedule for requalification training.

(r) Operators believe that the material presented by some instructors in the requalification training program is repetitive and boring.

(s) Operators believe there is a significant amount of antagonism between requalification instructors and licensed operators.

(t) Operators who did not come from the Navy nuclear program believe that the current training program is not geared to their needs but to the needs of those individuals who come from the Navy nuclear program.

(u) Operators who come from the Navy nuclear program believe they do not receive enough "hands-on" plant experience with equipment at TMI-1.

(v) Operators believe the staff assigned to operator training has decreased in the past several years.

(w) Operators want more career options and at least a significant minority at TMI would be willing to move eventually to another job even at a decreased pay level.

(x) A significant majority of the operators believe that the reorganization of GPU Nuclear, intended to lead to greater compliance with regulatory requirements and reduce the workload on operators, has in fact not promoted safer operations. A majority believe it has not reduced their workload.



(y) A majority of operators believe that the departments at GPU Nuclear need to work together better.

(z) Operators blamed both the new structure and the management of GPU Nuclear for the problems of lack of cooperation and coordination between departments.

(aa) A majority of operators do not believe they get fast enough action when they cite problems.

(bb) SROs believe that they do not have enough authority to do their jobs.

(cc) A relative majority of licensed operators do not have confidence in corporate management. (This is relevant to the training program because operators' priority work concern is training.)

(dd) A large majority of licensed operators believe GPU Nuclear management is less concerned about its employees and organizational issues than about public relations and technical issues.

(ee) A majority of operators disapprove of top management's interactions with the NRC.

For all findings with which GPU does not agree, state the reason(s) for the disagreement. For all findings with which GPU does agree, state the corrective actions taken to remedy the problem.

A.67. Items (a) through (ee) in this interrogatory are generally taken (although sometimes restated) from Section II, "Explanatory Material," of the RHR Report. As stated in the letter from Dr. D'Arcy to R. C. Arnold, dated May 13, 1983:

The report provides the subjective perceptions of operators rather than objective performance data. Although valuable, for several reasons these should not be taken at face value. Gripping by organization members against their management and organization is a universal phenomenon. Operators are currently adapting to significant structural changes in their organization which are frustrating for them.

In the small groups and in the survey, operators were given the opportunity to

ventilate with the understanding that their answers would present no personal hazards to them. This is a less precise mind set than objectively evaluating the nuclear facility. We did not find either their reactions to the changes made or the extent of griping unusual or surprising given the existing circumstances. Our only surprise, as indicated in the report, was how strong the morale of the operators is under very trying conditions.

And, as stated in the Introduction to the RHR Report:

This report is avowedly to a large extent one-sided. There are always at least two sides to all issues. The mandate to the consultants was to focus on the operators' concerns. The report conveys accurately the current perception of operators. It does not imply that these are entirely justified or realistic.

Further, the Introduction states that, "The Executive Report contains the essentials of purpose, priorities and action steps." The start of the subsection titled, "Priority Issues of Concern to Licensed Operators," says that

One of the main reasons for the small group sessions was to prioritize the concerns of the licensed operators so that the limited resources of GPU Nuclear Corporation could be focused in an informed and reasonable fashion.

With this background and understanding, GPUN did not nor does it plan to evaluate and respond to the individual statements listed in (a) through (ec) of TMIA Interrogatory No. 67. The small group discussions held by RHR with the operators lead to the prioritized "Action steps" listed in the Tables of the RHR Report. The GPUN actions taken were identified in the Response to TMIA Interrogatory 66. It should, however, be noted

that to the extent that individual operators continue to be concerned about various items, these items are addressed in the annual interviews with the TMI-1 Plant Director and during the "Management Interface" meetings held as part of the requalification training week.

68. Identify the reason or purpose for which GPU commissioned the BETA Report, "A Review of Current and Projected Expenditures and Manpower Utilization for GPU Nuclear Corporation," Basic Energy Technology Associates, Inc. (February 28, 1983).

ANSWER. GPU commissioned the BETA Report with the following objectives:<sup>1/</sup>

1. To conduct a comprehensive and objective review of current and projected manpower and cost estimates for the operations of TMI-1 and Oyster Creek. The review to include TMI-2 data only to the extent of determining allocation of GPUN resources assigned to TMI-1 and Oyster Creek.

2. To analyze, to the extent possible, these figures with comparable data from other operating nuclear utility plants, and with BETA's judgement, recommend changes to ensure there are the necessary resources for safe and efficient implementation of GPU's nuclear program.

3. To report to GPUN management throughout the period of review those areas of manpower and cost which appear out-of-line by comparing similar assigned work functions at

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<sup>1/</sup> These objectives were set forth in BETA's December 1981 proposal to GPUN and generally adopted by the contract documents.

other sites and by conducting an independent analysis of those work functions to determine the appropriateness both of the comparison and the GPUN effort. To provide recommendations where savings in manpower or costs can be reasonably achieved or where resources should be reallocated.

4. To prepare a report which can be used and supported by GPUN and BETA to justify current and projected or readjusted manpower and cost figures.

5. To identify enhancements to present GPU systems which would permit each Division Director to continue to track, predict and analyze cost and manpower figures on a long term basis.

69. Identify all corrective and/or responsive actions GPU has taken in response to the BETA Report, specifically addressing whether you have taken the following recommendations of BETA:

(a) Page 56: The goals and objectives of the headquarters training and education group should be reviewed to ensure that higher priority is given to carrying out the function of coordinating and overseeing the efforts of the two site training groups.

(b) Page 56: All divisions involved with having people trained at TMI and the TMI Training Department should arrive at a realistic training schedule that covers one year ahead. This will require these divisions to feel some degree of responsibility for whatever inefficiencies they create by not providing useful data or by being insensitive to the needs of Training.

(c) Page 58: The Director of Training and Education should direct the efforts of the TMI Training Department to concentrate more on producing the best product they know how, and less on trying to prove it.

(d) Page 58: Greater effort should be spent on making the students more responsible for their performance.

(e) Page 59: The Manager of TMI Training should review the basic principles of supervisor responsibility with his supervisors.

(f) Page 59: The Manager of TMI Training should locate his office in an area where he can see his staff and they can see him, to eliminate the impression that he is inaccessible.

(g) Page 59: When both the Manager for TMI Training and the Operating Training Manager are absent from the Training Building, someone should be designated in charge and monitor the events in the Training Building.

For any actions recommended by BETA which GPU did not follow, explain the basis for failing to follow the recommendations and any alternative or substitute action which GPU took to remedy the problems outlined in the BETA Report.

ANSWER.

- (a) As noted on page 14 of the February 27, 1984 "Status Report" (Responses to Recommendations of Basic Energy Technology Associates, Inc. as set forth in their Report dated February 28, 1983), this recommendation (V-B-2) was completed.
- (b) As noted on page 6 of the July 20, 1984 "Status Report," this recommendation (V-B-3) was completed.
- (c) As noted on page 15 of the February 27, 1984 "Status Report," this recommendation (V-B-4-b) was completed.
- (d) As noted on page 6 of the July 20, 1984 "Status Report," efforts of several divisions have been underway to accomplish this recommendation (V-B-4-c).
- (e) As noted on page 15 of the February 27, 1984 "Status Report," this recommendation (V-B-5-a) was completed.



- (f) As noted on page 15 of the February 27, 1984 "Status Report," GPUN does not agree that this recommendation (V-B-4-c)', relocation of the Office of Manager, TMI Training is necessary. The training staff did not feel that the Manager was inaccessible.
- (g) As noted on page 16 of the February 27, 1984 "Status Report," this recommendation (V-B-5-c) was completed.

70. State whether or not GPU agrees with the following findings of the BETA Report:

(a) Page 52: Due to lack of management attention and lack of qualified and experienced people, the goals and objectives of the training program are falling short.

(b) Page 55: The headquarters training group is not concentrating enough on coordinating plant training efforts.

(c) Page 56: There is a lack of meaningful scheduling in the TMI training effort. Because of this the Training Department has difficulty in obtaining data to schedule its training.

(d) Page 57: There is an overly "understanding attitude" which prevails in the TMI Training Department with respect to operator training. The training department lacks the degree of toughness, accountability and insistence on performance needed in the nuclear profession.

(e) Page 57: The training department puts too much emphasis on proving to the world that the training program is good and not enough on doing what should be done to produce a competent operator.

(f) Page 58: The instructors in the TMI Training Department lack supervision.

(g) Page 114: There is a reluctance within the GPUN system to take action to improve the performance of poor performers or to terminate their employment.

If GPU does not agree with any of the findings stated above, explain the reason for the disagreement. For all findings with which GPU does agree, state the corrective actions taken to remedy the problem(s).

ANSWER. (a) This statement was not a BETA finding, but rather a general statement of observation. Since the BETA review, GPUN has hired a new director of Training, Dr. Richard P. Coe. Dr. Coe's activities have included reviewing, evaluating and focusing priorities of the training program at all locations, including the continuous monitoring of the goals and objectives program.

(b) As noted on page 14 of the February 27, 1984 "Status Report," GPUN does agree with the finding (V-B-2) and has completed action to address that situation.

(c) As noted on page 6 of the July 20, 1984 "Status Report," GPUN agrees with the finding (V-B-3) and has completed action to address that situation.

(d) As noted on page 6 of the July 20, 1984 "Status Report," GPUN agrees with the finding (V-B-4) and action is underway to address that situation.

(e) This statement was not a BETA finding, but rather a statement of "Discussion" of finding V-B-4, which is addressed in Interrogatory 69(c) and (d) and in the previous Interrogatory 70(d).

(f) As noted on page 15 of the February 27, 1984 "Status Report," GPUN agrees with the finding (V-B-5) and has completed actions to address this situation.

(g) As noted on page 14 of the July 20, 1984 "Status Report," GPUN agrees with the finding (XII-D-a) and has completed actions to address the situation.

71. Does GPU agree with the finding in ALAB-772 that lack of communication between top management and the Training Department contributed to the cheating incidents and/or failures in the training program? If it does not, explain why not. ALAB-772, at 71, n.55.

ANSWER. The OARP Committee stated on page 149 of their June 1, 1980 report, "It further recommends that communication between top management and the operating crews be kept open and supported by visible actions on the part of all levels of management such as visits to the control rooms (including visits during the back shift), facilitation of means for the consideration of operator ideas, etc. Top management needs to keep aware of the real and perceived problems of its employees." And footnote 55 of ALAB-772 states, "The Special Master similarly concluded, with regard to the poor administration of licensee was not aware of these conditions, "its management was out of touch with the training program." See LBP-82-34B, supra, 15 N.R.C. at 1050.

GPUN agrees with the recommendation of the OARP Committee referenced and partially quoted in ALAB-772. Mr. Hukill and members of his staff have made a special effort to communicate with the operating crews, including the activities described in the Special Report of the Reconstituted OARP Review Committee (June 12, 1984) and further discussed in the response to Interrogatory 61.

Dr. Long's Nuclear Assurance Division employee meetings (also discussed further in response to Interrogatory 61), the training management evaluations of instructors and training

(reference TMIA document request (second set) #19), and the Office of the President reviews with the T&E Department (see response to TMIA Interrogatory 27) are examples of GPUN's efforts to assure effective communications between top management and the Training Department, and to preclude circumstances where lack of communications may have contributed to events leading to the cheating incidents.

Mr. Clark, in a Memorandum to file dated February 22, 1984, and in a Memorandum to all GPU system employees engaged in nuclear activities, dated February 27, 1984, emphasized the importance of effective communications between top management and employees. And the GPUNC 1984 Corporate Objectives state:

Assure absolute openness of information availability and exchange within GPUNC so as to assure that all information which might affect safety of nuclear activities is available to responsible company officials.

72. Identify all discussions, conversations, meetings or communications among GPU Nuclear or GPU management about the Milhollin Report or the ASLB PID.

For all discussions, conversations, meetings or communications identified above, identify any documents related to them, including but not limited to meeting minutes; memoranda memorializing such conversations, discussions or communications; correspondence; personal notes and files; briefing papers; and instructions or directions concerning GPU's response to the Milhollin Report or ASLB PID.

OBJECTION. Licensee objects to Interrogatory 72 on the ground that the information requested is not relevant, nor could it lead to the discovery of relevant information. TMIA's extraordinarily broad discovery request once again concerns Licensee's opinion of and response to the Milhollin Report and

the ASLB PID. This information is in no way related to the quality of the current licensed operator training program or the Committee's assessment thereof. The identification of all of Licensee's discussions, conversations, meetings and communications and the related documents is therefore unnecessary and unduly burdensome compared to the infinitesimal probative value of the requested information.

73. Identify all options considered by GPU management to respond to the Milhollin Report and to the ASLB PID, including but not limited to options to change or restructure the Training Department; disciplinary action considered against individuals involved in the cheating incidents; restructuring of the management of GPU or GPU Nuclear; and cooperation with ongoing NRC and Department of Justice investigations.

ANSWER & OBJECTION. The responses to the Milhollin Report and ASLB PID have been described in answers to numerous other TMIA interrogatories including Interrogatories 2, 5, 6, 9, 17, 27, 28, 29, 30, 31, 65, 66 and 67.

Licensee objects to those portions of Interrogatory 73 pertaining to the elements of Licensee's organization that are unrelated to the TMI-1 licensed operator training program. Such information is neither relevant nor likely to lead to relevant information.

74. Identify all other evaluations of management, the Training Department, or the cheating incidents, commissioned by GPU after the ASLB PID was issued on July 27, 1982, other than the BETA, RHR and Rickover Reports.

Identify all documents which relate to, mention, refer to, memorialize, constitute or otherwise concern any evaluations identified above.

For any reports identified above, state whether or not GPU disclosed the reports to the NRC. If not, explain why not.



ANSWER & OBJECTION. The only external evaluation done of licensed operator training commissioned by GPU after the ASLB PID was issued on July 27, 1983, was done by the Institute of Nuclear Power Operations in May 1983.

Applicable documents include:

a. INPO's Evaluation Report on Three Mile Island Nuclear Power Station - Unit One GPU Nuclear Corporation.

b. S. L. Newton memo 6211-84-0117 dated February 9, 1984, "INPO Action Item Status Report."

c. P. R. Clark letter dated March 28, 1984 to Mr. E. P. Wilkinson.

d. H. D. Hukill memo 3000-84-130 dated March 29, 1984, "May 1983 INPO Evaluation Status Report."

Licensee objects to those portions of Interrogatory 74 requesting the identification of all evaluations, and any related documents, commissioned by Licensee concerning the cheating incidents or Licensee's management except insofar as these evaluations relate to the current TMI-1 licensed operator training program. Licensee also objects to that portion of Interrogatory 74 concerning Licensee's disclosure or nondisclosure of the aforementioned documents to the NRC. The information to which Licensee objects is neither relevant nor could it lead to relevant information. The evaluation of Licensee's management and of the cheating itself is outside the scope of the remanded proceeding. TMIA impermissably seeks to broaden the scope of this proceeding beyond that identified by the Licensing Board in its Memorandum and Order Following Prehearing Conference, dated July 9, 1984.

75. Identify all witnesses, expert or other, whose testimony GPU intends to present on the training issue in these reopened management hearings.

Identify all documents on which these witnesses intend to rely or to cite, or which GPU intends to introduce.

ANSWER. At this time, Licensee intends to introduce the testimony of Julien M. Christensen, Eric F. Gardner, Frank L. Kelly, William R. Kimel and Robert Uhrig. Licensee also anticipates that Dr. Long, Dr. Coe, Mr. Newton, Mr. Ross and Mr. Leonard probably will testify. Licensee has not decided whether any other individuals will testify on the training issue.

Licensee presently intends to introduce into evidence the Special Report of the Reconstituted OARP Review Committee, dated June 12, 1984. Licensee does not know on what other documents its witnesses will rely.

Respectfully submitted,

*Deborah B. Bauser*  
\_\_\_\_\_  
Ernest L. Blake, Jr., P.C.  
Deborah B. Bauser  
Wilbert Washington, II

SHAW, PITTMAN, POTTS & TROWBRIDGE  
1800 M Street, N.W.  
Washington, D.C. 20036  
(202) 822-1000

Counsel for Licensee

Dated: September 12, 1984

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

AFFIDAVIT OF RICHARD PHILLIPE COE

) 2000

*Richard V. Lee*

Sworn to and subscribed to  
before me this 11th day of September  
1984

Carol Schenli

My Commission Expires Sept. 29, 1967.

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 SP  
(Three Mile Island Nuclear ) (Restart-Management Remand)  
Station, Unit No. 1) )

AFFIDAVIT OF DR. ERIC GARDNER

County of Onondaga )  
State of New York ) ss

Dr. Eric Gardner, being duly sworn according to law, deposes and says that he is a consultant to GPU Nuclear Corporation, and that the answer to Interrogatory 56, contained in "Licensee's Answers to Intervenor Three Mile Island Alert's Second Set of Interrogatories to General Public Utilities" is true and correct to the best of his information, knowledge and belief.

Eric Gardner  
Eric Gardner

Sworn to and subscribed to  
before me this 6<sup>th</sup> day of  
September, 1984

Daniel J. H. H. H.  
Notary Public

My Commission expires 3-30-85.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

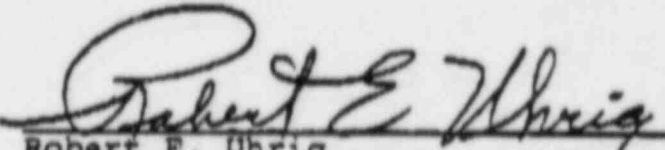
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

AFFIDAVIT OF ROBERT E. UHRIG

County of Palm Beach )  
 ) ss  
State of Florida )

Robert E. Uhrig, being duly sworn according to law, deposes and says that he is a consultant to GPU Nuclear Corporation and serves as Chairman of the Reconstituted OARP Committee. The answers to interrogatories 38, 47, 50-55, 57, and 60, contained in "Licensee's Answers to Intervenor Three Mile Island Alert's Second Set of Interrogatories to General Public Utilities" were prepared by me with the assistance of the other four Committee members and are true and correct to the best of my information, knowledge and belief.

  
Robert E. Uhrig

Sworn to and subscribed to  
before me this 12<sup>th</sup> day of  
September 1984 A.D.

  
Notary Public

My Commission expires

NOTARY PUBLIC STATE OF FLORIDA  
MY COMMISSION EXPIRES FEB 1 1987  
BONDED THRU GENERAL INSURANCE UND



NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )

METROPOLITAN EDISON COMPANY )

(Three Mile Island Nuclear  
Station, Unit No. 1) )

Docket No. 50-289 SP  
(Restart-Management Remand)

AFFIDAVIT OF PHILIP R. CLARK

County of Morris )

State of New Jersey )

ss

Philip R. Clark, being duly sworn according to law, deposes and says that he is the President and Chief Executive Officer of GPU Nuclear Corporation, and that the answers to Interrogatories 4, 5, 11, 65, and 68, contained in "Licensee's Answers to Intervenor Three Mile Island Alert's Second Set of Interrogatories to General Public Utilities" are true and correct to the best of his information, knowledge and belief.

Philip R. Clark

Philip R. Clark

Sworn to and subscribed to  
before me this 11<sup>th</sup> day of  
September, 1984.

Carol Disposito  
Notary Public

My Commission expires \_\_\_\_\_.

CAROL DISPOTO  
NOTARY PUBLIC OF NEW JERSEY  
My Commission Expires June 30, 1986

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 SP  
 ) (Restart-Management Remand)  
(Three Mile Island Nuclear )  
Station, Unit No. 1) )

AFFIDAVIT OF ROBERT L. LONG

District of )  
 ) ss  
Columbia )

Robert L. Long, being duly sworn according to law, deposes and says that he is Vice President, Nuclear Assurance Division, GPU Nuclear Corporation, and that the answers to Interrogatories 5, 8, 10, 14, 27, 61, 67, 69, 70, 71, 73, contained in "Licensee's Answers to Intervenor Three Mile Island Alert's Second Set of Interrogatories to General Public Utilities" are true and correct to the best of his information, knowledge and belief.

Robert L. Long  
Robert L. Long

Sworn to and subscribed to before me this 11<sup>th</sup> day of September, 1984

Elaine MacConnell Notary Public

My Commission expires June 30, 1987.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

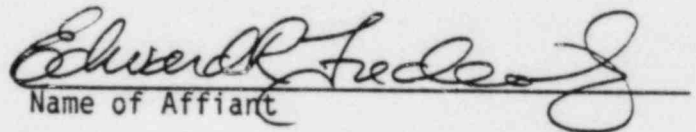
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

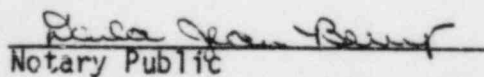
AFFIDAVIT OF E. R. FREDERICK

County of Dauphin )  
 ) ss  
State of Pennsylvania )

Edward R. Frederick, being duly sworn according to law, deposes and says that he is an Instructor V in the GPUN Training Department at TMI, and that the answers to Interrogatories 7, 16, 44, 46, contained in "Licensee's Answers to Intervenor Three Mile Island Alert's Second Set of Interrogatories to General Public Utilities" are true and correct to the best of his information, knowledge and belief.

  
Name of Affiant

Sworn to and subscribed to  
before me this [ 6th ]  
day of [ September ]

  
Notary Public

My Commission expires June 17, 1985.

PAULA JEAN BERRY, NOTARY PUBLIC  
HIOLETTOWN BORO. DAUPHIN COUNTY  
MY COMMISSION EXPIRES JUNE 17, 1985  
Member Pennsylvania State Bar Association

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

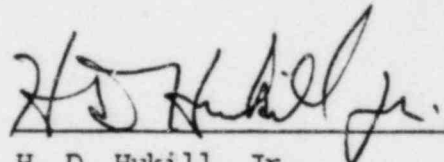
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

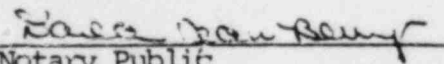
AFFIDAVIT OF H. D. HUKILL, JR.

County of Dauphin )  
 ) ss  
State of Pennsylvania )

H. D. Hukill, Jr., being duly sworn according to law, deposes and says that he is Vice President and Director, TMI-1, and that the answers to Interrogatories 13, 29 Paragraph 2, 61 except for items 3. and 4. on pages 77 and 78 of the Special Report, 62, contained in "Licensee's Answers to Intervenor Three Mile Island Alert's Second Set of Interrogatories to General Public Utilities" are true and correct to the best of his information, knowledge and belief.

  
\_\_\_\_\_  
H. D. Hukill, Jr.

Sworn to and subscribed to  
before me this 6th day of  
September

  
\_\_\_\_\_  
Notary Public

My Commission expires June 17, 1985.

JOHN J. BERRY  
MIDDLETOWN BORO. DAUPHIN COUNTY  
MY COMMISSION EXPIRES JUNE 17, 1985  
Association of Notaries

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

Docket No. 50-289 SP  
(Restart-Management Remand)

County of Dauphin                    )  
  )  
State of Pennsylvania                )               ss

Samuel L. Newton  
Name of Affiant

Lalayan Bury  
Notary Public

WORLD JEAN BERRY MARY PUBLIC  
MIDDLETOWN BORO, DAUPHIN COUNTY  
MY COMMISSION EXPIRES JUNE 17 1925  
number Pennsylvania 2100



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of )

METROPOLITAN EDISON COMPANY )

(Three Mile Island Nuclear  
Station Unit No. 1) )

Docket No. 50-289 SP  
(Restart-Management Remand)

AFFIDAVIT OF MICHAEL J. ROSS, SR.

County of Dauphin )

State of Pennsylvania )

Michael J. Ross, Sr., being duly sworn according to law, deposes and says that he is Manager, Plant Operations, and that the answer to Interrogatory 43, contained in "Licensee's Answers to Intervenor Three Mile Island Alert's Second Set of Interrogatories to General Public Utilities" are true and correct to the best of his information, knowledge and belief.

Michael J. Ross, Sr.

Michael J. Ross, Sr.

Sworn to and subscribed to  
before me this 12th day of  
September, 1984.

Shirley Jean Berry  
Notary Public

My Commission Expires June 17, 1985.

SHIRLEY JEAN BERRY, NOTARY PUBLIC  
MIDDLETOWN BORO. DAUPHIN COUNTY  
MY COMMISSION EXPIRES JUNE 17, 1985  
Member, Pennsylvania Association of Notaries

September 12, 1984

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 SP
	)	(Restart-Management Remand)
(Three Mile Island Nuclear	)	
Station, Unit No. 1)	)	

AFFIDAVIT OF DEBORAH B. BAUSER

District of       )  
                      )  
Columbia           )       ss

Deborah B. Bauser, being duly sworn according to law, deposes and says that she is counsel for GPU Nuclear Corporation, and that the answers to Interrogatory 75, contained in "Licensee's Answers to Intervenor Three Mile Island Alert's Second Set of Interrogatories to General Public Utilities" are true and correct to the best of her information, knowledge and belief.

Deborah B. Bauser  
Deborah B. Bauser

Sworn to and subscribed to  
before me this 12th day of  
September, 1984.

Katherine A. Noonan  
Notary Public

My Commission expires 3/31/85.