NUCLEAR REGULATORY COMMISSION

ORIGINAL

COMMISSION MEETING

In the Matter of: PUBLIC MEETING

STATUS OF STAFF CERTIFICATION ON LICENSEE COMPLIANCE WITH RESTART REQUIREMENT ON TMI-1

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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STATUS OF STAFF CERTIFICATION ON LICENSEE COMPLIANCE WITH RESTART REQUIREMENT ON TMI-1

- - -

PUBLIC MEETING

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Room 1130
1717 H Street N.W.
Washington, D.C;

Wednesday, October 6, 1982

The Commission convened on the above-entitled matter at 3:05 p.m., pursuant to notice.

BEFORE:

NUNZIO PALLADINO, Chairman
VICTOR GILINSKY, Commissioner
JOHN AHEARNE, Commissioner
THOMAS ROBERTS, Commissioner
JOHN ASSELSTINE, Commissioner

STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

S. CHILK, Secretary
L. BICKWIT, General Counsel
D. EISENHUT, NRR
R. JACOBS, NRR
R. JARUSDICKI, Region I

## DISCLAIMER

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P R O C E E D I N G S

CHAIRMAN PALLADINO: The meeting will please come to order.

The subject of the meeting this afternoon is the Status of Staff Certification on Licensee Compliance with Restart Requirements in TMI-1.

As you will recall, on August 9, 1979, the Commission issued an order to the Licensee for TMI-1 requiring, among other things, accomplishment of certain requirements as a condition for restart. These actions were required to be completed to the satisfaction of the Director of the Nuclear Reactor Regulation. However, the order required the Staff to certify their satisfaction to the Commission, and the Staff is here today to discuss the status of their certification activities.

Since the substantive matters of the items to be discussed today are still before the Commission in the TMI-1 proceeding, I would General Counsel to advise us at any time if I discuss must be curtailed or modified due to ex parte considerations.

Before we start, I believe it would be appropriate to ask General Counsel to briefly outline the nature of the issued that can or cannot be discussed here today.

Unless the Commissioners have other comments, I suggest we hear from Mr. Bickwit, and then turn it to the Staff.

MR. BICKWIT: Speaking generally, where the Board has decided on a given requirement, subject to Staff certification of that requirement, then the adequacy of the certification and questions relating to that matter can be discussed here. But the adequacy or wisdom of the requirement itself ought not to be discussed.

As in the case of the 0737 items, the Board has deferred to Staff and the Commission on matters which would normally be regarded not as mere implementation items, but as basic questions involving what the requirements ought to be and when they ought to be instituted, the Commission is free to discuss those matters with the Staff, the matters on which the Board has deferred to the Staff and the Commission. Where matters are outside the scope of the proceeding, the Commission and the Staff are free to discuss the matter.

In short, where the matter is one on which the Board has decided, the matter ought not to be the subject of discussion at this meeting, and anything is fair game.

COMMISSIONER GILINSKY: Now what does that mean?

MR. BICKWIT: Do you want examples?

COMMISSIONER GILINSKY: Give me an example. Is that going to affect anything that Mr. Eisenhut is going to say?

MR. BICKWIT: No.

COMMISSIONER GILINSKY: I must confess that I didn't follow that.

MR. BICKWIT: It is a very complicated proceeding, and it is a complicated instruction, so we will monitor it closely.

COMMISSIONER GILINSKY: All right.

MR. BICKWIT: Perhaps the easiest thing is to repeat the guidance.

(General laughter.)

MR. BICKWIT: I will give you an example with each.

COMMISSIONER GILINSKY: Why don't we just go on.

CHAIRMAN PALLADINO: May I suggest that the best way to get the examples is to go on.

COMMISSIONER GILINSKY: Wave your arms if you think we are getting into a problem.

MR. BICKWIT: I far prefer that.

CHAIRMAN PALLADINO: Okay, then, why don't we proceed. I guess the meeting goes to Darrell Eisenhut.

MR. EISENHUT: Thank you.

Ccould I have the second slide, I guess it is?

(Slide.)

In response to the Commission's request, we are going to go through today a listing of the status of the certification items and then at the end of that we will go through briefly the overall status of a number of other items that remain to be completed on this plant also.

If I could have the next slide.

(Slide.)

We find, based on the record in this case, limiting the certification to the short-term requirements as identified in the August 9, 1979, order and the March 8, 1980, order, and any item the Board has imposed as being a short term requirements that must be certified prior to any decision.

The obvious prerequisites for this are that first the utility has to complete the item, and then after they have completed the item either Region I, I&E headquarters in the area of emergency preparedness, or NRR will either inspect or verify as appropriate the

various items. At the conclusion of that, we would reach the point where we would certify that all outstanding items have been done.

(Slide.)

The next slide is a summary. Actually, the next two slides could be looked at either way. Perhaps I could go to the next slide, it would be a little easier. If I could go to the next slide please.

(Slide.)

This is a breakdown of how you get 129 items.

CHAIRMAN PALLADINO: Incidentally, there was a statement on your preceding slide that I thought was important to highlight. I think it is the second item..

MR. EISENHUT: I will come back to that slide. It is a little easier perhaps to do them in the order if I could.

CHAIRMAN PALLADINO: Thank you.

MR. EISENHUT: To try to characterize what the 129 items are and where they came from, we have together this little matrix. The number of items flowing from the items in the order or the Board decision follow pretty straightforward. Under items II A, B, C, and D, those are the four partial decisions from the hearing record.

The next thing on the table is the status as

we see it, and this is the status as of a couple of weeks ago from the utility at which time he had 93 complete. Appreciate that the numbers here evolve and change as time goes on, as he completes more and more items.

The NRC is reviewing these, as I indicated, either Region I, or I&E in the area of emergency preparedness, or NRR. The status of the NRR review is on the right-hand side, where you see that we have now completed 65.

COMMISSIONER AHEARNE: That is as of several weeks ago?

MR. EISENHUT: That is as of a couple of weeks ago, yes.

COMMISSIONER ROBERTS: Is there clear understanding on who has responsibility?

MR. EISENHUT: Yes, there is.

COMMISSIONER ROBERTS: Between the region and NRR?

MR. EISENHUT: Yes, there is. We, in fact, have an overall matrix that includes not only the certification items but other items that don't need to be certified. Rich Jurasdicki is here with me today from Region I, who is in fact implementing the Region I aspects. We do have representatives here today from I&E

in the area of emergency preparedness.

I think there is a pretty standard understanding that has been circulated and approved by all the Staff. The list gets very, very large when you look at the total number of items, not just the certification items.

If I could go back now to the previous slide.

(Slide.)

COMMISSIONER GILINSKY: Could you explain that remark?

MR. EISENHUT: Yes. There are a large number of items that need to be completed at the plant, and there are what I will call sort of the traditional things on an operating plant. There are a number of NUREG-737 issues. There are a number of responses to I&E bulletins, follow-ups, or items that fall out of health physics appraisals, out of routine inspections, follow-ups to licensee event reports. There is a list of things that have been accumulated for all time since March 28.

In fact, these certification items are a subset of that. So what we tried to concentrate on here is that subset, and the other items, you will see in a moment, there is a quite lengthy list. But the key we really focused on is items that had to be certified as

complete prior to any decision concerning lifting the suspension. You will get a feeling for the magnitude of this in just a little while. There are some other items.

CHAIRMAN PALLADINO: Darrell, I don't understand the "NRC Review Complete-Not Complete." Is it 65 out of 93. The 65 and 54 seem to add up to 119.

MR. JACOBS: No, it is 129. Sixty-five and 64.

CHAIRMAN PALLADINO: Is that 64, I am sorry.

MR. EISENHUT: Yes, it is. Of the 129, 65 have been signed off.

CHAIRMAN PALLADINO: Thank you.

MR. EISENHUT: It is meant to be 64. In fact, it is sort of an index, the way we follow progress in this area.

If I could go back to the previous slide.

(Slide.)

The second bullet here points to --

I am sorry, back to the one entitled "Status of Certification." There is one out of phase.

(Slide.)

Of the 64 that are not yet complete, four of those items require power operation. They are items that cannot be done prior to a decision. There are six

items --

COMMISSIONER AHEARNE: Wait, the 64 are NRC reviews.

MR. EISENHUT: Another way to put it. There are four items in either the 36 and, therefore, in the 64 by definition, that require power operation. There are six that require hot functional testing, and two others that require verification at the time of restart.

COMMISSIONER AHEARNE: I was noticing in the --

MR. EISENHUT: Since they are all in the 36, they are also in the 64. That is probably a better way to say it.

Of the other remaining 52 -- That is taking the six, the four, and the two away from the 64, of the remaining 52, 19 are right now -- as of the time that we put this together, they were ready for Region I inspection, 22 require GPU action before the NRC could get in the mode of doing an inspection. There were six that were resting NRR, and there were five that are now before I&E for action.

If I could go to two slides forward, to the Schedule for Complete.

(Slide.)

The next question is, how are all these going

to come together. This is a schedule both as the utility has indicated this is how, and the schedule he expects to resolve the 36 on. You can see that there are a number of these that are going to be resolved -- This schedule shows that by the end of January 1983 he will have resolved all except those that are needed to be done during hot functional testing.

The utility earlier today had indicated that in fact the schedule for completion of those is right now aiming more toward the end of December, rather than the end of January 1983.

COMMISSIONER AHEARNE: There are no items in your list, other than the order and the Board requirements. There are additional certification things, are there not, that you are checking on?

MR. EISENHUT: That are not --

COMMISSIONER AHEARNE: That are not in those two bins.

MR. EISENHUT: Not officially the certification items, but there are items that we are following up, yes. If I could, I will get to those a little bit later, in just a moment.

There are a couple of other things that you don't see from this. There are items that the utility cannot complete until the NRC takes an action also. We

sort of have it in a catch-22, where we must approve his technical specifications, for example, in a couple of areas, which constitutes a couple of these items, before he can modify his procedures, before the Region can sign off and complete them.

We are trying to be pretty sensitive to those and, again, today, I have asked the utility to identify any of those where we are on the critical path, other than the final sign-off. That is, we are preceding him on any activity that he is doing.

COMMISSIONER ROBERTS: You requested that information?

MR. EISENHUT: Yes, I have. I have been assured that it is only two or three items. It is a very small amount.

The technical resolution, I believe, on all issues has been arrived at, except for something on the order of one or two issues. There are one or two issues where we are still having some discussion with the utility on the certification list.

This sort of completes the overall picture of where we believe the utility is and where we believe the staff is on the certification items. We are prepared to talk in some more depth about any of the particular items on the schedule, or aspects if you like.

There is, in fact, attached as background to the package a listing of the certification items that are remaining, and it breaks down specifically, item by item, and the various status of where they stand. This is a tracking system we keep, and as an item is completed, we delete it from the list.

COMMISSIONER GILINSKY: What is the schedule for steam generator repairs?

MR. EISENHUT: The perfect question.

Could I have the next slide, please?

(Slide.)

This is a slide of -- And you really, in front of each bullet, you should think non-certification, because I have deleted the certification items and put them in the previous part of the package.

This is a listing of items and everything else that is outstanding. You will notice that the steam generator is the last item. It is the only item on the critical path, and I will get to that in a little more detail in a moment if I could.

The full menu of things that are left, you can break down in a number of ways. This is one way we tried to break it down.

First, on NUREG-737, it is the non-certification remainder of that document. There are

a number of issues in 737 that have not yet been resolved on this plant. I think resolution has been reached on essentially all of those, consistent with the position we are taking on the rest of the operating reactors.

COMMISSIONER AHEARNE: Could I get you to address one of them, and that is the one that you highlight --

MR. EISENHUT: II.B.2.2 plant shielding.

COMMISSIONER AHEARNE: Yes.

MR. EISENHUT: Yes.

COMMISSIONER AHEARNE: You end up saying, "The Staff has not completed its review of Licensee's justification for operation."

MR. EISENHUT: In fact, I think there was a schedule added for that SECY document that indicated that we hope to reach resolution on it by about October 8.

The item on plant shielding, we have not yet resolved. It is an item that Region I is actually reviewing for us, and we have yet to reach resolution on that issue. It now looks like the schedule is probably a couple of weeks away.

CHAIRMAN PALLADINO: Is there anything that you may want to add?

MR. JARUSDICKI: There is not much to add, other than the fact that we have started committing some people to looking at that. They have been to the site and there is some more need to follow up on some procedures.

COMMISSIONER AHEARNE: Is there something more than the fact that rather than putting in shielding, they decided to go to having instrumentation that enables them to operate the valves separately from the region where the valves are, and that instrumentation is not available in time?

MR. JARUSDICKI: Let me try to simplify it. There appears to be a problem when you go to the recirculation mode, and there are four different ways you can do it.

If you go through all those four different ways, there are different areas that we have to have access to that we may not have access to because of the source term. If you look and say, I need at least one way of doing it, and not allow the other three ways, the issue can be resolved today because they have shielding for that mode of operation.

We, therefore, are saying, all right, how do we distinguish? Do we want all four modes ready and available for restart, or will we be satisfied with one

mode of operation and will that be acceptable. So we are working. We know that we have one path of resolution and we will work out the details with them of whether that is acceptable or not to NRR. So I see closure.

Now, how long do we defer for allowing the other three modes --

COMMISSIONER AHEARNE: Is the acceptability, then, a question of what is the probability that you would need the other three modes?

MR. JARUSDICKI: I would have to say, yes, you would have to look at that. As I said, that is something that we need to discuss with NRR.

MR. EISENHUT: The ball is in our court as of about two days ago, and we just have not gotten to the point of resolving it yet.

MR. JACOBS: It relates to what we think are procedural deficiencies in the procedures to go into recirc. All we want to do is really verify that these are in fact procedural deficiencies that can be corrected before restart.

That is really where we are, and it is recent issue that came up, that was not known at the time the SECY paper was written.

MR. EISENHUT: The rest of the 737 items, for

example, things like reactor water level, we will be handling, as I indicated, very similar to the rest of the operating reactors, and we will be coming to the Commission generically on those requirements. We will handle them in a like manner.

The next three bullets here on this chart --

CHAIRMAN PALLADINO: On these items, you note in 384 that you are going to ask for approval to defer these four items?

MR. JACOBS: Yes, sir, we recommended that for four of the items should be approved for a delay until March 31, 1983, or restart, whichever is earlier.

MR. EISENHUT: Remember, the Commission in this case requested that the staff not take action on TMI-1 as we would on other operating reactors. We are preparing the order on other operating reactors, where we are working what we consider reasonable schedules for those particular plants. We have been contacting vendors of equipment to develop what reasonable schedules are.

In this case, following a similar fashion, we have requested that the Commission approve deferral of those items until March 31 or restart, whichever is later. It seems like a reasonable date, and it would seem like a very short period of time with the overall

schedule that is presently being proposed on this plant.

CHAIRMAN PALLADINO: If they start up before March 31, would that require a shutdown to get some of these done to meet the March 31 date?

MR. JACOBS: It is possible depending on how far he got on the modification before that time, yes, sir.

MR. EISENHUT: However, when you see the overall schedule, it likely is not an impact.

The next three items on the slide, as I indicated, really can be broken in a various number of ways. It is really the overall listing of items that are presently pending. I will call them the sort of the classical items that are pending before the Region, and Rich Jurasdicki is going to summarize those items.

MR. JARUSDICKI: These items are what we traditionally see on any plant, just like we saw on Susquehannah. We have appraisals. We have health physics appraisals that were done, the emergency planning appraisals. They are follow up items that need to be closed out as a result of an inspection, I&E bulletins.

Licensee make commitments to schedules, and most of these I&E bulletins were schedules for long

outage, like the masonry wall problem. They have been done, so we are closing them out. If an inspector has to go back and check a certain item, he will put that on this list. These types of items we have to have closed prior to restart.

The outstanding inspection items relate to appraisals and routine inspections. Outstanding LERs require follow-up reports by licensees and the inspectors, and the Region follows up on those. The I&E follow-up, again, is commitments by the licensee that we are following up, and again closing them out.

Miscellaneous technical specifications, as Darrell also mentioned earlier, general result in changes in procedures that we then follow up to make sure that they are properly implemented, and that the people are trained to follow the new procedures.

These are not something that is radically different from any plant. I do see an abnormal number of these items on TMI. It is pretty much what we had experienced in Susquehannah.

MR. EISENHUT: The last item item on the first part there, the number of miscellaneous technical specification, there are a number of items that we need to follow up. The sort of standard clean-up items in the tech specs, really nothing significant in that

group.

The last item on the slide is the only item that is in a direct way on the critical path of the licensee's estimate of plant readiness.

If I could have the last slide.

(Slide.)

COMMISSIONER AHEARNE: You have reviewed and approved the approach that has been used?

MR. EISENHUT: We have, in fact, reviewed and we have not yet issued the approval for the utility to go forth with the expansion process. That is, in fact, due to be issued very shortly. The utility's estimate, as of today, his estimate for when he would begin the repair operation, is about October 15th. He would not be ready by then. Our evaluation will certainly be issued by then.

Legitimately speaking, it is not an approval of them to do the repair operation. The approval actually comes prior to restart. We approve that they have actually undergone a repair operation, and that that operation will in fact accomplish its purpose. We have done a limited review to ensure that this operation has a reasonable likelihood of doing that.

COMMISSIONER AHEARNE: Clearly, if you had found problems with the approach they are taking, you

would have --

MR. EISENHUT: Absolutely.

COMMISSIONER AHEARNE: Do I gather your conclusion is that you have not identified any problems.

MR. EISENHUT: We have not identified any problem. In fact, the explosive expansion process is one that has been done on thousands of tubes.

CHAIRMAN PALLADINO: It is what?

MR. EISENHUT: It has been done on thousands of tubes literally before, and we have high confidence that it can be done.

CHAIRMAN PALLADINO: Successfully?

MR. EISENHUT: Successfully.

COMMISSIONER AHEARNE: These are thousands of tubes in how many plants?

MR. EISENHUT: It is hard to say. A number of those are not commercial power plants. So it is over a number of facilities. There have also been --

CHAIRMAN PALLADINO: Nuclear facilities?

MR. EISENHUT: Some are nuclear facilities, some are not.

MR. JACOBS: I might add that Combustion Engineering uses this process in all their initiation fabrication, an explosive expansion process, to close

the gaps between the tubes and the tube-sheets.

MR. EISENHUT: It is a variation of it.

COMMISSIONER ROBERTS: It works in manufacturing.

MR. JACOBS: Not in repair.

MR. EISENHUT: It is a variation of that process, but it is very similar.

There also has been some extensive tests that have been run to demonstrate that this process in fact can work.

CHAIRMAN PALLADINO: In steam generators?

MR. EISENHUT: In steam generators, yes.

CHAIRMAN PALLADINO: With effect now? In position?

MR. EISENHUT: Yes.

CHAIRMAN PALLADINO: You said that you had made a preliminary, it sounded like a tentative analysis.

MR. EISENHUT: No, it is not meant to be. It is meant to be the subtlety that we go through, sort of the legalisms. It is not an approval, but it is a review. We have done a review in enough depth into the process to see that the process can be done. As the Commissioner indicated, we have done enough of a review to say, stop, if in fact we thought there was any

question about the process.

Technically, it is not the approval because the approval actually entails that it can work and it has done so properly. So the approval will come prior to a restart decision, and that is the only tentativeness.

CHAIRMAN PALLADINO: But you are satisfied. You have gone in enough depth to know whether there are problems to be faced.

MR. EISENHUT: Yes, we have, and that evaluation will be issued very shortly.

The utility would start the repair operation on October 15. He would be completing the repairs something toward the end of the year. As you can see, his proposed schedule would end up with a completion date in February, which is the end of the process, since this is in fact on the critical path.

COMMISSIONER AHEARNE: Do you think that that is realistic?

MR. EISENHUT: Our estimate at the bottom is that we are shooting more -- We think that it is will be closer to a March/April timeframe.

COMMISSIONER AHEARNE: You say, "Staff's optimistic estimate of schedule."

MR. EISENHUT: Yes. We don't think it can

really be --

COMMISSIONER AHEARNE: Let me back up and say, what do you think is your realistic estimate?

MR. EISENHUT: I don't know whether there is any -- We think this is the earliest it can be. If they run into difficulties, it would be later, depending upon those difficulties. It is really hard to speculate beyond that.

We really think that this is the earliest timeframe that this can all be accomplished, and that is why the March 1983 date for completion of the other items. I believe, from a practical standpoint, they will essentially coincide.

COMMISSIONER AHEARNE: Optimism in schedules around usually means that it run out by many months.

MR. EISENHUT: Having had the opportunity to reflect on this slide, I would have deleted that word.

COMMISSIONER AHEARNE: But it still would have been an optimistic estimate, though, would it not?

MR. EISENHUT: No. Characterized, I think the Staff believes it is about as early as it can be accomplished.

MR. JACOBS: I think for the mode that he would go through to complete his repairs and to get ready for operation, the schedule is realistic, but it

doesn't include contingencies if he runs into a major problem. That is the reason that it is stated as being optimistic.

MR. EISENHUT: As I said, I would have deleted the word from the slide, had I had time to read the slide.

That basically concludes our presentation. We are prepared to address any of the items in some more detail as concerns the schedule or aspects.

COMMISSIONER AHEARNE: Let me just ask about another item on that steam generator. Do you have in mind any specific requirements on its operation and subsequent verification?

Have you reached a conclusion on the procedures that you will require, or is that something they propose and you accept it?

MR. EISENHUT: I don't think that we are at that point yet. I think that is really where we are. There would very likely be some additional --

COMMISSIONER AHEARNE: Where will the approval be with that? Will that be in the Region?

MR. EISENHUT: It will be in headquarters. The approval for restart after the repair will be based upon several pieces of information, including information from the Region, information from the

utility, based on inspections. We will put it all together, and I would expect that we will come up with some special requirements.

COMMISSIONER AHEARNE: I am just trying to make sure that I can get a sense of it. Do you expect the utility will propose: here is how we intend to verify that this repair process was satisfactory.

MR. JACOBS: Yes.

COMMISSIONER AHEARNE: There will be a set of tests which NRR would then agree, yes, those are adequate tests?

MR. JACOBS: Before you get to hot functional testing, there is a series of tests you have to do, which involve the hydro, probably some probalistic gas leak tests to verify the leak tightness.

What we are really concerned about is what happens when it is repaired -- We are not really concerned, but what we all want to know is what happens to the repair in an operating condition, and hot functional testing is as close as you can get to simulated operating condition and doing it in a safe manner. If problems are going to show up, we would expect them to show up in that time.

With regard to specific tests, it would be in terms of monitoring leak rates and those kinds of

things. We wouldn't be proposing to put the plant through any type of major transients to do it, though.

COMMISSIONER AHEARNE: Have you thought through whether you would require a longer period during hot functional testing?

MR. JACOBS: Yes, we have. We have been working very closely with the Licensee. He has been incorporating some of our concerns, and as part of that, I think, he is proposing right now about a 30-day hot functional testing.

Then, even following a restart condition, we would probably expect only short periods of operation, and then come back down and verify with anti-current testing, that kind of thing. He is generally in agreement with that type of strategy.

MR. EISENHUT: We have not reached the bottom line of what those things will look like.

CHAIRMAN PALLADINO: As GPU proposed and you reviewed the program for assuring the quality assurance in this repair process?

MR. JACOBS: Yes, sir. Part of their evaluation was to demonstrate how they were proposing quality controls and procedures for doing the expansion.

CHAIRMAN PALLADINO: Do you approve their QA

program?

MR. JARUSDICKI: The specific QA program, no, sir.

MR. EISENHUT: The overall approval process has not -- I mean, we have not reached the point yet. It is in the very near future. In fact, we are still putting together the final evaluation.

CHAIRMAN PALLADINO: Don't you approve the QA program?

MR. EISENHUT: It is not really a QA program per se for this, but it is: How do you know there is a quality job being done on the generator.

CHAIRMAN PALLADINO: I don't mean only confirming that it has been done, but how do they assure that it is being done properly, making sure that he has the proper QA?

MR. JACOBS: During the time that he is doing the expansion, we are going to have people on site monitoring the process. We also have one of our contractors reviewing the procedures he is using to conduct the expansions. Also, as we said, any problems that should show up, are going to show up in a leak testing mode or a hot functional testing mode.

I might add that he is not just running off and doing this in his steam generator. He has been

doing extensive testing on a steam generator at Mount Vernon, Indiana, which is a full steam generator. It is a TMI-1 type steam generator. He has been conducting similar procedures to consider ALARA concepts, and a number of other concerns, following the exact procedures he would use in his steam generator.

CHAIRMAN PALLADINO: Are there any inspection methods that are used as a certain number of tubes are done, to make sure that the bond is effective?

MR. JACOBS: In the early part of it, he intends to do a test on tubes in the generator, and to conduct the expansions, and then verify with profilometry and anti-current testing, and all kind of testing.

He is incorporating in the process quality checks, where he would stop at various periods and look at whether he is doing the repairs the way he should be.

COMMISSIONER GILINSKY: The Chairman's previous question, it seems to me, is an interesting one, not only for the case of TMI but all reactors. Did we, anywhere along the way, specifically address the question of the Licensee's QA program, and convince ourselves or decide that we were satisfied?

MR. EISENHUT: For steam generator

activities?

COMMISSIONER GILINSKY: For steam generator activities, or more generally for the general refurbishing of the plant?

MR. JACOBS: Yes, sir.

COMMISSIONER GILINSKY: Who did that?

MR. JACOBS: The quality assurance plan was submitted to NRR for review. It was a subject in the hearing. The implementation of the quality assurance plan is being reviewed by Region I by inspection.

MR. EISENHUT: For all plants, there are in fact detailed quality assurance plans.

COMMISSIONER GILINSKY: I know that we review these plans, paper plans, but to what extent have we made a determination that we have a functioning QA organization that is adequate to the job. This applies not only to TMI, but --

MR. JARUSDICKI: TMI is not being treated differently. They still have QC inspectors. They have QC organization. They still have to do their double-checking. There is the papertrail they have to follow, but they also still have to have their requirements for their own people to follow their own procedures.

So I woul think that quality is both the QC

people coming along and looking at the quality of work being done, and do you judge the quality of the work being done is by what kind of effort has gone into preparing the procedures to do the job properly.

COMMISSIONER GILINSKY: It doesn't sound to me like anywhere along the way we have said: Yes, the quality assurance program is functioning as it should. But rather the opposite, that a number of problems accumulate --

MR. JACOBS: There has been a quality assurance inspection on TMI-1 to verify that the proper implemer[illegible] was kosher. There may be some outstanding items, but I am not sure if Region I can address those.

There has been a specific quality assurance inspection on TMI-1.

MR. JARUSDICKI: We have had inspectors from Region 1 whose sole job is looking at quality assurance programs. They have been to TMI-1 throughout the course of the year. So that should answer your question. However, I would like to go a step further and say that that is not where quality stops with us.

We still go beyond the program and what those inspectors look at. I have not seen an enforcement history or a problem with the quality of the work or the

quality control program.

So from a programmatic standpoint, we have people looking at it. From looking at what the inspectors are finding, I see no problems. So I have to say, yes, there has been a program. NRR has looked at it. It has been applied in the field, and we are satisfied with it.

COMMISSIONER GILINSKY: Because they have not turned up problems to a degree where it would cause you concern.

MR. EISENHUT: That is implicitly what it is. In fact, generally what surfaces, so to speak, at either operating reactor or at OLs is where problems elevate themselves and surface that here is a demonstration of a history with some problems. Generally that is where we really start refocusing on it, certainly in headquarters.

That, basically, completed the items that we were planning to summarize. This is the kind of schedule we are looking at. We have committed that we are putting on whatever resources it takes to continue to process the approval of the remaining 64 items. We don't really think, even though the number is getting pretty intense --

COMMISSIONER AHEARNE: I assume that you mean

by, to continue your process, reviews of the remaining 64 items before they get approval.

MR. EISENHUT: Requests for approvals, yes. In fact, some have run into difficulty, and some are continuing to.

We will continue to process those, though. The density of them, so to speak, is getting greater per month as we get closer to the end of the line.

CHAIRMAN PALLADINO: Darrell, you earlier referred to your indication that you wanted our approval to defer four items. Then I wonder what part do we Commissioners play, if any, in approval of the 129, if I can remember the number.

COMMISSIONER AHEARNE: Go ahead, Darrell.

MR. EISENHUT: What I wanted to say earlier is, the reason the SECY document came down requesting -- and it was written as proposing -- was because it was our understanding that was the mode the Commission wanted to be in. That is, you wanted us to put it in a recommended mode on this plant, so you could take the final action.

Concerning the certification items, we are required to certify to the Commission the completion of 129 items. Then you would include that in your overall decision. That is basically why the language here is a

little different than it normally would be.

CHAIRMAN PALLADINO: The reason I raise the question, it seems to me you have asked for specific approval for the deferral of these four items.

COMMISSIONER AHEARNE: Those are the 737 items. They are outside.

CHAIRMAN PALLADINO: Are there any other questions from the Commissioners?

(No response.)

CHAIRMAN PALLADINO: I gather that this completes the status report. We will agree on deferral on the items affecting TMI-1 restart. Thank you all.

(Whereupon, at 3:40 p.m., the meeting adjourned.)

NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the

COMMISSION MEETING

in the matter of: Status of Staff Certification on Licensee Compliance with Restart Requirement on TMI-1

Date of Proceeding: October 6, 1982

Docket Number:

Place of Proceeding: WASHINGTON, D. C.

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

Patricia A. Minson

Official Reporter (Typed)

Patricia A. Minson

Official Reporter (Signature)

# COMMISSION BRIEFING

OCTOBER 6, 1982

# TMI-1 STATUS

D. G. EISENHUT
49-27572

# OUTLINE

- CERTIFICATION PLAN
- STATUS OF CERTIFICATION
- SUMMARY - CERTIFICATION ITEMS
- SCHEDULE FOR COMPLETION
- OTHER ITEMS TO BE COMPLETED BEFORE RESTART
- OVERALL PLANT STATUS AND SCHEDULE
- ATTACHMENT
  - CERTIFICATION ITEMS REMAINING

# CERTIFICATION PLAN

- CERTIFICATION LIMITED TO SHORT TERM REQUIREMENTS AS IDENTIFIED IN AUGUST 9, 1979 AND MARCH 8, 1980 ORDERS AND BOARD IMPOSED SHORT TERM REQUIREMENTS

- CERTIFICATION PREREQUISITES
  - LICENSEE MUST HAVE FULLY COMPLETED
  - REGION I, IE, OR NRR WILL INSPECT OR VERIFY COMPLETION WITH ALL OUTSTANDING ISSUES RESOLVED

# STATUS OF CERTIFICATION

- OF 129 CERTIFICATION ITEMS, 65 TOTALLY COMPLETE AS OF 9/23/82
- OF 64 ITEMS NOT YET COMPLETE, 4 REQUIRE POWEP OPERATION, 6 REQUIRE HOT FUNCTIONAL TESTING (HFT) AND 2 OTHERS REQUIRE VERIFICATION AT TIME OF RESTART
- OF 52 REMAINING ITEMS
  - 19 ARE READY FOR REGION I INSPECTION
  - 22 REQUIRE GPU ACTION WITH SUBSEQUENT INSPECTION/ REVIEW BY REGION I/NRR OR IE
  - 6 REQUIRE NRR ACTION WITH POSSIBLE FOLLOWUP ACTION BY GPU AND REGION I
  - 5 REQUIRE IE VERIFICATION
- ALL CERTIFICATION ITEMS EXCEPT THOSE REQUIRING CHANGE IN PLANT CONDITIONS COULD BE COMPLETED BY JANUARY 1983

# SUMMARY

## CERTIFICATION ITEMS

| | # OF ITEMS | UTILITY COMPLETE | UTILITY NOT COMPLETE | NRC REVIEW COMPLETE | NRC REVIEW NOT COMPLETE |
|---|---|---|---|---|---|
| I. AUGUST 9, 1979 ORDER SHORT TERM ITEMS | | | | | |
| 1. EFW RELIABILITY | 19 | 13 | 6 | 12 | 7 |
| 2. IE BULLETINS | 24 | 20 | 4 | 19 | 5 |
| 3. EMERGENCY PREPAREDNESS | 1 | 1 | 0 | 1 | 0 |
| 4. SEPARATION OF TMI-1/2 | 7 | 7 | 0 | 1 | 6 |
| 5. WASTE MANAGEMENT | 2 | 1 | 1 | 1 | 1 |
| 6. MANAGERIAL CAPABILITY | 12 | 10 | 2 | 9 | 3 |
| 7. FINANCIAL QUALIFICATIONS | N/A | | | | |
| 8. CATEGORY "A" LESSONS LEARNED | 21 | 15 | 6 | 10 | 11 |
| II. ASLB IMPOSED REQUIREMENTS (SHORT TERM) | | | | | |
| A. MGMT PID | 10 | 6 | 4 | 4 | 6 |
| B. PLANT DESIGN PID | 21 | 14 | 7 | 7 | 14 |
| C. EMERGENCY PLANNING PID. | 8 | 6 | 2 | 1 | 7 |
| D. CHEATING PID | 4 | 0 | 4 | 0 | 4 |
| TOTALS | 129 | 93 | 36 | 65 | 64 |

# SCHEDULE FOR COMPLETION OF CERTIFICATION

OF 64 REMAINING CERTIFICATION ITEMS:

| | UTILITY | NRC |
|---|---|---|
| OCTOBER 1982 | 7 | 12 |
| NOVEMBER 1982 | 14 | 15 |
| DECEMBER 1982 | 2 | 19 |
| JANUARY 1983 | 2 | 6 |
| HFT | 6 | 6 |
| RESTART/POWER ESCALATION TESTING | 5 | 6 |
| | 36 | 64 |

## OTHER ITEMS TO BE COMPLETED PRIOR TO RESTART

- NUREG-0737 (See SECY-82-384)
- OUTSTANDING IE INSPECTION ITEMS
- RESOLUTION OF OUTSTANDING LERs
- IE BULLETIN FOLLOWUP
- MISCELLANEOUS TECHNICAL SPECIFICATIONS

ONLY ITEM ON CRITICAL PATH

- STEAM GENERATOR REPAIRS

# OVERALL PLANT STATUS/SCHEDULE

- OTSG Repairs Controlling Plant Restart Readiness
- Steam Generator Recovery Schedule
  - Start of Explosive Expansion Repairs — 10/82
  - Completion of Repairs/OTSG Cleanup/Leak Testing — 12/82
  - Plant Available for Post Repair/Precritical Testing — 12/82
  - Remaining Actions
    - RCS Cleanup I.E. Desulfurization (major potential schedule impact)
    - Hot Operations and Subsequent ECT to Verify Repair Acceptability — 1/83 (est.)
    - Potential Further Repair
    - Optimistic Completion Date — 2/83
- Staff Optimistic Estimate of Schedule
  - Hot Operations — 1/83
  - Plant Ready for Criticality — March/April 1983

# CERTIFICATION ITEMS REMAINING

MI-1 RESTART CERTIFICATION STATUS - ITEMS REMAINING
. AUGUST 9, 1979 ORDER REQUIREMENTS

| ITEM | DESCRIPTION | ITEM TYPE | LICENSEE STATUS | INSPECTION/REVIEW STATUS | ESTIMATED COMPLETION/ REMARKS |
|---|---|---|---|---|---|
| . SHORT TERM | | | | | |
| RDER ITEM 1 | EFW RELIABILITY | | | | |
| A-1 | AUTO INITIATION OF EFW | MOD | COMPLETE | COMPLETE | EXCEPT POWER ESCALATION TESTING |
| A-3 | AUTO EFW LOAD ON DIESELS | MOD | COMPLETE EXCEPT TESTING | PARTIALLY COMPLETE | TESTING DURING HFT |
| A-4 | EFW TECH SPECS | TECH SPECS | PROCEDURE DRAFTED | PARTIALLY COMPLETE | 12/82 |
| A-8 | EFW AUTO START ANNUNCIATION | MOD | COMPLETE | COMPLETE | EXCEPT POWER ESCALATION TESTING |
| A ADDITIONAL ITEMS | RELIABILITY ANALYSIS | | | | |
| 1 | CWST LEVEL ALARM | MOD | IWL ITEMS - EST. 11/82 | PARTIALLY COMPLETE 12/82 | 12/82 |
| 6 | EFW INITIATION INDEPENDENT OF AC | MOD | REWORK IN PROGRESS EST. 10/82 | PARTIALLY COMPLETE | 11/82 EXCEPT HFT |
| 8 | CROSS-TIE BREAK | ANALYSIS | COMPLETE | NON-DESTRUCTIVE EXAM RECORDS REVIEW SCHEDULED 12/82 | 12/82 |
| RDER ITEM 2 | IE BULLETINS | | | | |
| 9-05A-2 | PLANT TRANSIENT REVIEW | INSPECTION | COMPLETE | SCHEDULED 12/82 | 12/82 |
| 9-05A-5 | VALVE POSITION REVIEW | PROCEDURES | -- | -- | VALVE LINEUP VERIFICATION AT TIME OF RESTART |
| 9-05A-6 | CONTAINMENT ISOLATION | MOD | SEE ORDER ITEM 8 2.1.4 | SEE ORDER ITEM 8 2.1.4 | |
| 9-05B-5 | ANTICIPATORY REACTOR TRIP (SAFETY GRADE) | MOD | COMPLETE | COMPLETE | EXCEPT POWER ESCALATION TESTING |

| EM | DESCRIPTION | ITEM TYPE | LICENSEE STATUS | INSPECTION/REVIEW STATUS | ESTIMATED COMPLETION/ REMARKS |
|---|---|---|---|---|---|
| DER ITEM 4 | SEPARATION OF TMI-1 & 2 | | | | |
| | A) LIQUID RADWASTE<br>-INTERCONNECTION ISOLATION | MOD | COMPLETE | SCHEDULED 10/82 | 10/82 |
| | B) GASEOUS RADWASTE<br>-LEAK TEST OF WASTE SYSTEM | TEST | COMPLETE | SCHEDULED 10/82 | 10/82 |
| | -FUEL HANDLING BUILDING ISOLATION | MOD | COMPLETE | SCHEDULED 10/82 | 10/82 |
| | -FUEL HANDLING BUILDING VENTILATION SYS. MOD. | MOD | COMPLETE | SCHEDULED 10/82 | 10/82 |
| | C) SOLID RADWASTE<br>-TMI-1/2 TRASH SEGREGATION | PROCEDURES | COMPLETE | SCHEDULED 10/82 | 10/82 |
| | D) SAMPLING SYSTEM<br>-INDEPENDENT TMI-2 SAMPLING SYSTEM | MOD | COMPLETE | SCHEDULED 10/82 | 10/82 |
| DER ITEM 5 | WASTE MANAGEMENT | | | | |
| | B) SOLID RADWASTE<br>-LOW ACTIVITY STOR. EXPANSION | MOD | COMPLETE | SCHEDULED 10/82 | 10/82 |
| DER ITEM 6 | MANAGERIAL CAPABILITY | | | | |
| | C) HEALTH PHYSICS<br>-QUALIFICATION RECORDS | TRAINING | COMPLETE | PARTIALLY COMPLETE | 11/82 |
| | D) NUREG-0694 ITEMS<br>-II.B.4 TRAINING RECORDS FOR MITIGATING CORE DAMAGE | TRAINING | PARTIALLY COMPLETE EST. 12/82 | PARTIALLY COMPLETE | 1/83 |
| | E) INSPECTORS VIEWS<br>-RESOLVE INSP. FINDINGS IN NUREG-0680 | INSPECTION | PARTIALLY COMPLETE EST. 10/82 | PARTIALLY COMPLETE | 12/82 |

| TEM | DESCRIPTION | ITEM TYPE | LICENSEE STATUS | INSPECTION/REVIEW STATUS | ESTIMATED COMPLETION/ REMARKS |
|---|---|---|---|---|---|
| RDER ITEM 8 | LESSONS LEARNED-SHORT TERM | | | | |
| .1.1 | EMERGENCY POWER SUPPLY -PRESSURIZER HEATERS | MOD | COMPLETE | PARTIALLY COMPLETE | 11/82 |
| .1.3A | VALVE POSITION INDICATION | MOD | COMPLETE | PARTIALLY COMPLETE | 11/82 |
| .1.3B | INADEQUATE CORE COOLING -EXISTING INSTRUMENTATION & SATURATION METER | MOD | COMPLETE EXCEPT TESTING | PARTIALLY COMPLETE | 10/82 EXCEPT HFT |
| .1.4 | CONTAINMENT ISOLATION | MOD | TESTING EST. 11/82 | PARTIALLY COMPLETE | 12/82 |
| .1.7B | EFW FLOW INDICATION (CONTROL GRADE) | MOD | IML ITEMS EST. 10/82 | SCHEDULED 11/82 | LICENSEE INSTALLING SAFETY GRADE INST. IAW II.E.1.2 - 11/82 |
| .1.8B | RADIATION MONITORS (CONTROL GRADE) | MOD | | | LICENSEE INSTALLING FINAL MONITORS IAW II.F.1 - 1/83 |
| | A) III RANGE RADIATION MONITORS | | IML ITEMS-EST. 1/83 | SCHEDULED 1/83 | |
| | B) NOBLE GAS MONITORS | | IML ITEMS-EST. 1/83 | SCHEDULED 1/83 | |
| | C) RADIOIODINE/PARTICULATE MONITORS | | IML ITEMS-EST. 11/82 | SCHEDULED 12/82 | |
| .1.8C | IODINE INSTRUMENTATION | MOD | COMPLETE | SCHEDULED 11/82 | 11/82 |
| .2.1C | SHIFT TURNOVER | PROCEDURE | COMPLETE | SCHEDULED 11/82 | 11/82 |
| .2.2B | ONSITE TECH SUPPORT CENTER | MOD | COMPLETE | PARTIALLY COMPLETE | 10/82 |

II. ASLB IMPOSED REQUIREMENTS

| PID ITEM | DESCRIPTION | LICENSEE STATUS | INSPECTION/REVIEW STATUS | ESTIMATED COMPLETION/ REMARKS |
|---|---|---|---|---|
| A. MANAGEMENT FINDINGS - AUGUST 27, 1981 PID | | | | |
| II.D. | ACCURACY OF MAINTENANCE RECORDS | PARTIALLY COMPLETE EST. 11/82 | PARTIALLY COMPLETE | 12/82 |
| II.M | 5. BIDS AND SPECS FOR TMI-1 REPLICATE SIMULATOR | 10/82 STATUS REPORT PREPARE BIDS/ISSUE SPECS. | PENDING | 4/82 PREPARE BIDS/ISSUE SPECS. 10/82-FIRST OF LICENSEE ANNUAL REPORTS ON PROGRESS-EST. 12/82 |
| | 6. CONTRACT FOR BASIC PRINCIPLES TRAINER TO BE INSTALLED IN 1982 | INSTALLED-1983 CONTRACT COMPLETE | PENDING | 12/82 |
| | 7. EMERGENCY DIRECTOR/SUPPORT DIRECTOR TRAINING | PARTIALLY COMPLETE EST. 12/82 | PENDING | 1/83 |
| | 9. (A)-(G). LICENSEE CONDITIONS FOR SHIFT MANNING | COMPLETE | SCHEDULED AT RESTART | AT TIME OF RESTART, LICENSE CONDITION |
| | 10. (A)-(C). MANAGEMENT SYSTEM TO PERFORM SPECIFIC FUNCTIONS RELATED TO OPERATING EXPERIENCE INFORMATION | COMPLETE | PARTIALLY COMPLETE | 11/82 |
| B. PLANT DESIGN, MODIFICATION AND PROCEDURES FINDINGS - DECEMBER 14, 1981 PID | | | | |
| II.C | STAFF REVIEW REVISED ATOG PROGRAM (PARA. 721) | GENERIC PROGRAM SUBMITTED | UNDER NRR REVIEW | CERTIFY REASONABLE PROGRESS-EST. 10/82 |
| II.E | PRESSURIZER HEATERS DEMONSTRATE RCS PRESSURE CONTROL W/HPI (PARA. 755) | 11/82 SUBMITTAL TO REG. 1 | PENDING | 12/82 |
| II.K | COMPUTER -OPERATOR RELIANCE ON COMPUTER (PARA. 865) | COMPLETE | PENDING | 10/82 |
| | -INCORE THERMOCOUPLE BACKUP DISPLAY (NOT SAFETY GRADE) (PARA. 867) | COMPLETE EXCEPT TESTING | PENDING | LICENSE CONDITION BEFORE 5% POWER-HFT |

| ITEM | DESCRIPTION | LICENSEE STATUS | INSPECTION/REVIEW STATUS | ESTIMATED COMPLETION/ REMARKS |
|---|---|---|---|---|
| I.M | SAFETY SYSTEM STATUS PANEL<br>-SYSTEM STATUS ADMIN. CONTROLS (PARA. 904) | COMPLETE | PARTIALLY COMPLETE | 11/82 |
| I.N | CONTROL ROOM DESIGN<br>-CORRECT NUREG-0752 DEFICIENCIES (PARA. 914-915) | IWL ITEMS-10/82 | PARTIALLY COMPLETE 10/82 | SHORT-TERM 10/82, LT DEFICIENCIES 1ST REFUEL AFTER RESTART (LICENSE CONDITION) |
| I.O | ADDITIONAL LOCA ANALYSIS<br>-INSTALL HPI CAVITATING VENTURIS (PARA. 943) | COMPLETE EXCEPT TEST | COMPLETE EXCEPT TEST | HFT |
| I.P | SYSTEMS CLASSIFICATION<br>-UPGRADE PRESSURIZER LEVEL INST. POWER SUPPLIES (PARA. 1001) | COMPLETE | SCHEDULED 12/82 | 12/82 |
| I.Q | EFW RELIABILITY | | | |
| | A) EFW CAVITATING VENTURIS | COMPLETE EXCEPT TESTING | COMPLETE EXCEPT TESTING | HFT |
| | -PROPOSE MEANS TO PREVENT EFW ISOLATION DUE TO RUPTURE DETECTION SYSTEM FAILURE (PARA. 1064) | COMPLETE | NRR REVIEW PENDING | CERTIFY REASONABLE PROGRESS-EST. 10/82 |
| I.S | BOARD QUESTIONS NUREG-0694 ITEMS (PARA. 1132) | | | |
| | -I.G.1-LOW POWER TESTING | PARTIALLY COMPLETE | NRR REVIEW PENDING | DURING LOW POWER TESTING |
| I.T | EQUIPMENT QUALIFICATION<br>-SIX BOARD CONDITIONS CONCERNING MATERIAL AGING & OTHER EQ ITEMS (PARA. 1163 & 1168) | SUBMITTED RESPONSE | UNDER NRR REVIEW | 11/82; LICENSE CONDITION FOR 3 ITEMS PRIOR TO EXCEEDING 5% POWER |
| | -STAFF REVIEW FLOOD LEVEL CALCULATIONS (PARA. (1174) | COMPLETE | NRR REVIEW PENDING | 11/82 |

| ITEM | DESCRIPTION | LICENSEE STATUS | INSPECTION/REVIEW STATUS | ESTIMATED COMPLETION/ REMARKS |
|---|---|---|---|---|
| C. SEPARATION OF TMI-1 AND TMI-2 FINDINGS- DECEMBER 14, 1981 | | | | |
| III.B | -VENTILATION SEPARATION PROGRAM (PARA. 1267) | TEST COMPLETE SUBMITTAL 10/82 | NRR REVIEW PENDING | 12/82 |
| D. EMERGENCY PLANNING FINDINGS | | | | |
| IV.L BOARD CONDI-TIONS | CONCLUSIONS PARAGRAPH 2010 | | | |
| | A. EMERGENCY SUPPORT DIRECTOR STAFFING IN EOF PRIOR TO FULL EMERGENCY SUPPORT ORGANIZATION ARRIVAL (PARA. 2010(A)) | COMPLETE | PENDING | 11/82 |
| | B. STAFF REVIEW COUNTY EP BROCHURES AND FEMA EP PAMPHLET AND ADVISE COMMISSION OF IMPACT OF CHANGES | COMPLETE | FEMA REVIEW COMPLETE NRC ADVISE COMMISSION | 11/82 |
| | C. FEMA PAMPHLET AND COUNTY BROCHURE DISTRIBUTION TO POPULACE IN EPZ | COMPLETE | PENDING | 11/82 |
| | D. PUBLIC INFORMATION BROCHURE DISTRIBUTION TO TRANSIENT LOCATIONS | EST. 11/82 | PENDING | 12/82 |
| | E. LICENSEE TO CONDUCT EP BRIEFINGS TO MAJOR EMPLOYERS AND OPERATORS OF TRANSIENT LOCATIONS. BRIEFINGS TO BEGIN PRIOR TO RESTART | SCHEDULED 11/82 | PENDING | 12/82 |
| | F. STAFF CERTIFY SATISFACTORY COMPLETION OF SIREN SYSTEM TESTING | COMPLETE | FEMA REVIEW COMPLETE STAFF REVIEW 11/82 | 11/82 |
| | H. CERTIFY TO COMMISSION THAT EPZ SCHOOL PLANS ARE COMPLETE | N/A | FEMA REVIEW COMPLETE ADVISE COMMISSION 12/82 | 12/82 |
| E. REOPENDED PROCEEDING ON CHEATING-JULY 27, 1982 | | | | |
| V. | PARAGRAPH 2421 | | | |
| | 2) LICENSEE ESTABLISH CRITERIA FOR QUALIFICATIONS OF TRAINING INSTRUCTORS | EST. 11/82 | PENDING | 1/83 |

| ITEM | DESCRIPTION | LICENSEE STATUS | INSPECTION/REVIEW STATUS | ESTIMATED COMPLETION/ REMARKS |
|---|---|---|---|---|
| | 3) LICENSEE IMPLEMENT INTERNAL AUDITING PROCEDURE ON TRAINING AND TESTING PROGRAM TO BE COMPLETED BY MANAGER OF TRAINING AND SUPERVISOR OF TRAINING | EST. 11/82 | PENDING | 12/82 |
| | 4) LICENSEE IMPLEMENT A PROCEDURE FOR SAMPLING AND REVIEW OF EXAM ANSWERS TO DETECT CHEATING. REVIEW PROCESS TO BE APPROVED BY NRC | EST. 11/82 | PENDING | 1/83 |
| | 5) UNTIL FURTHER ORDER, G. MILLER'S PARTICIPATION IN STARTUP/TESTING/ OPERATION OF TMI-1 TO BE SUPERVISED BY GPUNC OFFICIAL | 10/82 | PENDING | 11/82 |