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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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In the Matter of: :

COMMONWEALTH EDISON COMPANY : Docket Nos. 50-295

(ZION STATION, UNITS 1 and 2) : 50-304

- -x

Nuclear Regualtory Commission
5th Floor
East-West Towers
4350 East-West Highway
Bethesda, Maryland

Tuesday, July 1, 1980

The above-entitled matter came on for oral argument, pursuant to notice, at 10:00 a.m.

BEFORE:

RICHARD S. SALZMAN, Chairman
DR. JOHN H. BUCK, Member
DR. W. REED JOHNSON, Member

APPEARANCES:

On Behalf of the NRC Staff:

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C O N T E N T S

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PROCEEDINGS

CHAIRMAN SALZMAN: Good morning, ladies and gentlemen. The board is convened today to hear oral argument and the State of Illinois' appeal for a licensing board decision authorizing the Commonwealth Edison Company to increase the capacity of a spent fuel storage pool at the Zion facility.

This board this morning is composed of Dr. John Henry Buck. Dr. Buck, on my right, is a nuclear physicist. On my left, Dr. Reed Johnson, professor of nuclear engineering at the University of Virginia. My name is Richard Salzman. I have been designated to serve as chairman of this appeal board.

Counsel will present argument this morning. Please introduce yourselves and tell who you represent; introduce as well, any colleagues who accompany you. Mr. Miller?

MR. MILLER: Thank you, Mr. Chairman. My name is Michael I. Miller from Isham, Lincoln and Beale, representing the licensee. With me is my associate, Mr. Steptoe. We will be sharing the oral argument this morning.

MS. SEKULER: My name is Susan Sekuler, Assistant Attorney General for the State of Illinois, Environmental Control Division. I represent the people of the State of Illinois.

With me this morning is Anne K. Markey, also an Assistant Attorney General in the Environmental Control Division. We will be sharing our presentation this morning.

MR. GODDARD: Mr. Chairman, I am Richard J. Goddard,

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Office of the Executive Legal Director. With me is Steven C. Goldberg. He will not be sharing the argument with me; however, he was an attorney in the original case.

CHAIRMAN SALZMAN: Mr. Goddard, while you are up, are you prepared to address the questions we forwarded to you in the copies we sent to all parties?

MR. GODDARD: Yes, we are.

CHAIRMAN SALZMAN: Thank you. The board has allowed each side an hour for its presentation. Mr. Miller, have you and the Staff agreed upon a division of your time?

MR. MILLER: Yes, sir. I believe we agreed we would split it equally. I should also add, Mr. Chairman, that Mr. Steptoe will be addressing the questions posed by the appeal board in its order of last Friday. We would ask that we be given some time for rebuttal.

CHAIRMAN SALZMAN: We understand, Mr. Miller.

MR. MILLER: Thank you.

CHAIRMAN SALZMAN: We would like each of your to please address the point we included in our memorandum of last week, in addition to any other points that you intend to make. Counsel should be aware that we are quite familiar with the briefs we have dealt into the record on the points raised in the argument.

We would like you to bear in mind that the oral argument is for our benefit. This is our only opportunity to question you directly about the matters which concern us in the case.

Therefore, for those of you who have not appeared before us, please do not be upset if we ask a great many questions. We ask that they be addressed fully. You will be allowed time to touch upon the matters you believe important. With that caution, we will begin the argument. Assistant Attorney General Sekuler, are you ready to begin?

MS. SEKULER: Yes.

CHAIRMAN SALZMAN: How much time would you care to reserve for rebuttal, ma'am?

MS. SEKULER: 15 minutes.

CHAIRMAN SEKULER: Yes, ma'am. Did you say Ms. Markey will be sharing your argument?

MS. SEKULER: Yes, I will be discussin certain points other than those questions that were put forward by the board.

CHAIRMAN SALZMAN: Yes, ma'am.

ORAL ARGEMENT STATEMENT OF MS. SUSAN SEKULER AND MS. ANNE MARKEY, REPRESENTING THE STATE OF ILLINOIS

MS. SEKULER: Gentlemen, good morning. I am Susan Sekuler. I represent th people of the State of Illinois, the intervenor in this proceeding.

This is an appeal from the initial decision of the Atomic Safety and Licensing Board, which was issued on February 14, 1980.

MR. SALZMAN: Let me interrupt, just a moment. Can the

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people in the back hear? Just tap the microphone to make sure it's turned on, ma'am.

MS. SEKULER: I believe it is.

We have filed exceptions and briefs which the appeal board has received and apparently has read. Therefore, this morning, I will not try to reiterate all of the arguments that we posed in those briefs. However, I will deal with some of the more important points.

I will discuss the conclusion that swelling in the pool of the racks and tubes would not impinge on fuel, which incorporates the exceptions raised in Exception 3, 4, 5, and 7. I will deal with the board's error in dismissing the State's testimony; that neglect, among other causes, could lead to failure to supply makeup water, which is part of our exception to 1 and 2.

Ms. Markey will deal with questions involving tech specs, as I stated before. These go to our exceptions 6, 8, 9, 10, and 11. The board erred in failing to find that corrosion of various types in the tubes and racks in the Zion spent fuel pool modification could possibly lead to damage of the fuel.

The evidence on the record should be seen in the context of the fact that this is an experimental program. The rack design is new and the configuration of the racks is new. This is an experimental program based upon limited test programs that have not been adequately replicated in a spent fuel pool environment.

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Therefore, it is a program based on educated guessing. Some of the existing data warn of dangerous possibilities that can occur in the pool. The transcript and in in camera transcript and Exhibits 1 and 2 to the in camera transcript, presents of the tests that have been done by Brooks and Perkins, the manufacturer of the boral substance in these racks; Battelle, Columbus; and Exxon.

The board recognized these tests in their initial decision at pages 270, 271, and 272. In fact, the board relies on its initial decision that good quality control to afford certain types of swelling would be carried out. In fact, the record shows that this may be questionable, in the transcript at pages 736, 740, 745, and 748 -- through 748 and 755.

There are -- there is testimony to show that the Brooks and Perkins Quality Assurance Program in relationship to the boral has not been sufficient. Other existing knowledge which appears in the record about Monticello, which was acknowledged by the Applicant's witness, Mr. Draley, and by the staff's witnesses, Mssrs. Almeter and Lance indicates that at Monticello, which also had Brooks and Perkins racks, there had been swelling in similar racks.

On page --

DR. JOHNSON: Ms. Sekuler, I don't quite understand the comments with regard to experimental programs. How are the racks at Monticello and Zion different? If they have been used

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at Monticello, are the racks at Zion extremely different from those at Monticello?

MS. SEKULER: The racks are very similar. The reason I used the words "experimental program" is to indicate two things. One is that the racks have been used very little before. At Monticello, there was swelling in these racks. As a result of this swelling, one analysis of the swelling was it was created by a trapping of hydrogen that came about as a result of corrosion insode the sealed tubes.

Therefore, it was devised -- a program at Zion to vent the racks. Originally, the racks were to be vented at the top. Then I believe it was changed to the top and the bottom. Then, as the record shows, after Brooks and Perkins did some other analysis of the effect of highly oxygenated water, they closed the racks up again on the bottom.

Therefore, the design of these racks has been altered, first from Monticello to Zion, then within Zion itself. The significant thing to us is Brooks and Perkins was only one week before the hearing on this issue a year ago, was not sure what the best design would be to keep its own racks and swelling.

On the record, Dr. Draley noted that he was aware of these problems, but he had not given a great deal of significance to the Brooks and Perkins experiments. However, he did not have any objection, he said, to the closing of the racks on the bottom.

DR. JOHNSON: Do you recall what his reasons for not

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being very concerned by the experimental results of Brooks and Perkins was?

MS. SEKULER: Yes. This also goes to the experimental nature of this program. Dr. Draley hadn't done any experiments of its own in this area. He relied on the fact that the experiments that had been done by Brooks and Perkins, Battelle and Exxon were in a somewhat different environment. However, no experiments in the environment of the spent fuel pool had been done either.

So, he was just relying on his general knowledge about boral, which I think had experimented with 20 years before, to make an assumption that at the water temperatures and the chemistry of the pool, that the types of effects that were noticed by Brooks and Perkins would not occur in the Zion pool.

DR. BUCK: What was the difference in the environment, can you tell me?

MS. SEKULER: I cannot tell you specifically from experiment to experiment. Generally, the temperatures were higher. The boric acid or other kind of ph level content was lower.

DR. BUCK: Was there any testimony to the effect that lower temperatures would speed up corrosion or lower the corrosion?

MS. SEKULER: I believe that it was not a question of lower temperatures, but of -- at 170 degrees fahrenheit, there

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would be a question of corrosion being speeded up. There was a question also of loss of water in the pool, which we brough testimony --

DR. BUCK: Let's hold the phone here. I asked you what the difference in the environment was. I thought you said there was a difference in temperature.

MS. SEKULER: Difference in temperature.

DR. BUCK: I asked you then what was the difference in temperature. First of all, the experiments were done at a higher temperature?

MS. SEKULER: Yes, they were.

DR. BUCK: All right. I ask you, was there any testimony to the effect as to whether the corrosion would be lower or higher at lower temperatures.

MS. SEKULER: As I recall, the testimony was based on general knowledge that the assumption was at lower temperatures the corrosion would be less than it would be at higher temperatures.

DR. BUCK: Was there any dispute of that general knowledge of corrosion?

MS. SEKULER: I believe there was no dispute of the general knowledge of corrosion at lower temperatures, but there was some dispute as to lower temperatures and their interaction with lower -- more concentrated ph levels, yes.

DR. BUCK: That is a different problem. Now, was there

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also a difference in the environment besides temperature difference.

MS. SEKULER: Yes. That was the ph level.

DR. BUCK: All right. Which was a higher ph level?

MS. SEKULER: The higher ph level was in the spent fuel pool.

DR. BUCK: All right. Was that supposed to increase corrosion or lower corrosion?

MS. SEKULER: The corrosion would increase with the lower ph. So, the higher ph in the pool would act as a modifier of corrosion.

DR. BUCK: All right. Thank you.

MS. SEKULER: It would decrease it. The point I would like to make there, Dr. Buck, is that we showed evidence that under certain circumstances, the pool water could evaporate and the concentration of the boric acid in the pool could become more concentrated.

So, once we got above the level of 170 degrees, which is below boiling, and enough water had possibly evaporated out, there could be a more vigorous environment in the pool.

DR. BUCK: How much of the water would have to evaporate out to make any difference?

MS. SEKULER: I do not think I have that in my head. I would have to look it up.

DR. BUCK: That is important. Maybe half of the water

has to evaporate out. I don't know.

MS. SEKULER: There are various mediating circumstances. It depends on how the makeup water gets put into the pool. If the pool lost 20 percent of its water --

DR. BUCK: What would be the difference in concentration, then?

MS. SEKULER: The concentration would be considerably lower. I think on the record it said about down to four.

DR. BUCK: Have you looked at it to see whether it comes up to the ph of -- that the experiments were done at?

MS. SEKULER: We believe from the testimony that it was testified that the ph level of the pool would get down to 4 to 4.5, which coul correlate with the tests.

DR. BUCK: How was that relevant to the experiements?

MS. SEKULER: The experiments that were shown showed that at the lower ph --

DR. BUCK: How low?

MS. SEKULER: Between 3.5 and 4, as I recall.

DR. BUCK: So, the pool would not get down --

MS. SEKULER: It would not get down to the very very aggressive levels, no.

DR. BUCK: Thank you.

MS. SEKULER: One of the points we are making is that the experiments that have been done have not been done by putting the spent fuel and the poison racks in a pool environment

for a long enough period of time to test what the effects of the more passive environment of the pool, compared to the more aggressive environment in the tests would be.

This is a long range program that will go on for 40 years. It was an estimate of Brooks and Perkins in their report, which was included as an exhibit in the in camera transcript; that after 40 years, there would be sufficient harm to the boral from pitting in the environment; that they had specified that the racks would no longer be usable.

This is a very great concern of ours, because there has been no additional data brought to show that for certainty that there will be no possibility of such corrosion occurring in the pool. We acknowledge that we are only talking about possibilities here. As Ms. Markey will address in her presentation, I think that the standard that we are looking to through Trojan is a possibility.

DR. JOHNSON: In that regard, in the event of corrosion of the boral or other corrosion on these racks, is it expected to be something that would occur suddenly, or something that you would expect to occur gradually over a period of time? Are there not techniques to be employed at Zion to measure the onset of corrosion, if it is to occur in that environment?

MS. SEKULER: Yes. We understand there will be an initial brief period of intense corrosion. Then, there will be a slower period of corrosion over the period of years. We

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suggested that there be some surveillance program. In fact, we wanted to have that imcorporated as a technical specification precisely for the reason that we do not know. In essence, we think the Zion pool is an experiment. We would like to use it as an experimental test ground to be sure that the types of corrosion that are possible would be detected prior to the time that they might occur; and therefore, create the possible impingement of fuel or closing up of tubes.

I think it is important for us to mention two other points. One is the disagreement between Dr. Draley, who used general knowledge to make some decisions about experiments that were only partially completed at the time of the hearing. The other is that by closing up the racks, another problem was created. This is the other thing that is very important for us to have a surveillance program for.

It appears that these types of problems appear without prior consideration of the people who designed the racks, and that they are -- people have generally taken -- are taken unawares when the racks --

DR. JOHNSON: With regard to be taken unawares, did your suggestion that there be a surveillance program -- was it accepted?

MS. SEKULER: The initial decision accepted it as a commitment. That was a lesser standard than we wanted imposed.

DR. JOHNSON: Does that standard mean it will not be

in effect. Maybe Ms. Markey will deal with --

MS. SEKULER: Ms. Markey will address those.

DR. JOHNSON: The enforcibility of a commitment is what I am getting at.

MS. SEKULER: The enforcibility of a commitment is dubious, because we believe it can be withdrawn without notice. Ms. Markey will address that point. The other point I wanted to raise --

CHAIRMAN SALZMAN: Before you leave it, Ms. Sekuler, did you get a copy of the actual license for the plant?

MS. SEKULER: Yes, we did.

CHAIRMAN SALZMAN: Doesn't that include the surveillance program as a license condition?

MS. SEKULER: It includes it as a license condition which we understand has the same validity as a technical specification.

CHAIRMAN SALZMAN: I thought a technical specification was not less than a license condition.

MS. SEKULER: There is some question that the board has raised as to whether the license conditions and/or technical specifications imposed in the license are legitimate legally.

CHAIRMAN SALZMAN: My question -- back to one side. You argue in the brief as though there was no such commitment made, or no such license condition made.

MS. SEKULER: That is based on the legal interpretation

of the board's right to put in a technical specification without the licensing board's approval.

CHAIRMAN SALZMAN: The board's right to put in?

MS. SEKULER: I am sorry. The staff's right. We are arguing that the license should have been ordered by the board itself rather than having the technical specifications or conditions imposed by the staff after the fact.

CHAIRMAN SALZMAN: You think what the staff has done here is illegal?

MS. SEKULER: We believe that the staff may have exceeded its authority.

DR. JOHNSON: With regard -- perhaps again this may be Ms. Markey's, but are you also saying that this board in 5.31 erred when it suggested in the technical specifications -- that they should be reserved for safety conditions that have a certain degree of immediacy associated with them?

MS. SEKULER: I think that Ms. Markey -- you are talking about the Trojan decision and the immediate threat to the public safety concept?

DR. JOHNSON: Yes.

MS. SEKULER: I would prefer to have Ms. Markey address those because she is more familiar with that case. The other thing I would like to address is to bring home the point that when the design change occurred in the racks at Zion, without realizing it -- this is why I use the word "unawares" --

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another situation that was created that brought into focus another type of corrosion which was intergranular stress corrosion cracking. After the hearing was over, the board reopened the record to get affidavits on the possibility of intergranular stress corrosion cracking occurring, because by closing the racks at the bottom, they created another environment that had not previously been in the pool where there was stagnant borated water that could lead to certain types of corrosion.

The point I am trying to make is that it is an experimental program. If we find a problem and we find a solution to that problem, that solution in itself may lead to other problems. Without adequate surveillance programs, we may not be able to keep abreast of all the various changes.

CHAIRMAN SALZMAN: I do not understand your argument. I understand that the applicant has committed itself to maintain such a surveillance program, so you are not really telling us that there is not a surveillance program, are you? Isn't there one?

MS. SEKULER: We are telling you that a commitment does not guarantee a surveillance program.

CHAIRMAN SALZMAN: If they are committed to do it, why not?

MS. SEKULER: Because they may decide they don't want to. There aren't enough sanctions with just a commitment.

CHAIRMAN SALZMAN: Can't staff then insist that they

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so it?

MS. SEKULER: I would prefer to have Ms. Markey discuss this because I think she has a better grasp of the differences between the commitments.

CHAIRMAN SALZMAN: Surely.

MS. SEKULER: I have one other point I would like to bring up. That is in relation to the board's decision to ignore parts of Dr. Resnikov's testimony.

DR. BUCK: Before we leave the corrosion, in the effects of the corrosion, what are you claiming to be the major effects if you do have corrosion?

MS. SEKULER: We are not sure that the venting is going, to a certainty, prevent all swelling in those tubes. So, there is a possiblity of swelling from an effect that is yet unknown, or from incomplete modification of the tubes to allow hydrogen gas that is formed, so that the swelling of the --

DR. BUCK: The swelling will do what?

MS. SEKULER: The swelling of the stainless steel through that mechanism, plus the swelling of the boral itself -- in the record it talks about how the aluminum and the boral can form corrosion products, plus the combination of effects that could come into play with the intergranular stress corrosion cracking stresses that could cause deformation of the cracks and tubes; we believe could lead to some deformation in the racks and tubes which could either keep the racks from receiving fuel

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properly unless there was some kind of test to show that they are open or possible could, if the fuel has already been in the rack and the fuel is in a brittle condition from being hydrogenated, for instance.

It might cause some kind of damage to the fuel cladding.

DR. BUCK: You feel this is an immediate effect, or immediate danger to the public?

MS. SEKULER: We feel, if it occurs, the danger to the public will be immediate. We do not know that it will occur in the first week of the racks being in the pool. That's why we are asking for a surveillance program so that as soon as it is discovere, it can be corrected.

DR. BUCK: In that way?

MS. SEKULER: If a dummy test, for instance, is used and discovers that a tube cannot fit into the -- a piece of fuel cannot fit into the tube as was discovered at Monticello, that tube would be put aside and not used.

We are --

DR. BUCK: All right. Fine. Supposing the commitment is not kept and the dummy is not put down there to find out whether the tube is swollen. What is the immediate danger?

MS. SEKULER: The immediate danger -- there are two immediate dangers. One is that there will be no place to put this fuel. What do you do with the fuel? If you keep it in the reactor, the second danger is loss of the use of that reactor

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because it will be used for storing fuel as opposed to being able to produce electricity efficiently.

DR. BUCK: Are you going on the assumption that all these tubes will swell at once?

MS. SEKULER: Actually, no. I think it most probably depends on the area of the pool. My understanding is that the pool does not have the universally conforming areas -- invironment.

DR. BUCK: How immediate is this danger? I mean, supposing you cannot put a tube in?

MS. SEKULER: If you cannot put a tube in, you have to -- excuse me. If yo. cannot put an assembly in a tube, you have to find someplace else to put that tube. The danger is immediate when you do not have the location for that tube -- for that fuel to be cooled and shielded from the environment.

Therefore, you would have to have casks on hand for additional storage. You would have to put it back into the reactor. You would have to find some other tube that was not swollen to put it in.

DR. BUCK: Assuming you have those, what is the immediate danger to the public?

MS. SEKULER: In that case, so long as there is no radiation damage to the occupational personnel -- I think there probably is none -- if it goes back in the reactor, the amount of electricity that can be fabricated --

DR. BUCK: Okay. Thank you.

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MS. SEKULER: In relation to our second point on Dr. Resnikov's testimony, on the record in the application -- in the initial decision it is reflected that the Commonwealth Edison Company and th Staff and the board agree that it is possible for the water in the pool to boil.

The issue here is not whether the water can boil. The issue is not whether there are makeup water failities available under normal circumstances. The question is whether there are proper techniques to alleviate the consequences of boiling which would lead to some evaporation and lack of shielding and cooling for the fuel that could be due to a loss of water, and an inability to get to the non-automated makeup water sources.

It is our contention that our board ignored and/or understood the bulk of Dr. Resnikov's testimony anf focussed on the words "neglect."

I would like to read to you just very briefly some of the actual statements that Dr. Resnikov made. On page 19 of his written testimony, he stated that "Under a major reactor accident in which the site must be vacated" he would recommend keeping water sources fully automated and independent of reactor operation.

DR. JOHNSON: Are you aware of a circumstance in which a major reactor accident would require that the entire site be vacated?

MS.SEKULER: Yes, I am. I believe that Resnikov also

alluded to it in the testimony. On page 15-16, under the transcript he stated that bulk pool boiling could occur at Zion. On 15.70, which was noted on our brief, the effect of this would be "to allow the water to boil off the pool and a major accident to ensue."

The major accident would involve the zirconium reaction with steam that would lead to increased heat in the building, and a possiblity of a hydrogen explosion.

DR. JOHNSON: Are you talking about something going on in a fuel pool now?

MS. SEKULER: Yes. He was.

DR. JOHNSON: My question -- your definition of neglect, which I take some issue with involved an accident as a result of which the site would be vacated. I believe those were your words.

I asked you what accident was that. I do not believe you have answered that question. What is the accident that would --

MS. SEKULER: The accident would be an explosion. One accident could be an explosion either in the reactor itself, or in the sepnt fuel pool because the loss of water leads to the creation of hydrogen. That creates a sufficient amount of radiation that would make it impossible for workers to get into the auxiliary room where the makeup water sources are located.

DR. JOHNSON: But I asked you what accident would cause

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the people wo walk off and leave the fuel pool so that it would drain through neglect.

You told me an accident in the fuel pool. I do not understand that.

MS. SEKULER: I am sorry. I don't think that I was clear. I don't believe that the accident -- when Dr. Resnikov talked about turning off the pool and walking away, it may have been an unfortunate use of words, becuase I do not think it communicated what was communicated in the rest of his testimony. That is where the problem is.

DR. JOHNSON: Let me dwell on that one minute. Are there technical specifications which have been imposed, which would at least to the level of enforcibility of a technical specification preclude the operators of this plant from walking off and leaving the fuel pool to boil away from neglect?

MS. SEKULER: Not in the new license, to my knowledge.

DR. JOHNSON: There are no technical specifications with regard or license conditions with regard to the operation of the spent fuel colling system, or the level of water in the spent fuel pool.

MS. SEKULER: They are assuming normal operation. I would presume there are many technical specifications.

DR. JOHNSON: I thought that you said that there are two elements of neglect, one would be neglect as a result of a large accident. The other would be neglect as the result of

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simple walking off and leaving it. I believe those are the words that were used.

MS SEKULER: I am trying to find that particular one. The simple walking off and leaving, as I said, I believe is being misinterpreted. I believe that the simple walking off and leaving was related to Resnikov's totality of his testimony where he was not talking about Commonwealth Edison saying, "We do not want to run a plant anymore, so we are going to give up the license."

That is obviously not legitimate under Nuclear Regulatory Commission regulations. I believe that what he was trying to transmit and is borne out from the rest of the testimony is that in the event of certain major calamitous circumstances, there might be no choice but to walk off and leave it.

If that occurred, and if also as a result of these calamitous circumstances it would not be possible; as he said on page 15.56, for the firemen to get close to the plant; assuming that somebody would be coming back and trying to get close to the plant; that there might be neglect of the pool.

DR. BUCK: This goes back to Dr. Johnson's original question. What are these calamitous circumstances that you are talking about that would cause this?

MS. SEKULER: One of these would be a reactor accident. Another could be, as he hypothesized, an explosion in the spent fuel pool due to loss of water.

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DR. BUCK: What kind of explosion?

MS. SEKULER: It involves a loss of water in boiling which would cause a hydrogen effect with the zircaloy having hydrogen in the pool. Then an explosion.

This was also hypothesized --

DR. BUCK: The boiling water temperatures?

MS. SEKULER: Yes.

DR. BUCK: This would create a water-zirconium reaction to produce hydrogen?

MS. SEKULER: In his testimony on page 15.69, he did alluse to exactly that. I am afraid I probably cannot answer the questions as well as he could, because I am not a scientist. I can only rely on the testimony in the record.

DR. JOHNSON: Are you aware of a record reference that gives the temperature at which the zirconium-water reaction takes place?

MS. SEKULER: It is in the record. I do not have it off-hand.

DR. JOHNSON: Do you have any idea what that temperature is relative to the boiling temperature?

MS. SEKULER: Yes, it is considerably higher; however, because of the type -- I believe it was -- I know that Resnikov mentioned it in the testimony. He mentioned the degree of temperature that was necessary.

He mentioned the fact that he believed it was possible

in the pool. I cannot tell you the numbers.

DR. JOHNSON: Okay.

MR. SEKULER: I think at this time, unless there are any other questions, I would like to defer to my colleague, Ms. Markey, and have her address the technical specification question.

DR. JOHNSON: Right. I have two questions. In most accident scenarios, up to and including the design basis, loss of coolant accident, would the area of the spent fuel pool be accessible to the extent that the operators can maintain the level of water?

MS. SEKULER: The area of the spent fuel pool where the manual controls are located are not in the spent fuel pool itself. They are in another part of the reactor.

I think that would be determined by the type of accident and whether the heat and radiation that resulted from that accident prevented workers from enterning that part of the building.

DR. JOHNSON: I have just specified the accident very very closely, when I said the design basis loss of coolant accident, which involves, if you recall, the regulatory guide that governs the design of the rest of the system with regard to that accident. That acciden involves radioactive source terms, assuming certain amounts of radioactive material are released into the containment as a result of that LOCA.

I am asking you for your statement with regard to that

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accident. Is it your position that as a result of the design basis loss of coolant accident, the areas which have to be accessible in order to maintain the level of water in the spent fuel pool would not be accessible. Is that your position?

MS. SEKULER: That is the positon of our witness, yes. Are there any other questions?

DR. JOHNSON: Thank you.

CHAIRMAN SALZMAN: Dr. Buck?

DR. BUCK: No.

CHAIRMAN SALZMAN: Thank you.

DR. JOHNSON: Excuse me, I do have one more. You said you were going to address the exclusion of witness Cleary.

MS. SEKULER: I would be glad to. I was not going to discuss it this morning. I would be happy to say something if you have a question on it.

DR. JOHNSON: I guess I have no questions. I was just trying to remind you of the things you said you were going to say.

MS. SEKULER: Just because you raised the question, our position on Mr. Cleary is that his testimony should not have been struck; and that he was as qualified to talk to the issues at hand as was, at least, Mr. Sears, who testified for the staff.

On page 20.54 of the record, Mr. Sears states that he should make it clear that calculations of accident assumptions

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were not his, that "I am in the emergency planning business. This calculation was done by people in the accident analysis branch. I simply used their tables."

Then, later --

DR. JOHNSON: Wait a moment, now.

CHAIRMAN SALZMAN: Go ahead.

DR. JOHNSON: What I really wanted to get to was the board's reason for not accepting Mr. Cleary. What is your opinion of what that reason was?

MS. SEKULER: It appears from the record and from what Dr. Remick said that they believed that the testimony was irrelevant. It is our position that the testimony was not.

DR. JOHNSON: Why did he say it was irrelevant?

MS. SEKULER: He said that the witness was not going to be able to address the question posed.

DR. JOHNSON: What was that question?

MS. SEKULER: THe question was whether the modification of the spent fuel pool would demand modification of various programs, including the emergency plan, which is what Mr. Cleary was going to testify to. He premised the question on Mr. Cleary's being competent to talk to two aspects of that question. That question is divided into two parts.

One is, will there be circumstances that will arise, consequences of an accident that will arise because of the spent fuel pool being modified?

The second half of the question is, if so --

DR. JOHNSON: Wasn't the first half of the question crucial in establishing whether the board had jurisdiction over the question?

MS. SEKULER: Yes. Our contention is the first half of the question was answered to the testimony of other witnesses. For instance, Dr. Resnikov, who hypothesized different types of events that could occur with the additional spent fuel in the pool.

We also attempted to put in some testimony on circumstances in relation to 4-A, I believe it was, the security sabotage question, which was not allowed, because the board interpreted that question to talk only to the probability of risk rather than consequences.

Therefore, that particular testimony cannot be relied on. It is a basis for Mr. Cleary, I realize. There was testimony on the record to show that there was accident potential; and that the consequences of those accidents could be increased because of additional fuel in the pool.

I believe that answered the first part of the question. The second part of the question was Mr. Cleary's area of competence, what should be done to the plant.

DR. JOHNSON: Would you give me the references in the record to what you believe establishes that, the extra fuel in the pool would cause enhanced accident consequences?

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MS. SEKULER: I believe it was in the testimony -- the direct testimony of Dr. Resnikov. I would have to go back and find the pages.

DR. JOHNSON: Thank you.

DR. BUCK: Can you point to anything in your offer of proof that Mr. Cleary supplied as to what he would say if he was allowed to say it, that in any way connected the modification of the fuel pool to a requirement of some change in the emergency plan?

MS. SEKULER: I am trying to recall that testimony. As I recall, Mr. Cleary would have testified to the fact that there were no criteria for informing the public for the necessity of evacuation.

DR. BUCK: I am talking about -- he was criticizing the emergency plan. What I am talking about, was there anything in his offer of proof that connected the modification of the fuel pool that would cause modification in the emergency plan?

MS. SEKULER: No, I do not believe there was.

DR. BUCK: Thank you.

MS. SEKULER: May I make one more point on Cleary? In our brief, we discuss the three objections that were raised, hearsay, relevancy, and qualifications. The board appears to have used relevancy as the reason for excluding Cleary's testimony, although as I started to say, Mr. Sears appeared not to have been able to make those same determinations and depended on

bfm31

others in his team of witnesses to make those determinations for him.

CHAIRMAN SALZMAN: Does that go to relevancy?

MS. SEKULER: Yes, because the relevancy of the first part of the question -- the first part of the question is proved by any testimony, then the second part of the testimony becomes relevant.

Under the assumption that perhaps we would win the day on the Cleary argument, and this board would overturn the relevancy objection; we just want to make it clear that we also answered questions as to the objections of hearsay and qualification in our brief.

DR. JOHNSON: Let me ask: Did Mr. Cleary have a staff of people that worked with him, or did he work by himself?

MS. SEKULER: He worked at the Citizens for Better Environment as part of that staff. In our particular situation as a witness, he did not have any assistance from CBE or any other scientists.

Thank you, sirs. At this point, Ms. Markey will answer the rest of the questions on technical specifications.

MS. MARKEY: Good morning. My name is Anne Markey, Assistant Attorney General. I will address our exceptions related to the licensing board's denial of our request that four technical specifications be imposed as part of the license.

CHARIMAN SALZMAN: I take it you are making the assum-

ption that the imposition of the these same amendments to the license ecxeeded the staff's authcrity because they did not do it pursuant to the order to the licensing board?

MS. MARKEY: Yes, that is our position. I am somewhat at loss as to how I should address the questions the board addressed to us recently. The reason is because this morning, shortly before the argument began, Mr. Goddard informed all counsel that the staff was going to change their position for a second time.

So, I am not sure exactly how to deal with this.

CHAIRMAN SALZMAN: Let's wait just a moment.

(board conferring.)

CHAIRMAN SALZMAN: That does make it difficult, Ms. Markey. Why don't you sit down. Mr. Goddard, why don't you get up and tell us just what is going on here? Would you tell us please what you told counsel this morning?

MR. GODDARD: Yes, Mr. Chairman. This morning, I informed counsel for the State of Illinois and for Applicant, that the staff, in retrospect, is of the opinion at this time that they did, in fact, exceed the limits of the licensing board's initial decision in imposing the license conditions which are referred to here as technical specifications.

CHAIRMAN SALZMAN: Let me stop you. The staff did not impose all the conditions as technical specifications. They just made an amendment to the license, didn't they?

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MR. GODDARD: Yes, sir.

CHAIRMAN SALZMAN: They did not include them in the book of technical specifications, if they did they hid it well.

MR. GODDARD: No, sir. They did not amend the technical specifications themselves, but your brief was wrong in that respect.

CHAIRMAN SALZMAN: The brief was ambivalent, I think.

MR. GODDARD: Yes, sir. It was. We do not feel there is any difference in force and effect between the technical specifications and license conditions.

At the time we took the action, the emphasis of the staff had been upon the order and language of the licensing board at pages 99 and 100 of the initial decision.

The board ascribed great weight to each of these three commitments at issue. They found that the Applicant was bound by these commitments as a matter of law. The indicated that Applicant should not be relieved of such commitments by the staff, and that such commitments or the deviation from such commitments should be accompanied by any appropriate regulation -- regulatory sanctions found in the regulations of the Commission.

Accordingly, the staff attempted to affect the enforceability of those commitments in accordance with the licensing board's intent as it was derived from the ordering portions of the initial decision when it imposed the licensing conditions we are referring to.

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In retrospect, the staff is of the position that they perhaps went too far. We felt at the time we were more right than wrong in imposing these commitments as technical specifications -- as license conditions based upon the emphasis the board placed on them.

In retrospect, we feel we were a little more wrong than right.

DR. JOHNSON: The issue was before the licensing board squarely, was it not, as to whether these conditions should be or should not be made technical specifications. Did not the licensing board employ a standard and decide that they did not meet that standard and therefore, they would not be imposed as technical specifications?

MR. GODDARD: That is correct, sir.

DR. JOHNSON: Then you did not quite represent the board's intent as it might have sounded. I mean, if their intent was to make them technical specifications, would they not have made them technical specifications?

MR. GODDARD: Rather than answering that question directly, sir, I would state that the language that the board used with regard to the commitments is more in the language one would use to describe technical specifications than to describe commitments of the Applicant which are not included in the safety analysis report.

CHAIRMAN SALZMAN: Your point is the board did not do

its job very well. Its decision was ambiguous. You thought you could do the job better than the board.

Therefore, your witness testified these things did not have to be made technical specifications.

MR. GODDARD: At the time the staff presented testimony on this issue, we felt that the safety significance of these items was not so great as to require their incorporation in the license.

DR. BUCK: Did you change your mind?

MR. GODDARD: No, sir. The staff did not change its mind as to the significance. Rather, the staff was influenced by the increased weighting which the board gave to those commitments.

DR. BUCK: This disturbs me a great deal because the Applicant put a commitment in. They wrote out a commitment to these things in their findings, in fact, initially in this thing.

Staff supported them all through the hearing. The board took a good strong look at these things and put the commitments in rather strong language, but as commitments.

Now, I do not understand how the staff can waffle back and forth and suddenly change its mind and put a specification on a technical specification which apparently they thought they were putting a technical specification on; at least the way your brief reads.

They did, at least, put in a license condition even though they had opposed it before the board. Now, under what rule or authority or common sense can you do that when you have just gone through a hearing promoting a position on a safety situation, then without concurrence from the board, changing your mind without even informing the board?

Does the staff have a habit of doing this, by the way?

MR. GODDARD: No, sir.

DR. BUCK: Have we ever done it before?

MR. GODDARD: Not to my knowledge, sir.

DR. BUCK: I would sure like to know if they have, because this is, to me, outrageous.

CHAIRMAN SALZMAN: Mr. Goddard, it is conceivable to me if not necessarily to you or my colleagues, that a mistake has been made in interpreting the board's decision in writing the license conditions.

I think you will get no where by suggesting that you are interpreting the board's language when the board has, for example, a statement to the effect that following carefule consideration of this issue -- talking about the surveillance program -- the board finds the corrosion sureveillance program need not be make the subject of a technical specification or a condition of license.

I realize when the crow goes down, it does not often go down forward. The feather, tickle the throat. I take it the

bfm37

staff's position is we were wrong. Therefore, what should be license commitments -- that is your position, this morning is it not; that the commitments will be satisfactory to carry out the program?

MR. GODDARD: Yes, sir. It is. The staff was wrong in imposing them in that the technical specifications which we imposed here were specifically litigated in this proceeding.

At the time the license amendment was prepared and reviewed, emphasis was given to the ordering language of the initial decision.

CHAIRMAN SALZMAN: Let's not beat a dead horse. I take it the staff has not intention of imposing these things, absent some other order as technical specifications, unless we agree with the State of Illinois this should be the case. You are here this morning to tell us that this should not be the case; that you are not going to get up and confess error, are you? Is that your next point?

Are you going to tell us you are wrong at the hearing, you are wrong to do this on your own, but you are going to tell us we ought to do it. Is that your next point?

MR. GODDARD: We do not feel we were wrong at the time of the hearing, Mr. Chairman. We have not deviated from that position. We do feel we were in error in imposing the license conditions, subsequent to receiving the initial decision of the licensing board.

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Accordingly, the staff does then prepare to delete these conditions from the license.

CHAIRMAN SALZMAN: Is it your judgment we should put them in then? Is it your judgment now that you have seen the error of your ways and that these, in fact, be imposed now by us?

In other words, I am asking you if you made a technical mistake in law that does not necessarily change the fact that you believe these things should now be license conditions, and you can confess error and ask we support the staff, if you wish -- I mean, the State of Illinois, if you want.

Is that what you are doing this morning?

MR. GODDARD: At this time, we feel the error which we made is insignificant. Licensee is committed to these points. The staff will, at this point, assure compliance with those commitments. Accordingly, we do not feel that technical specifications or license conditions such as we have imposed are required.

CHAIRMAN SALZMAN: You say "at this time." You are not likely to change your mind in the next two weeks, are you? Or after we enter our decision?

MR. GODDARD: No, sir.

DR. BUCK: That was going to be my next question. You said, "at this time" several times here.

CHAIRMAN SALZMAN: I take it what you are saying then, absent some significant changes in circumstances, it is sufficient

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that these things be embodied, in your judgment at least, as license -- commitments of the Applicant, rather than formal amendments to the license?

MR. GODDARD: That is correct, Mr. Chairman. When I used the phrase "at this time," I was referring to at this time as opposed to the time when the conditions were, in fact, imposed.

DR. BUCK: Not as opposed to the future?

MR. GODDARD: No, sir.

CHAIRMAN SALZMAN: If, in the future, you elect to propose these matters as license conditions or technical specifications, and the Applicant objects; they are entitled to a hearing on the proposed change, aren't they?

MR. GODDARD: Yes, they are.

CHAIRMAN SALZMAN: Thank you. I understand your position. With that being the case, there is no reason then that we should not allow Ms. Markey to argue.

DR. JOHNSON: I have a question.

CHAIRMAN SALZMAN: Surely.

DR. JOHNSON: I would like, Mr. Goddard, for you to address the staff assessment of a decision or a position taken by this board in Portland General Electric Trojan ALAB-531, with regard to the standard which would govern whether or not a matter -- a commitment should be made a technical specification.

That standard involved the immediate significance to safety or some immediacy with respect to safety problems arising.

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Does the staff believe that that standard set down by the appeal board was erroneous?

MR. GODDARD: No, sir. It does not. In drafting technical specifications, the staff is of course bound by the provisions of 10 CFR 50.36 and the Lessons Learned in the Trojan case.

DR. JOHNSON: Does the staff -- I think what we heard today and what we find in these briefs raises a question. Does the staff make a distinction between a license condition and the technical specification?

MR. GODDARD: No. They are both part of the license. The only difference would be in the location within the technical specifications and --

DR. JOHNSON: Does a license condition have to have a degree of immediacy associated with it, or with the problem that might arise in the event that that condition is aborted?

In other words, we said in 5.31 that a tachnical specification should be imposed under circumstances where there is an immediate safety problem that might arise, such as a hole in the primary coolant system, or something of that nature.

Quite frankly, in that opinion, we were making a distinction between technical specifications as something in which immediacy was involved and a license condition where immediacy was not involved. Were we wrong in making that distinction?

CHAIRMAN SALZMAN: Here is your chance.

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MR. GODDARD: Sir, I read Trojan as not distinguishing between licensing conditions and technical cpecifications, but rather between commitments of the Applicant and --

DR. JOHNSON: Sir, I wrote Trojan to make that distinction because I thought that distinction existed. Now, I am asking quite honestly for the staff's opinion on that. There is nothing lurking here. I had almost felt that such a distinction existed.

I would like to know from someone who should be an expert on it whether or not there is such a distinction.

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t3

MR. GODDARD: I am not prepared to state that there is a distinction of substance between a license condition and a technical specification.

DR. JOHNSON: They are enforceable in precisely the same manner by the Inspection and Enforcement Branch of the NRC, are they not?

MR. GODDARD: Yes, sir.

DR. JOHNSON: Okay. Thank you, sir.

MR. GODDARD: Thank you.

CHAIRMAN SALZMAN: Thank you, Mr. Goddard.

(Board conferring.)

CHAIRMAN SALZMAN: Ms. Markey, I take it you understood the distinctions being made and that you argue accordingly, please.

MS. MARKEY: Yes, thank you.

The Licensing Board denied the four proposed -- four of the proposed technical specifications put forth by the state of Illinois. First, that the corrosion surveillance program to which licensee is committed be made a tech spec. Second, that each tube receive a dummy fuel test before its placement into the pool. Third, that an in situ neutron attenuation test be performed before the licensee has committed to perform such a test on the sample of the tubes; so we ask that that program be made a tech spec, and also that if any one boral plate is found to be missing, that that tube be plugged and the neutron attenuation testing be

performed on all of the tubes instead of just a sampling of them.

We represented in our brief that only two of these matters were the subject of commitments. I stand corrected. The licensee has committed to all four, and of course, the tube corrosion surveillance and the in situ neutron attenuation testing was at one time a license condition for a few months.

CHAIRMAN SALZMAN: Briefly.

MS. MARKEY: Briefly.

Now, the decision that this Board uses in deciding whether a condition or matter ought to be a technical specification is set forth in the Trojan decision at page 273 -- in several places actually, but this is a succinct one.

They say, "Does the condition or limitation at issue -- is it necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to public health and safety?"

As Ms. Sekuler has already argued, and I believe the record shows clearly that the possibility of an abnormal situation or event exists where the matters are covered by proposed technical specifications, that is, problems caused by corrosion and degeneration or loss of boron in the boral tubes.

I note at this point that of course the applicant has the burden of proof on this issue, as on all other issues in the hearing. It is up to them to show that the possibility does not exist. And we contend the applicant did not do that.

Moreover, the Board itself did not find that such possibilities did not exist; for example, for intergranular stress corrosion cracking, the Board found simply that it is not likely to occur. It could not find on the basis of the affidavits submitted that it would not occur. Even Dr. Sayley in his original November 1979 affidavit could only say that such cracking was unlikely and used very tentative language in talking about what the apparent causes of the cracking had been at Three Mile Island.

Excessive heat may have been a causative factor. There was no conclusive evidence as to what particular factor contributed to it.

Given this state of uncertainty, we think it is clear that --

CHAIRMAN SALZMAN: I don't recall any fuel pool accident at Three Mile Island.

MS. MARKEY: This was found in the lines to the spent fuel pool, and it was that notice circulated to the Licensing Boards that prompted the Licensing Board here to ask for affidavits on the subject, since the Board found in the record that there wa that type stainless steel in the Zion spent fuel pool.

Now, the question which the Board has been raising this morning and which the standard obviously suggests is why aren't commitments sufficient? The licensee has committed to do these things. Why can't we be satisfied with that?

Now, the distinction between the technical specificatio

and the commitment is set forth in the Trojan decision. The Appeal Board discussed it again more recently in the North Anna decision in February of 1980, and the distinction seems to come down to two things.

First, if the matter is only a commitment, then the licensee can eliminate or modify that commitment at any time without prior NRC approval.

DR. JOHNSON: What is the basis for the statement that you just made?

MS. MARKEY: Our citation to the rules governing technical specifications.

DR. JOHNSON: Are you referring to 50.59?

MS. MARKEY: That is correct.

DR. JOHNSON: Does that part of the rules address commitment in any way?

MS. MARKEY: That talks about the procedures that are included in the SAR, I believe, and that these can be changed if they do not involve technical specifications or an unresolved safety issue, that the licensee can change that and that the NRC staff then must be notified after the fact of such a change.

DR. JOHNSON: We are talking about a commitment then that is not in the FSAR and not in the license conditions. In other words, I am not aware, and I am sure there are people around here who can probably tell me, but I am not aware of any mechanism whereby a license commitment as opposed to a license condition or

a technical specification or something in the FSAR can be changed by the licensee, with or without prior approval of the NRC.

MS. MARKEY: Well, if the license commitment is not in the FSAR, if it is not intended to be placed into the FSAR as a result of this proceeding, then I do not know what legal significance it has at all.

It would seem to me --

CHAIRMAN SALZMAN: Let me interrupt a moment. Didn't this applicant commit itself to the Licensing Board that it would not -- that it would do something, and it didn't seem to me that it reserved any obligation or any right to change what it committed itself to do on any circumstances without asking that it be relieved of the obligation that it took on. Indeed, I understood that the Licensing Board's decision turns on the fact that the applicant committed itself to doing something.

Now, don't you think if the licensee withdraws that commitment, it endangers the foundation upon which its license is sitting?

MS. MARKEY: I agree. It does endanger that foundation.

CHAIRMAN SALZMAN: What authority does it have to withdraw an express commitment it made to a board? Suppose you were in a court situation and you told the Court that well, we will agree to do so and so; the Court said all right, we accept it. You thereafter do not do so and so. Why, you are in trouble.

MS. MARKEY: You would be in trouble in terms of having

made a false representation.

CHAIRMAN SALZMAN: No.

MS. MARKEY: Unless it was embodied in a court order --

CHAIRMAN SALZMAN: It is embodied in the decision, the decisions, as the licensee committed itself to do that.

MS. MARKEY: We do not understand that to be the equivalent of something -- to make the commitment be something that is enforceable. If it is not --

CHAIRMAN SALZMAN: You don't think a commitment -- a decision contingent on A,B,C is enforceable? Is it all just so much paperwork?

MS. MARKEY: It is a voluntary statement by the applicant.

CHAIRMAN SALZMAN: The statement may have been voluntary, but the decision of the Licensing Board to authorize a license change was not voluntary. Without that statement it may well have been that the Board would not grant it. Once the Licensing Board relies upon it, I would think that is locked in as anything you are likely to get.

MS. MARKEY: If it is true that that is the status of the commitment made in the hearing and referred to as a basis of the Board's order, if it does have that status, then it would -- it sounds like it is some kind of condition of the license. And if that is the case, then that would mean that the staff would have to be able to enforce it using their powers under the act through the show cause proceedings, imposition of civil penalties --

CHAIRMAN SALZMAN: You don't think the staff cannot enforce --

MS. MARKEY: I would hope they can.

CHAIRMAN SALZMAN: What makes you think they can't?

MS. MARKEY: What makes me think they can't is I do not understand that the Board's reference to the commitment gives it the legal status it needs under the regulation to make it enforceable. There are specific regulations that set forth what is enforced by the staff and what is not -- what is enforced by the staff anyway, and the fact that these sorts of commitments are not anywhere referred to makes me suspect exactly what the staff's authority is to enforce.

CHAIRMAN SALZMAN: I would suspect if someone brought to -- the regulations cannot encompass every conceivable thing. The cases I thought -- to determine peculiar matters -- peculiar to a particular reactor, to a particular spent fuel pool, to a particular amendment, I never heard it suggested by anyone that if they caught anyone not obeying the conditions embodied in the condition that the staff was a powerless body unable to do anything. Far from it. I understand the staff would be prepared to move whole hog to do such a thing as suspend the license on the spot. The staff has enormous powers delegated by the Commission.

MS. MARKEY: If indeed that is the status --

CHAIRMAN SALZMAN: Let me ask it this way. If the commitment made by the applicant here or the licensee is as I described

it, that is, a commitment to the Board that it would do something on which the license amendment firmly rests, then you are satisfied?

MS. MARKEY: If the commitment -- the fact that it is a commitment upon which the Board's decision rests means that it is enforceable as such by the staff directly as a license condition would be and also that it could not be changed without prior staff approval. If it meant both of those things, then we certainly would be satisfied, because those are two concerns here.

We think there are going to be problems if Commonwealth Edison goes off and changes any of these four commitments, that that is where the immediacy of the threat comes in from why we wanted these to be technical specifications.

CHAIRMAN SALZMAN: Under those circumstances you would be satisfied.

MS. MARKEY: Yes.

CHAIRMAN SALZMAN: You will have to ask the applicant what it understood it was committing itself to.

DR. BUCK: I think we ought to point out that the commitment was treated by the staff in its enforcement procedures. The lack of meeting a commitment is treated initially as a deviation, and a deviation from the license can cause a suspension of the license.

Did you understand my statement or my question?

MS. MARKEY: From our reading of the regulations it

looks to us like the licensee can change this commitment at any time without getting the staff to approve it first. It can go ahead and do it first and then come and say this is what we have done. Now you have something new to enforce.

I understand that the staff keeps these on file and when they go out and make their inspections, they make sure they are being obeyed. However, in the interim if the licensee can decide on its own it wants to change this, and if it does change it, the only way the staff has of doing this is whenever -- I don't know exactly what the time period is -- but whenever they have to notify -- they have to notify the staff it is done, and then when they make their next inspection, they will have something different to enforce. And that is one of our concerns with the status of the commitment.

If in fact that is not the case, then that is not a problem. But we assume that when the term "commitment" was being used, it was as a result of this decision -- it was going to be embodied in the FSAR, and it would have -- the only requirement which would be legally enforceable would be this reporting requirement. If that is true, we would have problems with it.

DR. JOHNSON: Is your definition or understanding of the words "immediate threat" have to do with whether or not the applicant can change a commitment?

Is that what you feel the Appeal Board meant when it said "immediate threat?"

MS. MARKEY: I think what the Appeal Board meant was at least when you are juxtaposing tech specs and commitments like this that you have to look at what is going to happen if this thing -- if the commitment is changed first, and then they come to the staff afterwards, what are the possibilities there? In that situation, some sort of threat, some kind of harm created.

It is our position that for each one of these four proposed technical specifications, if it was -- if the licensee decided they were going to eliminate it and only tell the staff about it afterwards, then there would be -- that potentially problems could arise, first of all with the corrosion surveillance program. That is the only way we have of getting advanced warning of any corrosion problems, as Ms. Sekuler has already explained. There was a possibility of corrosion and the problems it creates in terms of the generation of the boral or swelling of the racks. This is an advance warning system.

In a sense you could say that is not an immediate threat because we are just talking about an advance warning system, except without that advance warning system we will not know when it does get to the point where there is a serious problem.

The other problem --

DR. JOHNSON: When it does get to that point is it then an immediate threat to the public health and safety?

MS. MARKEY: Yes, it is, because what is going to happen when it gets to that point is the only way they are going to know

that there is, say, swelling in the tubes is because they are going to put a fuel assembly in.

DR. JOHNSON: Where is the immediate threat to the public health and safety when they find that they cannot get a fuel element in that tube?

MS. MARKEY: We would say that kind of event would be sufficient to satisfy the Board's standard.

DR. JOHNSON: That that is the immediate threat to the public health and safety?

MS. MARKEY: Yes.

DR. JOHNSON: And what is the nature of that threat? They find that they cannot put the spent fuel in the rack.

MS. MARKEY: It is that they put it in the rack and it would get stuck, and that could --

CHAIRMAN SALZMAN: As long as it is in the pool, there is no problem.

MS. MARKEY: I am not certain. I have a problem. I'm talking about the part of the testimony Ms. Sekuler was responsible for. Ms. Sekuler can address that more ably in a rebuttal.

DR. BUCK: I think she has already stated her understanding of that particular question.

MS. MARKEY: So we would say that that sequence of events constitutes the kind of threat that would justify the position of the technical specification.

DR. BUCK: You think that is the sort of immediate threat -

the same sort of thing as having a main cooling pipe break.

MS. MARKEY: It does not sound like it is the same order of magnitude, but we think it should be sufficient for the Board to use its authority.

DR. BUCK: But how? How can it be an immediate threat?

MS. MARKEY: It is --

DR. BUCK: What is the threat you are talking about, first of all? What threat is it to the public?

MS. MARKEY: The threat is simply, as I said, in the case of what we are trying to avoid with the corrosion surveillance plant. One of them is --

DR. BUCK: What is the threat?

MS. MARKEY: Not knowing that there is a problem, a serious corrosion problem in the racks until the fuel assembly is placed in the racks and because of swelling, for example, it gets stuck, or because of stress corrosion cracking the rack falls apart.

DR. BUCK: Suppose that happens. What is the threat to the public?

MS. MARKEY: We would say that just that event in itself.

DR. BUCK: That is not a threat to the public, just a thing sticking in there. What are the consequences of that sticking?

MS. MARKEY: Again, I do not know the --

DR. BUCK: You are talking about threats to the public, and you are talking about a tube getting stuck. The public is

three miles off. I'm asking you, what is the threat to the public?

MS. MARKEY: I must confess I do not know because I do not understand the technical issue, and Ms. Sekuler can address this better than I.

DR. BUCK: Thank you.

MS. MARKEY: I am sorry -- I realized in the course of her argument that our allocation of responsibilities might create these problems, and I apologize for the inconvenience it causes you.

The other problem with allowing the licensee on its own to eliminate the corrosion surveillance problem plan, which is a possibility if it is simply a commitment -- the problem with that is that if the samples are, for example, taken out of the pool -- if you have a program you can do that -- and disposed of somehow -- it would completely eliminate the effectiveness of the program.

The important thing about the samples are they are going to be placed in the pool at roughly the same time as the new racks are going to be placed in the pool, and therefore, they will hopefully duplicate the conditions to which the tubes and racks are being subjected.

And it is important, therefore, to maintain that continuity for them to have any validity. They have to stay in the pool for roughly the same amount of time as the racks themselves are in the pool.

Now, as to the other technical specifications we have requested, we have requested the same sort of considerations govern.

CHAIRMAN SALZMAN: How does it apply to the dummy test you are talking about? What sort of consideration do you have there?

MS. MARKEY: This is to avoid again the problem of the tubes being somehow damaged or distorted in transportation or manufacture. Testing them first will assure that when they are placed in the pool --

CHAIRMAN SALZMAN: By testing them, you want a fuel assembly dumped in and pulled out of each rack.

MS. MARKEY: That is correct. That is correct.

CHAIRMAN SALZMAN: I thought the applicant committed itself to testing that, didn't it?

MS. MARKEY: Yes, it has.

CHAIRMAN SALZMAN: Hasn't it tested them?

MS. MARKEY: To my knowledge --

CHAIRMAN SALZMAN: If it tested them once --

MS. MARKEY: That is all it has to do.

CHAIRMAN SALZMAN: It said it would.

MS. MARKEY: It said it would, but again, our problem with that is that it can change its mind, as we understand it. If it cannot change its mind then that is fine. We want these things to be done, if we want assurance that they will be done, and we do not want the licensee to have the option to decide in a

month or a year, or in the case of a corrosion surveillance program to decide they do not want to do these things any more.

The other point I would like to make on this is we are not requiring that every detail of the licensee's quality assurance program or their quality control program, all these little things to which they have alluded in their brief, we do not think all these things should be technical specifications or license conditions or anything like that.

We have selected the sorts of things that the Board itself said it was relying upon in entering its order, and also they are the sorts of things that serve as sort of checks. There is the dummy fuel assembly test and neutron attenuation test.

No quality assurance program is perfect, and the testimony below showed that neither was Brooks and Perkins.

CHAIRMAN SALZMAN: None of us are.

MS. MARKEY: This provides a last point where an easy -- and I imagine fairly inexpensive check -- it is a form of direct measurement which is always better than just looking at things or measuring things.

CHAIRMAN SALZMAN: Your time has expired, Ms. Markey.

Do you have questions, Dr. Buck? Dr. Johnson?

DR. JOHNSON: Yes. The dummy fuel test, was it intervenors' position that this need only be done when the racks were first installed?

MS. MARKEY: Well, at the hearing below it was our

position -- we still think this is worthwhile -- that dummy fuel assembly tests should be performed of each tube shortly before it is to receive a fuel assembly. That again would provide an extra check on what has happened to the tubes in the pool environment.

CHAIRMAN SALZMAN: Why wouldn't the same thing be served by simply dropping the fuel assembly into the tube? Either it will fit or it will not.

MS. MARKEY: You get back to the question that Dr. Buck asked before. The assembly will get stuck. What is wrong with that, I will defer to my colleague because I do not feel that --

DR. JOHNSON: I can make that distinction. In one case you might get the dummy stuck. In the other case you get a real live fuel element stuck, and even I can figure that one. But you have withdrawn from the position that this should be done at each refueling to check out the racks that are proposed to be used.

MS. MARKEY: We have not specifically requested that or challenged that as part of this appeal, no, though, as I said, we still think it is meritorious.

In conclusion -- do you have another question, Dr. Johnson?

DR. JOHNSON: Do you know what the standard that must be met by the applicant before it changes a license condition under 50.59 is? Do you recall that?

MS. MARKEY: Let's see. 50.59 being the section that speaks of commitments, including the FSAR.

DR. JOHNSON: That is correct.

MS. MARKEY: No, I do not.

DR. JOHNSON: Do you recall anything about unreviewed safety questions?

MS. MARKEY: Oh, yes. It said that the only -- the only commitments that could be changed without prior approval are ones that either, number one, do not involve an unreviewed safety question, or number two, do not call for change in the technical specification.

So if the Board finds this is an unreviewed safety question, then that would -- that would respond to our concern.

DR. JOHNSON: In this case it is the applicant that would make the finding whether it is an unreviewed safety question or not.

MS. MARKEY: We interpreted that to refer to the unreviewed safety questions that have formerly been compiled and listed by the NRC, the staff, I believe.

DR. JOHNSON: I may be wrong, but the way that particular part of the regulation is phrased, one thing that would be an unreviewed safety question would be something increasing the likelihood of safety-related events. In other words, your fear of the applicant running around eliminating conditions on their own motion, as it were, I think is a little bit unrealistic when you look at what the standard for unreviewed safety questions is. In other words, they have to make this determination; then

they have to make it public that it is an unreviewed safety question before they can utilize the procedures under 50.59.

MS. MARKEY: You mean they must make the determination publicly that it is not an unreviewed safety question.

DR. JOHNSON: And publicly, I mean they have to report the basis for their evaluation to the staff.

MS. MARKEY: It is my understanding as I recall from the applicant's brief that they already contend that this is not an unreviewed safety question, and so they seem to assume that that determination has already been made.

DR. JOHNSON: I do not recall that. We can certainly find out from the horse.

CHAIRMAN SALZMAN: Thank you, Ms. Markey.

I take it you wish to speak to the horse next. Why don't we take a break for five minutes? The reporter will read it if no one else. We will reconvene at 11:30, gentlemen.

(Brief recess.)

CHAIRMAN SALZMAN: Mr. Steptoe, are you going to speak first?

MR. STEPTOE: Yes, Mr. Chairman.

CHAIRMAN SALZMAN: May I ask what subjects you are going to address, sir?

MR. STEPTOE: I am going to address the -- all of the exceptions raised by the state of Illinois other than the last four which deal with the exclusion of Mr. Cleary's testimony on emergency planning and the need for groundwater monitoring at Zion station. I am also prepared to address the technical specification issue. But before I start --

DR. BUCK: You can raise that thing if you want to.

MR. STEPTOE: I will just lean over. I may be down on the ground by the time this thing is over.

(Laughter.)

There is one correction that I would like to make. There is an error in my brief on page 29. The statement is made that even if one plate, boral plate out of 16 is missing from the tube, .95 is not effective -- it should be 1 out of 64 -- when all effects of eccentric positioning of fuel are taken into account. And the Board's decision at 11 NRC 281 will explain that. I apologize for the error.

I would first like to address the technical specification issue. The staff's withdrawal of their action makes it unnecessary to go further into the merits of what they did, except

it was, in licensee's opinion, clearly unauthorized. And we commend the staff for their withdrawal on that point.

CHAIRMAN SALZMAN: What I would like to know, Mr. Steptoe, is what sort of commitment did you believe your client was making to the Licensing Board? Let me be specific. Am I correct that these commitments were made to the Licensing Board in order to obtain a favorable decision, and therefore they may not be changed or withdrawn absent an agreement of the condition, the staff and the Board?

MR. STEPTOE: I think we made those commitments to the staff in order to get the staff on our side before the Licensing Board.

CHAIRMAN SALZMAN: You did not make any commitment to the Licensing Board?

MR. STEPTOE: Also to reaffirm to the Licensing Board.

CHAIRMAN SALZMAN: Would you agree with me that are you bound and you cannot make any changes absent the approval of the Commission?

MR. STEPTOE: Absent the approval of the Commission, which in this case means the staff. We would have to go back to the staff.

CHAIRMAN SALZMAN: If that is so, what is your problem with having these things embodied as licensing conditions?

MR. STEPTOE: It gives us adequate flexibility -- you have to talk about individual commitments. With respect to

corrosion surveillance, that is going to be over the lifetime of the station. We may want to change, for example, the methods of monitoring for corrosion, as indeed we have already served vou one time with one minor modification that we made, those kinds of modifications.

I do not think we want to presume that for the 28 years remaining in the Zion licenses that the signs of corrosion or --

CHAIRMAN SALZMAN: The issue is whether you have to get the staff's consent to change it first.

MR. STEPTOE: If it is a technical specification, we have to pay a license fee and run the risk of a hearing. It is an entirely different procedure than if we go the commitment route and ask the staff for its willingness to change it.

DR. JOHNSON: In between commitment and technical specification we have FSAR amendment and license condition, do we not, or -- or do we not in between license commitment have a level of applicant commitment which is FSAR amendment and license condition before we get to technical specification?

Is that your understanding?

MR. STEPTOE: Not entirely, Dr. Johnson. I think I, like intervenors, do not see quite the distinction you are drawing between license condition and technical specification, except for legal purposes, except for a very practical consideration which is that when you have a surveillance requirement, it ought to go back in the back of the book with the other surveillance requirements

and the tech specs so it can be easily found.

DR. BUCK: Excuse me, but isn't a technical specification a special kind of a license condition? Isn't it a kind which you have certain immediate reporting situations and so on if you break that specification, and there are some conditions that you do not have the immediate reporting, as I understand it. There are all kinds of conditions put in the license.

MR. STEPTOE: I suppose that is right. The technical specifications themselves contain reporting obligations, so if that is what you are driving at --

DR. BUCK: That is what we are driving at, frankly.

MR. STEPTOE: Yes. There could be a conceivable difference there. Also, let me go to the other three commitments, which are essentially the dummy testing and the neutron attenuation test. Those are one-time tests, really quality assurance tests. Licensee cannot see why those should be stuck in the license for 28 years. They are only one-time -- one-time requirements. They are not related like technical specifications are to the operation of the facility.

CHAIRMAN SALZMAN: Let me interrupt you. If they're one-time tests, what difference does it make? You have done it. It is over. What do you care if it is a license condition or not?

MR. STEPTOE: It does not make a great deal of difference except the license and the technical specifications are more than a legal document. They are supposed to be a handbook for the

people that run the station.

CHAIRMAN SALZMAN: Yes. The people who run the station I suppose will know you have made these tests.

MR. STEPTOE: It is a three-inch thick document. Why should it be one more page thick? It is not a big deal except to the extent it created a much larger volume of these dead letters.

DR. BUCK: I disagree with you there. I think it is extremely important. I hate to see these technical specifications that the operators have to follow any larger than they have to be, and I think this is one thing about technical specifications in the book -- they have to know, they have to know if they break them. They have to have immediate reporting.

If you fill that book up with commitments on a one-time basis or commitments that have already gone by and are not going to be again, you are destroying part of the safety of that plant, in my opinion.

MR. STEPTOE: I know that I am an ineffective advocate because there are many people within the licensee who feel that way, but as a lawyer and somebody who has not run or worked in a nuclear power plant, perhaps I did not give enough emphasis to that. But that is the argument I was trying to make.

Again, one page, this is a straw. It is not going to be the straw that breaks the camel's back. But nevertheless, the license and the technical specifications should not be cluttered up with unnecessary material.

DR. JOHNSON: In that hierarchy of document where do you put the FSAR?

MR. STEPTOE: Well, the FSAR is a little bit of a new animal now since the Commission has the rule on updating FSARs, because it used to be there was no requirement to update it, and it was out of date. The Commission's recent rule means that you have to include in the FSAR on an annual basis the results of changes, whether conducted under 50.59 or through license amendments and analyses and so forth. And so I would place it halfway between a commitment and a technical specification in that I am not sure quite how a failure to include something in a FSAR will be treated for enforcement purposes. I think it would be some kind of notice of deviation or a deficiency would be issued.

DR. JOHNSON: How about failure to abide by the statement or a condition in the FSAR?

MR. STEPTOE: I think the appropriate enforcement there -- the way they would sanction you would be through 50.59 because that states the conditions under which you can depart from the FSAR. And if you did something that was caught in the FSAR in an analysis or you departed from that and your judgment on an unreviewed safety question was clearly wrong -- if applicant went ahead and did something on the basis of that, then you would be sanctioned for that. But I do not think the particular -- the FSAR update requirement would be the legal source of that violation -- of that enforcement action. It would be 50.59.

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CHAIRMAN SALZMAN: Mr. Steptoe, I am a little puzzled. If you say the technical specifications are something the operator should have in hand so that he will know what he is doing, then why should the surveillance program be a technical specification?

MR. STEPTOE: The most important thing should be -- there are two different types of commitments, and you have me going between the two of them. But certainly the one-time requirements which become dead letters as soon as you execute them should not be in the tech specs.

CHAIRMAN SALZMAN: Suppose I agree with you on that point. What about the surveillance program?

MR. STEPTOE: The surveillance program is in hand because it is reflected in station procedures. It is not reflected in the tech specs. And there was a balance between the need of the station to have something that they can live with for 28 years, the flexibility to make these small changes; and on the other hand, the station writes the procedures for carrying out surveillance requirements, and they are there before them, so there is simply no question that they are going to forget to go out an do what the surveillance program requires.

CHAIRMAN SALZMAN: Just like there is no question that the people will turn the valves back on after they finish inspecting various pumps.

MR. STEPTOE: Like Dr. Johnson's argument about the risk associated with having -- if you have a tech spec, it should

be reserved for those things of immediate safety significance. If you fail to go sample the water one week, it doesn't seem that that is comparable to a failure to, for instance, to use a tech spec that was imposed by the Board carrying something over spent fuel.

CHAIRMAN SALZMAN: What about failing to notify the Commission in advance that you are going to handle heavy loads in the vicinity of the pool?

MR. STEPTOE: The staff withdrew that, and they are going to keep it as a commitment.

CHAIRMAN SALZMAN: You must remember that the staff may have withdrawn it, but I thought Illinois was complaining about it.

MR. STEPTOE: No, they aren't, Your Honor.

CHAIRMAN SALZMAN: They are not challenging that one? I thought they were.

MR. STEPTOE: No, they are not. But the answer to your question on the merits is that the reason that advance notification issue was put in back in 1976 or that the staff was undergoing a generic review of heavy loads by the spent fuel pool, and they have not signed off on that generic review, and they said as soon as they signed off; it was just for that purpose, and it could be deleted. So why should licensee have that again which will become a dead letter we hope shortly. Or why should we pay the NRC a fee to get it out of the license?

CHAIRMAN SALZMAN: We need the money.

(Laughter.)

Well, let me put it this way. Suppose -- would there be any advantage to formalizing these commitments as part of the FSAR or disadvantage?

MR. STEPTOE: They will be formalized in the FSAR. Under the proposed rule -- not proposed rule -- final rule on updating the FSARs, analyses reflected in the license amendment cases are to be included in the FSARs.

CHAIRMAN SALZMAN: Once they are included in the FSARs, you do not have any problem of the sort that Ms. Sekuler or Ms. Markey was raising, that there was no mechanism for enforcing them. They were making the point, I thought -- and perhaps I am wrong -- that the absence -- maybe we were making that point. I withdraw that.

MR. STEPTOE: There was no question about enforcing them, and there was actual testimony by Mr. Kohler of the Inspection and Enforcement Branch of the Commission that the Commission can enforce these commitments and in fact they will have a stop work order, immediate action letters. That kind of enforcement is available, and the existence of the FSAR has nothing to do with their ability to do that on a very timely basis.

There is one point that came up in that discussion that I would like to respond to about commitments, and that is a very narrow issue. And again I want to emphasize that licensee makes these commitments and feels bound by them. But since the issue

came up about the question of how the staff would enforce -- whether the staff could enforce a civil penalty for violation of some of these commitments -- okay -- the staff, as I read the Inspection and Enforcement manual, Chapter 800 -- the staff makes a distinction between regulatory requirements for which it issues deficiency notices, and in bad enough cases civil penalties, and commitments which it defines -- it is defined in that chapter as something that is not a regulatory requirement. There is a terminology problem here about the use of commitments.

The staff defines a commitment as a promise the licensee makes which is not a regulatory requirement in any way through whatever means. Now, in this proceeding we have been using the word "commitment" loosely to mean anything but a tech spec, but there are, of course, mechanisms in the regulation by which civil penalties could be assessed if you fail, for example, as in North Anna -- the Appeal Board pointed out a procedure that was called for in the tech specs, or if you failed to follow a procedure that was called for in your quality assurance program under 10 CFR Part 50, Appendix B, Chapter 5.

So most civil penalties are made on the basis of failure to follow procedures rather than failure to follow license conditions or tech specs. So what I am saying is that there may be an animal such as a commitment that is not a regulatory requirement that might not serve as the basis --

CHAIRMAN SALZMAN: I am troubled by this. If in fact

the Licensing Board relied on your commitments in determining to grant a license amendment, what sort of result would follow if you did not follow through with the commitment?

MR. STEPTOE: That would depend on whether those commitments were in enforceable procedures such as I have described, and the record is silent on that.

May I just suggest it is an academic question. If the Appeal Board wants to make sure there is no doubt that these commitments are enforceable, there ought to be some way through civil penalties you could simply -- let's see, how could you do it -- you could order that they be reflected in procedures.

DR. JOHNSON: Is it your --

MR. STEPTOE: My problem is I have to go off the record to tell you whether or not these things are in procedures or not which would be subject to civil penalties, and you are not --

DR. JOHNSON: There are other means of enforcement other than civil penalties.

MR. STEPTOE: Absolutely, absolutely.

DR. JOHNSON: And a deficiency which is defined as not living up to a commitment --

MR. STEPTOE: Deviatic

DR. JOHNSON: Deviation -- is enforceable up to revocation or suspension of a license.

MR. STEPTOE: Up through -- the staff has tremendous powers on the basis -- whenever the public health and safety is

involved to order us to do the commitments, if it looks like we are not going to do them, and revoke our license or take any other appropriate action.

DR. JOHNSON: And I gather you are making these statements because of your familiarity with the Inspection and Enforcement manual, Chapter 800. Is that the source of your information on that?

MR. STEPTOE: Yes. I would have tried to be more forthcoming on that in the brief, but I did not have the benefit of the North Anna decision which came down and was out in the yellow book recently. I did not read it in time. It got me thinking about the --

DR. BUCK: What would be your reaction to our saying that a licensee -- a commitment made during the course of a hearing to a Licensing Board should be reflected after the decision comes down, with the Licensing Board agreeing that that commitment has been made to them and stating that that commitment has been made to them, that commitment be made an amendment to the SAR or the FSAR?

MR. STEPTOE: That would be a salutory development.

DR. BUCK: Would that commitment be --

MR. STEPTOE: It would be a good idea.

DR. BUCK: You would have no objection to doing that.

MR. STEPTOE: Absolutely not. One of the problems, frankly, in this hearing is that in a way every word of testimony

is sworn; it is under oath. We take the position, and in selecting out certain things as being formal commitments is sometimes a difficult task. So in our proposed findings of fact licensee tried to pull out all those things that seemed to be the major promises. But every word spoken under oath is in effect a promise.

But I think it would be useful to have an institutional procedure to select these things out and put them into the FSAR, and I think licensee would probably go ahead and do that since it is rewriting its FSAR now. It would probably want to go ahead and do that anyway. But I do recommend that the Appeal Board do it.

CHAIRMAN SALZMAN: Please go ahead.

MR. STEPTOE: Unless there are any further questions on technical specifications, I would just like to respond briefly to a couple of things that intervenors said about corrosion.

I think that the testimony of Dr. Draley is far more than an educated guess, and these racks are far more than an experiment. This is not at the cutting edge of new technology. Dr. Draley -- his expertise is well established by the record, and I think that short of putting racks in an empty spent fuel pool and watching them for 28 years, events demand that you make changes, and those changes are not -- there are no significant differences really between these racks and the Monticello racks. And that is what the corrosion surveillance program is all about -- to make sure that the expert judgment is in fact confirmed. That is what protects the public health and safety.

Intervenor also made the statement that there was not very much experience with boral, but I think there is some experienc with half cylinders at Brookhaven National Laboratory for long periods of time. I think that was referred to in the testimony.

Dr. Buck, I think you asked about the pH decreasing due to the concentration of boric acid as water boils. Dr. Draley addressed that at transcript pages 1324 through 1327, and what he said was you have to distinguish between the pH in the pool as a whole and the pH inside those tubes. And he said it would take at least two weeks before there would be any conceivable corrosion. He was not saying corrosion would start at two weeks.

Just briefly then, intervenor seems to ask for certainty about corrosion, and I do not think that is the standard. The standard is whether the public health and safety -- whether there is reasonable assurance that the public health and safety is protected, and I think that the expert opinion of corrosion witnesses which the licensee presented do provide that reasonable assurance.

With respect to the testimony of Dr. Renikov on pool boiling, as the brief -- as Commonwealth Edison's brief at page 12 points out, Dr. Resnikov did not say, as intervenor told you, that access to the pool would not be possible. He said he did not know. That was all he said. He did not challenge the expert opinions that licensee and the staff provided on that question.

Unless there are further questions, I would like to

relinquish the stand to Mr. Miller.

DR. JOHNSON: With regard to the dummy fuel element test --

MR. STEPTOE: Yes?

DR. JOHNSON: I gather applicant opposed the concept of utilizing the dummy prior to insertion of the fuel in the racks other than at the beginning of the life of the racks. Where is this addressed in the testimony or in the record?

MR. STEPTOE: In the record, dummy fuel assembly testing. I think it came up in the briefs filed afterwards or the proposed findings of fact of the state of Illinois, and I cannot tell you where that appears.

I might say though that the dummy fuel assembly testing -- first of all, the worst that could happen is that you would stick one assembly, and that accident has been analyzed, the worst possible accident which involves a fuel drop. It is below 10 CFR Part 100 limits.

DR. JOHNSON: That is not a criterion that we want to bump our heads against very often. It would seem to me from the standpoint of the operator, the fuel element stuck halfway down in the rack would be a great pain, and a way of avoiding that would be to find out whether the rack was open before you started shoving a fuel element down there.

MR. STEPTOE: That is true. In our view, however -- this goes back to something that Dr. Buck said -- testing each tube

before a refueling outage could be done, but we have those surveillance specimens in the pool. We think it is adequate, and it is a bad administrative practice to tell people to do repetitive things like that when you are not expecting any problem, when there are other means of catching such swelling. It is like telling someone who is making a souffle to go open the refrigerator door every ten minutes to tell whether the light is on.

DR. JOHNSON: It seems to me it is more analogous to if you are going to get ready to make a souffle, check the oven to make sure that it works before you go through the pain of mixing up the ingredients.

MR. STEPTOE: How many times do you check the oven? I guess that is the point. It is a repetitive kind of thing that we see no need for. If you had to impose it, the major pain it would cost licensee would be if you did not give us enough time to do it before the refueling so it cut into critical path. But I don't suggest by that that you should impose it, because with this corrosion surveillance program it is not necessary. It is just one more burden on the people who are running these plants, who have a great deal of burdens on them right now. The whole industry is playing catchup since Three Mile Island.

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DR. JOHNSON: Thank you.

MR. MILLER: Mr. Chairman, I will be quite brief. I really wanted to address only the question of the exclusion of the testimony of Mr. Cleary, state's witness who was tendered

for the purpose of presenting testimony on emergency planning. I think Dr. Johnson asked a couple of questions, and I would like to address those first.

He asked first what was the basis for the exclusion of Mr. Cleary's testimony. I believe it clearly was relevance, and Dr. Remick in his remarks in connection with the ruling by the Board excluding Mr. Cleary's testimony made it quite clear that the Board had asked the specific question of the relationship of any change in the emergency plan to the spent fuel pool modifications. That was the issue which Mr. Cleary's testimony did not address.

It was simply a rehearsal or recitation by Mr. Cleary of perceived inadequacies in the Zion station emergency plan generally, and the mechanism within the state of Illinois, the governmental apparatus, for dealing with emergencies in nuclear power plants, interaction between the state and federal government, covered the waterfront pretty well, but it did not deal with the modification to the spent fuel pool and how that would change or require any change in the emergency plan.

DR. JOHNSON: Mr. Miller, how do you deal with the argument made this morning that the connection between the modification in the spent fuel pool and the emergency plan had already been made by intervenors' witness Resnikov?

MR. MILLER: Well, I think the response to that is really that that misperceives the whole thrust, if you will, of the

emergency plan. As was pointed out in the testimony of licensee's witness, Mr. Peoples, the Zion station emergency plan does not purport to deal with individual action scenarios. What is of concern are the consequences in terms of offsite exposure of a whole spectrum of events from things that merely cause an onsite alert to a classification of events called general emergency.

And Mr. Peoples' testimony defined a general emergency as existing whenever nuclear station instrumentation indicates failure of protective systems and engineered safety features which result in damage of nuclear fuel in a reactor, and the likelihood of appreciable quantities of fission products to the environment.

There is not quantification there, but I think that is the worst conceivable type of accident.

Dr. Renikov's testimony dealt with the breach of the spent fuel pool building following a boiloff, and the release of an appreciable quantity of fission products to the environemnt. Certainly that would be a disastrous accident, but it would be no worse than the accidents which were already contemplated for attention by the Zion station emergency plan. So there was no connection between the modification of the spent fuel pool and any changes in the Zion station plan.

CHAIRMAN SALZMAN: Did the state make the suggestion to the Licensing Board when the question of excluding Mr. Cleary's evidence came up that the relevancy connection had already been made?

MR. MILLER: Yes, sir. I believe Ms. Markey in responding to the motion to strike that I made and that was supported by the staff did in fact point out to the Licensing Board that the problems had been -- the accident scenarios had been addressed in the testimony of other witnesses.

Her other point, I believe, was that since Mr. Cleary's conclusion was that under any set of circumstances the Zion station emergency plan was perceived by him to be inadequate, that if it was not going to work under any circumstances before the spent fuel pool was modified, that it would not work after the spent fuel pool was modified. And while that -- the logic may be unassailable, I do not see how his testimony would be of any assistance to the Board below in resolving the issue before it, which as stated, whether the modification itself would cause a modification in the emergency plan.

DR. JOHNSON: If Dr. Resnikov had been able to offer unrefuted evidence that a particular fission product grows into spent fuel and reaches higher and higher concentrations as time goes on so that fuel that had been stored for 20 years is much more toxic than fuel that had been stored for five years -- I am not saying this appears; I am just saying hypothetically -- if he had been able to do that, then he could have raised the question as to whether the emergency plan was adequate with 20-year old fuel when it had been shown to be adequate with 10-year old -- only with 10-year old fuel or 5-year old fuel earlier.

Are you saying in your view he did not pose such a problem?

MR. MILLER: No, sir, he did not. What he did was assume the accident occurred at the very limit of the modified spent fuel pool's capacity; and I think he hypothesized that there was something like 11 full cores in the spent fuel pool when his hypothetical accident took place. But the next connecting step was not taken. I do not believe there was any testimony, and I do not believe it would be factual if there were such testimony, that there would be an increase in the toxic level, if you will, of fission products. As I understand it, there is an equilibrium point which is reached within the spent fuel pool following each discharge of spent fuel. I think there is testimony to that effect by Mr. Tramm and others from the licensee.

And while you would have a greater inventory of spent fuel which would be subject to rupture and dispersion through the environment under the scenario that Dr. Resnikov hypothesized, I do not believe there was any showing that there would be any greater concentration of a particular radioisotope or anything like that other than as related to the larger quantity of fissionable material that was stored in the pool.

Once again, getting back to the emergency plan itself, I believe that that is not -- is not pegged to different accidents with different releases of different fission products or noble gases or whatever. It attempts to deal with various levels of

events that comprise a spectrum of possible accidents within the plant.

For that reason, as I say, Mr. Cleary's testimony was not relevant.

I would like to also point out that as far as the hearsay objection goes with respect to Mr. Cleary's testimony, if he had been qualified as an expert, which he was not, he clearly would have been entitled to rely upon hearsay statements in formulating his own opinions with respect to the matter that he was addressing.

However, it is my understanding of the federal rules of evidence that under no circumstances would the hearsay itself have come in for its independent probitive value, and that it was only a question of what as an expert he was entitled to rely on if his testimony had been accepted.

If there are no further questions, I think I have overstayed my time.

CHAIRMAN SALZMAN: Thank you, Mr. Miller.

Mr. Goddard.

MR. GODDARD: Mr. Chairman, members of the Board, the staff believes that it has answered the five questions propounded to it by the Appeal Board in their memorandum of June 26. If there are no further questions along those lines, I would like to speak to a couple other points raised by Ms. Sekuler in her argument for intervenor.

With regard to the swelling of the boral racks to be

installed at Zion, it has been said that the rack design is new. The rack design is similar to the Monticello facility where swelling occurred. The distinction between the two racks is a proposal that the Zion racks will be vented to allow the release of hydrogen offgas formed as a result of corrosion.

To the extent that this design may be considered new in any way, staff would submit that the metallurgical results of the corrosion are anything but new. There is uncontroverted expert testimony in the record, both from Dr. Draley and Dr. Almeter and Mr. Lance on behalf of the NRC staff, to the effect that of the two known measurements of corrosion, which would be production of gas or production of solid corrosion product, neither could occur to the extent that swelling of any significance would occur.

By "significance" I refer to impeding the lowering and raising of fuel assemblies within the storage racks.

As to the fact that at the time of hearing the specific proposal for venting had not been clarified between applicant and staff, there is testimony on the record by Mr. Zudans for the staff and Dr. Draley for the applicant to the effect that either top venting of the racks or top and bottom venting of the racks would be sufficient to allow release of the offgas. And the only question was which was the more satisfactory solution.

At the time of hearing that ultimate solution was yet to be determined. However, either of the two alternatives was deemed effective to prevent the swelling mechanism due to the

formation of gas within the racks.

I would next like to turn to the question of pool boiling and the alleged lack of attention which the Licensing Board paid to the testimony of Dr. Resnikov. The staff would submit that Dr. Resnikov's scenarios were fanciful, and he was abjectly speculating with regard to the abandonment of the Zion spent fuel pool.

As was pointed out by, I believe, Dr. Johnson, there are technical specifications with regard to operation of the facility to include the spent fuel operations. Moreover, there is in this record the uncontroverted testimony of Mr. Zech and Mr. Lance for the staff and Mr. Tramm for applicant to the effect that there are accessible from outside the plant remote controls for providing makeup water from a number of sources to the spent fuel pool.

DR. JOHNSON: You do not mean to say that the controls which would allow people to put this water into the pool are themselves outside the plant, do you?

MR. GODDARD: The controls are in a concrete-shielded area of the fuel building. They are accessible from a trackway outside the plant itself.

DR. JOHNSON: You have to get into the building to find the controls. That access is a non-normal access.

MR. GODDARD: It is a non-normal access, and those controls are insulated from the pool itself. They are in the

fuel building.

Dr. Resnikov himself conceded that there was adequate makeup water supply, and the staff would submit that his scenarios whereby these water supplies would not be brought into play were not based upon any evidence in the record. They were not based upon fact, and accordingly were not entitled to any further consideration from the Board than they received, given the uncontroverted testimony by the witnesses for staff and applicant.

DR. BUCK: Do you know what, if any, basis Dr. Resnikov had when he stated at transcript 1561 that he was concerned about the operators just walking way and then the accident would happen.

Did he have any basis for assuming that these operators would walk away? Did he give any reason for that?

MR. GODDARD: I believe he based it upon a serious accident. However, the staff's testimony was to the effect that even in the event of a design basis loss of coolant accident, these controls were accessible from the trackway.

DR. BUCK: He gives a statement here. The question was, 'Isn't it true that the scenario that the spent fuel pool could go neglected for ten days while it was boiling is simply not credible" -- wait a minute. That's the wrong page here.

He was asked, "You state on the first page of your testimony, 'This accident is possible under a major reactor accident scenario or simply through neglect.'"

He says, "Yes. What I meant -- oh, do you have a

question?"

"What do you mean, Dr. Resnikov? I'll give you that courtesy."

He says, "Thank you. What I intended there is if you simply turn off the cooling system and walk away" -- now, do you know what basis he had for making an assumption like that, if any?

MR. GODDARD: No, sir, I do not, and he certainly did not give a basis for such an assumption during his testimony.

Are there any further questions from the Board?

DR. JOHNSON: One of the scenarios that was advanced in the discussion of neglect was civil or social upheaval, and I believe the Board made reference to a section of the regulations which said the NRC staff has the right in any event to take over a nuclear power [illegible] under such circumstances.

What I would like to ask you is what is your view of the applicant's responsibility towards meeting license conditions and technical specifications in the event of social or civil upheaval, for instance, a strike of the union members of the operating crew? This would not in any way relieve the applicant of meeting all the specifications, would it? Or a riot in the state of Illinois or something of this nature.

I mean, what -- what are the barriers to neglect of this type?

MR. GODDARD: The staff did not put forth the reliance

upon 50.13 which the Licensing Board seized upon in its opinion. The position of the staff would be that such action would not excuse the licensee from performing in accordance with the conditions of the technical specifications of the license.

It is conceivable that under some magnitudes of disorder the licensee might be prevented from compliance, but he would not be excused, a[illegible]hat term was used. In any event, I think at this point perhaps we are in an area which is too speculative to warrant discussion on the record. That was the position that was taken by the staff at the time of the hearings. There was no basis shown for such a situation. Of course, there would be coordination at all levels should such an event occur.

There is testimony in the record and in the staff's Exhibit 1-A, which is the safety evaluation report, that with the loss, I believe, of both cooling systems, it would still take approximately 8.3 days without makeup water to have a boiloff in the pool.

DR. JOHNSON: Right. Thank you.

CHAIRMAN SALZMAN: Any further questions, Dr. Buck?

DR. BUCK: No.

CHAIRMAN SALZMAN: One moment.

(Board conferring.)

CHAIRMAN SALZMAN: Ms. Sekuler, you asked to reserve some time for rebuttal. We will go straigh[illegible]ough and hear your rebuttal now.

MS. SEKULER: May I have about two minutes?

CHAIRMAN SALZMAN: We will take a break until about 12:30, if you need the time.

(Whereupon, a brief recess was taken.)

CHAIRMAN SALZMAN: Ms. Sekuler, you asked to reserve 15 minutes for rebuttal.

MS. SEKULER: I hope to take less time than that. I just wanted to clear up a couple of points that were raised during the various presentations.

References to the boric acid content and the tempera[illegible]re in the pool are in the transcript of the hearing starting at Page 1323. It goes on for several pages. In relation to the comments made about Dr. Resnikov's testimony, I think that Dr. Johnson has understood our position in indicating that the transcript must be continued to be read.

I would like to briefly point out pages 1561 and 1562. What it is we [illegible]re try[illegible]ng to say on 1561, the words "walk away" are [illegible]tarte[illegible] to b[illegible] used, and at the end of the page, the question is [illegible], "Do you really think it is credible -- strike that. Do you think it is true that the scenario that the spent fuel pool could go neglected for ten

days while it is boiling is simply not credible?

"Answer: I think it probably would require a major accidental war.

"Question: You stated it was independent of a major accident on Page 1.

"Answer: I can think of situations where a spent fuel pool would be neglected, yes, I can, but those would require major disruptions in our society.

"Question: Some act of God?

"Answer: Or war."

I think it is clear he was thinking in terms of massive social disruptions of one sort or another. When we talk about war, the board brought up the fact that the licensing board referred to regulation 50.103 Part of 10 CFR. I have two comments to make on that.

One is the Board's comment that the concept of a major social disruption is so speculative they did not have to address it, if that were true, it occurs to me we would not need a regulation such as 50.103 by either Congress or the Commission, but I would like to point out that reference to 50.103 overemphasizes the need for a war situation, and also overemphasizes or actually misinterprets the intention that Dr. Resnikov had in specifically referring to war.

We are not asking that the Zion facility be equipped with guns to repel enemy invasion or any other

design that would not be part of its normal design, and in fact the make-up water systems are part of the design. All we are asking is that they be automated, so in the event of a social catastrophe, that would make it impossible for anyone, Commonwealth Edison, Congress, the Commission, who did desire to go in and operate that plant to have access to it because of a circumstance.

CHAIRMAN SALZMAN: Ms. Sekuler, what do you have to say to the statements that we heard this morning that such access is available?

MS. SEKULER: I believe it is not if in a situation such as TMI they could not get into the plant.

CHAIRMAN SALZMAN: The testimony is to the contrary, that this is in a secure building shielded by concrete from radiation, and it has some access underground.

MS. SEKULER: If that building had an accident in it which had some leakage of radioactive water which occurred already at Zion --

CHAIRMAN SALZMAN: Is there evidence that water could get into the secured control room?

MS. SEKULER: On the record, I do not recall that there was evidence specifically as to whether or not water could get into that control room.

CHAIRMAN SALZMAN: The testimony is, the control room is secured from the rest of the --

MS. SEKULER: It is on a different level from the pool.

CHAIRMAN SALZMAN: It is shielded with concrete.

MS. SEKULER: The entire building is. There are concrete walls between that particular --

CHAIRMAN SALZMAN: The only evidence we have is the evidence that the place is accessible.

MS. SEKULER: I believe it can be taken on official notice that other types of accidents have occurred.

CHAIRMAN SALZMAN: Did you ask that official notice be taken.

MS. SEKULER: We will do so at this time.

CHAIRMAN SALZMAN: No, no, no, this is not that sort of proceeding.

MS. SEKULER: In the transcript, we had our witness testify to what he believed the types of catastrophic events would be.

CHAIRMAN SALZMAN: The answer I am getting at --

MS. SEKULER: These types of events would cause lack of access to the plant because of radiation.

CHAIRMAN SALZMAN: The testimony is, this isn't so. In other words, you have general testimony that says you could not get near the plant. You have specific testimony that says you can get to the plant and turn it off. There is nothing to rebut that. We are bound by the

record. What are we to do now?

MS. SEKULER: I can only tell you that the record was not interpreted correctly, and if you feel you are bound by the record and that it was not complete, then we have nothing more to add to that point at this time.

CHAIRMAN SALZMAN: If the record is not complete, whose fault is it it is not complete?

MS. SEKULER: I am saying we believe the record was complete, and it was your determination that --

CHAIRMAN SALZMAN: We know what we are going to do. My problem is this. You cannot come up here and complain that there is no access when there is evidence that there is access, and no testimony to controver that.

MS. SEKULER: The evidence is, there is possibility of access to that building if the building can be gotten into. The evidence that Dr. Resnikov put forward was to the effect that the building itself would be inaccessible. That is what is on the record.

DR. JOHNSON: A few minutes ago, we heard comment to the effect that the record said that the building is accessible in the event of a design basis loss of coolant accident. Now, it is my understanding that the level of isotope release in the event of a design basis loss of coolant accident exceeds the amount of radiation that was released to the containment during the Three Mile Accident

which involved significant melting of the core.

Now, the assumptions that are made in the design basis loss of coolant accident then, as I understand it, involve a heavy release of radioactive material to the containment which would provide a source of radiation, and the testimony apparently is that the fuel pool cooling controls are accessible under those conditions.

Now, is Dr. Resnikov asking for a bigger accident to be considered, or just -- I don't not understand --

MS. SEKULER: I think that is the point, that Dr. Resnikov is asking for consideration of an event which would be of such magnitude that the plant would be inaccessible as a whole, that the workers would have to get out -- I remember on the record there was discussion of suiting people up, and there was also some rebuttal about the fact that perhaps the radiation would exceed the levels that individuals could tolerate even in suits.

That is the type of magnitude Dr. Resnikov was addressing, but if that is the type of magnitude he was talking about of what significance is the amount of radioactivity in the pool?

MS. SEKULER: The essential point that he was making was that the pool itself could contribute additional environmental hazard if the pool cooling system was allowed to go off and additional explosions and radiation would

occur.

DR. BUCK: To what extent. If you are talking about a major meltdown of the reactor core, as Dr. Resnikov is apparently talking about, what percentage --

MS. SEKULER: I cannot quantify that, Dr. Buck. I do not have any figures in front of my.

DR. BUCK: I am a little puzzled also by the statement that war or social unrest, you would be better off with the plant automated. What is there in social unrest that would cause the workers to walk out of a plant and leave an automated system running?

MS. SEKULER: It would be --

DR. BUCK: Or one that would run under any circumstances without somebody there to watch it?

MS. SEKULER: Social unrest could mean any number of things, including a civil war, sabotage event, or something else that would endanger the workers who would, possibly, under stress of getting out of the situation --

DR. BUCK: You think this is going to be solved by automation?

MS. SEKULER: The theory that the witness had was that the more automated systems you have, the more failsafe it would be.

DR. BUCK: Provided they are on.

MS. SEKULER: Yes, providing they cannot be turned

off. I know he also said on the record that there should be systems that would be clear of the building itself that could be operated by remote control. Basically, his concern was that in his area of expertise that he was testifying to --

DR. BUCK: Is remote control his expertise?

MS. SEKULER: Remote control was the phrase he used in talking about location of --

DR. BUCK: Is it his expertise?

MS. SEKULER: He is a physicist. I don't know specifically if he is an expert in remote control.

DR. BUCK: Thank you.

MS. SEKULER: If I may go on, there was a question raised as to whether or not technical specification would be necessary throughout the life of the reactor if the dummy test was a one time test.

Our answer to that is yes. This should be incorporated as a technical specification for the life of the reactor for the reason that, unlike the in situ attenuation test would be once at the time that the boral racks would be placed in the pool, and that could be determined once and for all at the time. The dummy test could be done throughout the life of the reactor, before each fuel assembly was placed in.

If that were the case, it would be necessary to

continue to have this test continue so long as there were outages.

DR. JOHNSON: Is that position advanced in your exceptions and brief?

MS. SEKULER: In our findings of fact. I am mentioning that because it was brought up in the appeal.

DR. JOHNSON: It was brought up by me, I think.

MS. SEKULER: Yes. In relation to the difference between a commitment and a condition of the licensee and the technical specification, it seems clear to us that the Atomic Safety and Licensing Board presumed by their statements such as the statement on Page 278 of the opinion that there would be prior review and approval by the NRC before the licensee could be, in their words, relieved of their commitment, but the question we have is whether under the Regulation 50.59 there is the ability to demand this kind of prior approval by the NRC.

It appears that 50.59 states that you get prior approval for either a technical specification or for an unreviewed safety question, and the unreviewed safety question is defined in several ways, including one change that would lead to additional accident or malfunction of a type not previously anticipated or would increase the margin of safety.

The question we have is, who is making the

determination as to whether an unreviewed safety question exists. If it is the applicant who wants to make the change, will he be aware of all of the factors that might go into --

CHAIRMAN SALZMAN: Let me interrupt. Are you suggesting that the Board thought these should be technical specifications?

MS. SEKULER: The Board seems to feel that prior approval had to be --

CHAIRMAN SALZMAN: I am not sure you can make the assumption that the Board did not know what it was doing. It said specifically on 277 that there is no need to make this a technical specification or condition of the license.

MS. SEKULA: Apparently they thought commitment could have prior approval.

CHAIRMAN SALZMAN: Where do you see that?

MS. SEKULER: I am not saying they used the words, "a commitment" -- Excuse me. Just let me look it up here.

CHAIRMAN SALZMAN: I mean --

MS. SEKULER: On Page 278.

CHAIRMAN SALZMAN: Yes?

MS. SEKULER: It states at the top of the page, "It is the Board's recommendation, however, that the applicant should not be relieved of his commitment without careful review by the staff based on the facts at that time."

What we are asking for is that such commitment not be changed before having prior notification and approval, and that that commitment be enforceable. We are questioning whether or not under 50.59 this is possible. We are questioning also if there is no prior approval, if the applicant can be depended upon without the regulatory agency looking at the proposal to be able to catch all of the additional margin of safety problems.

The reason we ask this is precisely because of the design change that was used to alleviate the swelling problem in venting the racks and then along with Brooks and Perkins recommendations to alleviate another corrosion related problem led to what the staff notified the Board to be a possible problem of intergranular stress corrosion cracking.

We think there is a need for the NRC staff to review possible changes prior to their being made. Now, if it does not have to be a tech spec, and the Appeal Board knows that 50.59 does not apply or has a mechanism to make a commitment such that prior approval by the NRC will be necessary and that there will be sanctions if that prior approval is not gotten, then the state will be very satisfied.

DR. JOHNSON: Doesn't 50.59 specifically address itself to matters that appear in the safety analysis report?

MS. SEKULER: It states, "make changes in the facility as described in the SAR, Safety Analysis Report, make changes in the procedures as described in the Safety Analysis Report, conduct tests or experiments not described in the Safety Analysis Report without prior Commission approval unless the proposed change, test, or experiment involves a change in the technical specifications."

DR. JOHNSON: But I think the third item there relates to test in experimental reactors only. I may be wrong again in my interpretation of this, but that sounds to me like it is only things that appear in the technical specifications -- in the safety analysis report that can be changed under the 50.59 procedures, and at least on the surface it does not appear that a licensee commitment can be modified under 50.59.

MS. SEKULER: I think you are making an assumption that because "experiment" is the word used in Section 3 which talks about changes that are not described on the safety analysis report, that this would only apply to an experimental reactor. Is that correct?

DR. JOHNSON: I have heard that outside of this particular proceeding, but I may be making a wrong assumption there.

MS. SEKULER: If that were correct, and therefore the possibility did not exist for a commercial reactor that

would solve our problem, but if, on the other hand, a commercial reactor doing experimental programs such as the one that we see being used in the spent fuel pool --

DR. JOHNSON: I don't think anybody but intervenor is calling these racks an experimental program.

MS. SEKULER: Experiment and change. We would just like some assurance from the Appeal Board and from the Licensing Board that commitments or conditions or tech specs, whichever will be requiring approval before change will be used.

CHAIRMAN SALZMAN: For all these things, or just the surveillance program?

MS. SEKULER: For the various commitments that the licensing board noted in the license initial decision.

I would like to address one more point. Ms. Markey was asked about some of the dangers to or threats that came out of the need for using these commitments. I think there are several threats. Some of them I addressed previously. There are environmental threats both to the public and to the occupational personnel. Just because the radioactivity may be contained within the spent fuel pool area does not diminish the fact that it could be a threat to occupational personnel.

If an assembly is caught in a rack, there is a possibility for breakage. There is a history of broken fuel

assemblies already at LaCrosse where pellets have fallen into the pool, and this has created a situation where there is excess radioactivity. Divers going into the pool would be exposed to greater radioactivity, depending on where the fuel was when it was caught. If it were exposed to the air, increased radioactivity would be in the spent fuel pool area.

Additionally, there could be a danger from fuel being put into a rack, getting stuck and having an interaction with a rack that had been exposed to stress by intergranular stress corrosion cracking, if there was a lack of support because some kind of stress was put on that rack, if a fuel element dropped, if the support of the rack was diminished, and ultimately that could possibly lead to some kind of criticality event.

DR. JOHNSON: Are all of these addressed in the record somewhere, this evidentiary information you are giving us right now? Are these descriptions of specific health hazards presented in the record?

MS. SEKULER: I believe --

DR. JOHNSON: If so, where are they?

MS. SEKULER: I am not sure if all of them are in the record. I was using them as examples of why we felt we need -- in relation to the Trojan decision, the threats that could be found. Some of them are in the record.

Another thing that I would mention that is most

probably used in the record is the fact that the in situ boral surveillance test is definitely related to the criticality issue. If the boral is not in the poison tubes, then the neutrons will not be absorbed, and therefore decay may not be obtained.

Those are just some of the probable dangers that we see. One last question I have was, it was stated that the Board had withdrawn its technical specification in regard to the notice for withdrawing the heavy loads or moving heavy loads over the pool. I would like some clarification. The Board did not -- Excuse me. The staff did not change its position on the condition, which required that heavy loads over a certain weight not be lifted over the pool, to my knowledge.

CHAIRMAN SALZMAN: It was the advance notice.

MS. SEKULER: It was the advance notice, and that was withdrawn as part of all of the license conditions this morning. Is that correct?

CHAIRMAN SALZMAN: No. I thought I asked you, did I not, whether you wanted that to be part of the technical specifications. Perhaps you misunderstood my question.

MS. SEKULER: Yes.

CHAIRMAN SALZMAN: You do want it part of it, then?

MS. SEKULER: Yes.

CHAIRMAN SALZMAN: I see.

No further questions, gentlemen?

(Whereupon, the Board conferred.)

CHAIRMAN SALZMAN: Ms. Sekuler, we have no further questions for you. We do have some matters that have come up that we would like to discuss with Mr. Goddard and perhaps with Mr. Miller and Mr. Steptoe.

Dr. Johnson, did you want to ask Mr. Goddard a question?

Mr. Goddard, won't you come up, please?

DR. JOHNSON: With regard to the change procedures of 5 .59, do you read that portion of the regulations to refer specifically to items appearing in the safety analysis report and in particular could a license commitment made to a board be changed under 50.59 procedures?

MR. GODDARD: The staff's position is that 50.59(B) and the change procedures therein relate only to commitments of the applicant which are incorporated in a safety analysis report by the applicant. As to commitments of the licensee, be they on the evidentiary record or in letters or informal correspondence with the NRC staff, it is our position that the 50.59 change in reporting requirements is not applicable thereto.

CHAIRMAN SALZMAN: Do I draw from this that the only changes -- that no change could be made on those commitments by the licensee without the concurrence of your

client?

MR. GODDARD: No, sir. It is the staff's position that those commitments can be changed by the licensee without the concurrence of the NRC staff. The NRC staff, of course, has at its disposal other remedies which allow --

CHAIRMAN SALZMAN: I don't understand. If they have made a commitment, how can they change it without approval? That is the part that is troubling me.

MR. GODDARD: There is no direct regulatory sanction to enforce a commitment that is not within the purview of 50.59(B). There are mechanisms --

CHAIRMAN SALZMAN: There is no sanction if the applicant now announces right after this hearing that it is not going to abide by any of these commitments, no direct sanction at all, nothing?

MR. GODDARD: At that point we could issue an order.

CHAIRMAN SALZMAN: At that point, couldn't you rescind its license?

MR. GODDARD: We could rescind the license. That is correct.

DR. JOHNSON: This is covered -- we talked about this earlier with regard to Chapter 800 in the Enforcement and Inspection -- the Enforcement and Inspection Manual, and specifically listed as a licensee condition -- I mean, as a

licensee commitment, commitments made to boards, and those things are identified as deficiencies which are enforceable, if not through civil penalty, then at least through suspension and revocation of a license, and they are enforceable at the same level as items in the FSAR.

So, in terms of enforceability, I do not see any -- I am not aware of any distinction made between a commitment made to a board by a licensee and something that appears in the FSAR, ni this is according to Chapter 800 of the I&E manual.

MR. GODDARD: If I may, sir, the commitments made in the FSAR are directly enforceable as violations of 50.59(B). If the licensee fails to comply with the reporting procedures therein, which includes the safety evaluation and the effect of such change, in the event of a commitment made to the board. While the staff may enforce such commitment by order, it is not clear that the staff would have advance -- would have notice of such a deviation or change by the applicant, since the 50.59(B) reporting requirements would not apply to that commitment.

This is one of the factors which the licensing staff considered at the time that it did impose these commitments as technical specifications, but, Mr. Goddard, to avoid what sounds to me like utter confusion here, I asked the applicant -- I think I asked him the question,

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would they object or would they approve of taking the commitments made to the -- specifically made to the licensing board as amendments to the FSAR, and I think I heard the answer from him that yes, they would not object to that, and in fact would approve of it.

What would be your position if we were to do that?

MR. GODDARD: The staff would find such a procedure entirely acceptable, Dr. Buck.

DR. BUCK: Would it be helpful?

MR. GODDARD: It would be very helpful, on this basis, if the applicant chose to change such procedures, they would be free to do so without applying for permission to effect such a change. They would have to evaluate it. The question of payment of a fee for amendment of the license would not be present.

The annual reporting requirement in the case of corrosion would be sufficient to protect the public health and safety.

DR. BUCK: They would let you know the commitment is there, it is in writing in the FSAR under these circumstances?

MR. GODDARD: That is correct. Corrosion is a slow-acting mechanism, and the annual reporting requirement we would deem to be sufficient protection. This would also elevate these commitments of the applicant which are made on

the record to the status of the commitments made by the applicant in the Trojan case, where they were in fact part of the safety analysis report.

DR. BUCK: Perhaps we should ask --

CHAIRMAN SALZMAN: What about the applicant's commitment to notify in advance before it handles heavy loads in the area of the spent fuel storage pool. If it unilaterally decides it is not going to do that any more, you will not know it until next year. In the meantime, it will have moved these loads. Is that satisfactory to the staff?

MR. GODDARD: We would take the same position with regard to that commitment to the applicant. I assumed from the comments of counsel for applicant that he was referring to each of the three commitments which the Board weighted heavily as being those which he would treat as amendments to the FSAR.

CHAIRMAN SALZMAN: I take it the staff is not concerned, notwithstanding the fact that the Board rated these matters carefully, that a mechanism would be imposed which would allow the licensee to drop these, and you would not know about it for a year. That does not bother you?

MR. GODDARD: It is of concern to the staff that the appliant abide by these commitments and they be incorporated in the documents which the inspectors normally

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review, and that notice be brought to the NRC staff of any deviation therefrom.

CHAIRMAN SALZMAN: Mr. Goddard, it troubles me that a commitment is made to the licensing board and the staff deems itself unable to make administrative arrangements so that its inspectors will look at them. That is not a very difficult thing to do, Mr. Goddard, and it seems to me an admission of incompetence.

MR. GODDARD: The staff is going to take action to ensure that the import placed upon these commitments by the licensing board is clearly brought to the attention of the resident inspector at Zion Station and his successor, but to the Office of Inspection and Enforcement --

CHAIRMAN SALZMAN: You have not answered my question yet. If we make the commitment specifically to inform the NRC staff in advance of the necessity to move heavy loads in the vicinity of the spent fuel storage pool, simply a part of the FSAR, and thereupon, as I understand it, the applicant elects to drop the matter, and you do not know about it for another year or close to that, that is not of concern to the staff. That is all I would like to know. You are not really concerned about that.

MR. GODDARD: The staff does have concern with that issue. However, the staff similarly has, as we admitted before -- we are of the view that we went too far

in imposing these as technical specifications.

CHAIRMAN SALZMAN: No, no, no. I don't care whether you went too far. I can see to it that it is done with the concurrence of one of my colleagues, at least. The question, however, is, do you care? I mean, what do you want done? What would you prefer? You do not care if the applicant has the authority -- it is perfectly reasonable to drop this thing without telling you, or you do care? You don't have to tell me what I can do.

Dr. Buck, I want his answer, not yours.

MR. GODDARD: As to the movement of heavy loads in the vicinity of the pool, the only load we are concerned about is the movement of a shipping cask. It was determined that a shipping cask, if dropped, could tear the spent fuel pool liner. There is already a technical spedification imposed by the licensing board with regard to movement of heavy loads over the fuel in the pool.

As to the heavy load in the vicinity of the pool itself, and not direct movement over stored spent reactor fuel, the possibility of a shipping cask being brought into the plant is not one we are faced with at this time.

It is my understanding -- I believe it is on the record. I may be quoting a source outside the record, to the effect that there are no provisions for moving a cask into the facility, and that prior notice to the NRC would be

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required if a spent fuel shipping cask were to be moved to the facility.

CHAIRMAN SALZMAN: I take it the substance of your description is, you do not care if they were to drop this. It does not make any difference to the staff. You are satisfied if they drop it, your finding out about it next year is enough. That is what you just finished telling me, I believe. You have other protections that you are satisfied with, and in your view this is an unnecessary frosting on the cake.

MR. GODDARD: No, sir. What I think I said was that we are concerned with the movement of a cask in the vicinity of the pool, and we do not feel that there is a likelihood or a possibility of such a movement at this time.

CHAIRMAN SALZMAN: Well, you do not feel -- the question is, do you wish to be notified if the licensee suddenly feels or sees a need to do so, and the problem I have with your position, aside from the fact that you will not answer my question so simply, is that you do not seem to care if the licensee proceeds to have the authority to drop the notification requirement at this point. You will not tell me there is another requirement that requires you to be notified. You will not tell me that you do not -- that you disagree that if you put this in the FSAR, the licensee can, if it chooses, drop it -- the requirement, not the cask.

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The problem I have is, why not? If you don't foresee it, if I don't foresee it, that does not mean it won't happen, sir. I am troubled. If you don't care, all right, but you don't seem to be able to give me any reason for not caring.

MR. GODDARD: To the extent there is a possibility that loads other than a cask might be moved in the vicinity of the pool, or --

CHAIRMAN SALZMAN: Mr. Goddard, drop the matter. I am not further interested, but I tell you right now, you fail to satisfy me. I am quite dissatisfied. Hereafter you may have to explain it to someone else.

Dr. Buck?

DR. BUCK: With all due respect to the Chairman, I think he has misunderstood.

Would you tell me what the situation is now, Mr. Goddard, with respect to moving a cask over the fuel in the pool?

MR. GODDARD: The technical specification imposed by the licensing board here precludes the movement of any load in excess of the weight of specified loads over the pool. This would most certainly preclude the movement of a spent fuel cask.

DR. BUCK: In accordance with the technical specification.

MR. GODDARD: That is correct.

DR. BUCK: I don't understand what it is --

CHAIRMAN SALZMAN: What I am trying to point to, Dr. Buck, within the last few weeks the staff required as a license condition that the NRC shall be notified in advance should it become necessary to handle heavy loads in the vicinity of the spent fuel storage pool, and submitted a large brief which went on to describe why this was necessary as a license condition.

We are told today that was all a mistake, they exceeded their authority. I asked them in essence why we should not put it back in. Is it important?

DR. BUCK: Wait a minute. That was already in the order. That was already in the --

CHAIRMAN SALZMAN: Item C is not in the order, sir.

DR. BUCK: Take a look right there.

CHAIRMAN SALZMAN: Look at the next one.

DR. BUCK: In the vicinity. In the vicinity. Not over the fuel.

CHAIRMAN SALZMAN: I said "in the vicinity" several times, Dr. Buck.

DR. BUCK: Mr. Goddard, let me ask you again. You have a tech spec in now which prohibits in essence the carrying of weights over a certain amount over the pool itself. Is that correct?

MR. GODDARD: Over the fuel storage pool?

DR. BUCK: Over the fuel storage pool itself, you do not have such a technical specification for carrying it in the vicinity of the fuel pool. Is that correct?

MR. GODDARD: That is also correct, sir.

DR. BUCK: And that is the part that you three weeks ago put into it, or some time ago put into a tech spec and you today withdrew. Is that correct?

MR. GODDARD: That is, sir.

DR. BUCK: That is movement in the vicinity of the pool. Okay. Thank you.

DR. JOHNSON: Mr. Goddard, has staff made a prior determination that movement of a heavy load in the vicinity of the pool was not an unreviewed safety question?

MR. GODDARD: Yes, it has. That question has been reviewed by the staff.

DR. JOHNSON: And it has been determined that that is -- it is not an unreviewed safety question. Therefore it is susceptible to change by the applicant without prior approval under 50.59, or would be?

MR. GODDARD: Yes, there are restrictions upon certain movement of loads such as the -- a shipping cask.

DR. JOHNSON: Okay, thank you.

MR. GODDARD: Anything further?

CHAIRMAN SALZMAN: No, Mr. Goddard, I have nothing

further.

Dr. Johnson? Dr. Buck?

DR. BUCK: Nothing further.

CHAIRMAN SALZMAN: Mr. Steptoe?

MR. STEPTOE: I just don't want there to be any ambiguity about applicant's position. Applicant makes a commitment. Applicant is bound regardless of the provisions of 50.59 or any other regulation. It has to go back to the staff first.

CHAIRMAN SALZMAN: On what basis do you make that statement, sir. The staff does not seem to think so.

MR. STEPTOE: I cannot speak for the staff. I can speak for the applicant.

CHAIRMAN SALZMAN: What is the legal basis for that assertion?

MR. STEPTOE: There is no legal basis. There is something that is an informal procedure, and what Dr. Buck was suggesting was, having those commitments, especially ones in licensing proceedings be included by your direction in the FSAR would be helpful in this regard.

CHAIRMAN SALZMAN: Including that in the FSAR, if what Mr. Goddard tells us is true, means you can change your mind about it.

MR. STEPTOE: No.

CHAIRMAN SALZMAN: You certainly could if it were

in the FSAR without our urging.

MR. STEPTOE: No, sir.

CHAIRMAN SALZMAN: It is not an unresolved safety item. Therefore, as far as I know, it is not a technical specification, and therefore you can simply elect not to do it.

MR. STEPTOE: I am unwilling to say it is not an unreviewed safety question until I know what the subject of the commitment is.

CHAIRMAN SALZMAN: We are talking specifically about this commitment. The NRC shall be notified in advance should it become necessary to handle heavy loads in the vicinity of the spent storage pool.

MR. STEPTOE: We would notify them.

CHAIRMAN SALZMAN: You would notify them. My question is, however, you would retain the authority not to notify them, would you not?

MR. STEPTOE: No.

CHAIRMAN SALZMAN: Why not, simply because you made the commitment to the Board?

MR. STEPTOE: That is correct, because we made the commitment to the staff. If there was no licensing proceeding -- I will remind you, sir, that this commitment was made four years ago in 1976.

CHAIRMAN SALZMAN: Apparently it is not seen that

way --

MR. STEPTOE: I can only say the staff upon reflection will --

DR. JOHNSON: Mr. Steptoe, are you aware of any way that a licensee commitment which is not -- such as a commitment made to the staff in a letter during the preliminaries or a commitment made to a licensing board can be changed without prior approval, without prior approval of the staff?

I have found -- we have all been talking about a place where prior approval may or may not be required under 50.59, depending on whether it is an unreviewed safety question.

MR. STEPTOE: Yes.

DR. JOHNSON: Where can a licensee commitment which is not in the FSAR, where in the regulation -- where is it said that that commitment can be changed?

MR. STEPTOE: I think they should be in the FSAR, but going to your point, my position -- applicant's position is that we have to go to the staff for prior approval before we drop a commitment or make any kind of significant change in the commitment at all. I will not say that we would go back to the staff if we had a procedure and we changed a minor thing implementing that procedure.

CHAIRMAN SALZMAN: Mr. Steptoe, let me put it in a

context with which you may be more familiar. Consider a president of a large utility who is very concerned about money he has to spend for large lawyers' fees. He says to you, there does not appear to be any regulation that requires you to go back to the staff to get approval. Why should you simply not drop it? What legal justification do you have for running up the fees at X dollars an hour which we know will take month --

MR. STEPTOE: It is a matter of common sense, Mr. Chairman. If you break a commitment to the staff, they will never accept another commitment from you.

CHAIRMAN SALZMAN: I am prepared to take my chances with common sense, sir. I am concerned with the long arm of the law. You tell me one man's common sense may be another man's unfortunate mistake. I would like you to tell me where in the law am I required to do this, sir? And if the answer to that is, there is none, then maybe I will get myself another lawyer who has less common sense.

My point is simply, neither you nor I can continue with this proceeding forever, but the question is, if you are legally required to do so, then it will not change. If the matter is an important one, should it rest on your idea of common sense, sir? That question does not have to be answered, but since you are unable to give me any legal source for your commitment, unless --

MR. STEPTOE: There is no legal source in the regulations that I am familiar with. I do not think they appear in the regulations. It is an informal arrangement that has grown up over the years between the staff and licensee relating to things that need to be -- things that need to be done, and the staff can enforce whatever it wants to with the broad residual authority it has to revoke or amend a license or modify them immediately.

I might add that -- perhaps take a step back. In the wake of Three Mile Island, there are numerous upgrades going on throughout the industry, almost -- very many of those are pursued by th staff writing letters to the licensee and asking for a commitment to install ATWS by a certain date. That is done very frequently, and when licensee -- if licensee chooses not to make the commitment, then the staff can oppose it, and you go to hearing, and so forth, and all the legal requirements come into play, but if the licensee says it will make a commitment, it will impose something it will do something by a certain time, it will do it or it will go back to the staff and explain why it cannot do it and ask for more time.

Now, this is an informal process of regulation which is important to the orderly working of the system, and I cannot emphasize that too strongly.

Now, it is unfortunate, and I understand why you

are concerned about the staff's position in this case, but I do not think it is correctly stated. The staff, in the view of licensee, would enforce very promptly by means of an immediately effective order modifying the license any indication if they found out that licensee had dropped a commitment. All I can ask you is not in a moment of rage tear the informal structure which has served the industry and the staff --

CHAIRMAN SALZMAN: Supposing the state of Illinois is not satisfied with informal commitments written on the windk they want to see it in writing. It may be one thing to drop a license commitment, if you decide to drop something else, there may be trouble.

MR. STEPTOE: I do not think there is a practical --

CHAIRMAN SALZMAN: You would have no objection to our entering an order, would you, that says you would not change these commitments without prior notification to the staff?

MR. STEPTOE: Absolutely not.

CHAIRMAN SALZMAN: Dr. Johnson?

DR. JOHNSON: Nothing further.

CHAIRMAN SALZMAN: Dr. Buck?

DR. BUCK: I am sorry. I think I have no more questions for you. I think we ought to ask intervenors a

question.

CHAIRMAN SALZMAN: You have another question for intervenor, sir?

DR. BUCK: Yes. Would you come up, please?

Would you be satisfied with our requiring that these commitments that we have in dispute here today be placed in the PSAR as amendents or FSAR as amendments?

MS. SEKULER: If placing them in the FSAR as amendments guarantees prior notification before any change is made --

DR. BUCK: I am not saying it requires prior notification. There are certain things that the FSAR commitments -- one of the objections to the staff was that these commitments, as I understand them, made to the Hearing Board, they had no proper way of putting them into their paperwork, and no way of assuring that these were being followed.

I am asking you, first of all, on that basis alone, for the moment, let's forget about the prior commitment or prior information, and treat them as any other commitment that was made in the FSAR --

MS. SEKULER: I am not sure that would be acceptable.

DR. BUCK: Why not?

MS. SEKULER: Because my understanding of 50.59

leads me to believe, particularly 50.59(B) leads me to believe that we would not have prior notice of changes.

DR. BUCK: But you have many commitments in the FSAR that you have accepted. This, then, becomes another commitment in the FSAR.

MS. SEKULER: I would differ with you on the fact that we, the State of Illinois, as an intervenor in a hearing, has accepted those commitments. I believe those commitments which would have been arranged between the licensee and the regulatory commission without having had them contested at hearing.

DR. BUCK: You had a chance when the hearing came up in the first place.

MR. SEKULER: There are many amendments that are made to licenses throughout history, and there are some issues that intervenor in this case would not have contested for one reason or another at the time that those license amendments were made.

DR. BUCK: You can always appeal for a hearing.

MS. SEKULER: The ones with which we are concerned now are these contested issues, and we really --

DR. BUCK: There is no other commitment in the FSAR that you give a darn about at all?

MR. SEKULER: I would have to review that and see.

DR. BUCK: You say it is not satisfactory then for

us to put this in as an amendment to the FSAR. You want more.

MS. SEKULER: We want prior approval, and we want notification, and we want enforcement, yes.

DR. BUCK: I have no further questions.

DR. JOHNSON: I do not accuse you of illogic, but there is something illogical about this. The staff has already said that they have determined that these are not unreviewed safety questions. Therefore, if they are a main part of the FSAR, and we make the -- and this board, for instance, added a condition that prior approval would be required if they were to be changed, if the staff sees they are not unreviewed safety questions, that is almost a guarantee that they would grant approval to a change.

Maybe that is not -- I withdraw all of that, which was not really a question anyway. I have no further questions.

CHAIRMAN SALZMAN: That is a real consideration. You know, the staff, with all deference, Dr. Johnson is quite right. What advantage is there to notifying the staff if the staff has already decided that in essence, or 99 percent decided that this does not involve an unreviewed safety question?

MS. SEKULER: I think unreviewed safety question was only raised in relation to Item C as you referred to it,

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the movement of heavy items.

DR. BUCK: No, no, any --

DR. JOHNSON: There was a fault in my logic. That fault was the fact that they are not unreviewed safety questions does not mean necessarily that the staff would approve the change. They might not approve the change in the procedures, even though they are not unreviewed safety questions.

MS. SEKULER: Our theory is that in a situation that does not involve an unreviewed safety question, it would give the latitude for change for that notification.

Are there any other questions?

CHAIRMAN SALZMAN: I think we see the problem, if not the answers.

MS. SEKULER: Thank you.

CHAIRMAN SALZMAN: Dr. Buck, have you anything further?

DR. BUCK: No.

CHAIRMAN SALZMAN: Dr. Johnson?

DR. JOHNSON: No.

CHAIRMAN SALZMAN: For better or worse, the matter is submitted, and we will take it under advisement.

The hearing is adjourned.

(Whereupon, at 1:23 p. m., the hearing was adjourned.)

This is to certify that the attached proceedings before the

NUCLEAR REGULATORY COMMISSION

in the matter of: Commonwealth Edison Company (Zion Station Units 1 & 2)

Date of Proceeding: July 1, 1980

Docket Number: 50-295 & 50-304

Place of Proceeding: Bethesda, Md.

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

David S. Parker

Official Reporter (Typed)

Official Reporter (Signature)