UNITED STATES
NUCLEAR REGULATORY COMMISSION

ORIGINAL

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	
	)	Docket Nos.
PUBLIC SERVICE COMPANY OF	)	50-443-OL
NEW HAMPSHIRE, et al.,	)	50-444-OL
	)	OFF-SITE EMERGENCY
(SEABROOK STATION, UNITS 1 AND 2)	)	PLANNING

EVIDENTIARY HEARING

Pages: 27131 through 27249

Place: Boston, Massachusetts

Date: June 23, 1989

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ADD: MARJORIE NOROLINGER

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EVIDENTIARY HEARING

Friday,
June 23, 1989

Auditorium
Thomas P. O'Neill, Jr.
Federal Building
10 Causeway Street
Boston, Massachusetts

The above-entitled matter came on for hearing, pursuant to notice, at 8:30 a.m.

BEFORE: JUDGE IVAN W. SMITH, CHAIRMAN
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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

JUDGE RICHARD F. COLE, MEMBER
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PROCEEDINGS

JUDGE SMITH: Good morning.

MR. FIERCE: Good morning, Mr. Chairman, Members of the Board.

I believe Dr. Urbanik is the next witness?

JUDGE SMITH: Yes.

MR. BACHMANN: That's correct.

MR. FIERCE: I have spoken to Mr. Bachmann.

I am going to have a couple of small objections to a couple of answers in the ETE testimony. But we've agreed I will make that objection when he offers the testimony and discuss it right then. I don't have a formal motion in limine prepared.

JUDGE SMITH: Okay.

Whereupon,

THOMAS URBANIK II

having been previously duly sworn, was recalled as a witness herein and was examined and testified further as follows:

DIRECT EXAMINATION

BY MR. BACHMANN:

Q Dr. Urbanik, I remind that you have been previously sworn in this proceeding.

You have before you a document entitled "Testimony of Thomas Urbanik II, on Behalf of the NRC Staff, on Joint Intervenor Contentions 1 through 3 (SPMC)"?

A (Urbanik) Yes.

Q Did you prepare this document?

A (Urbanik) Yes, I did.

Q Is this document true and correct to the best of your knowledge and belief?

A (Urbanik) Yes, it is.

Q Do you adopt this document as your testimony in this proceeding?

A (Urbanik) Yes, I do.

MR. BACHMANN: Your Honor, I hereby move that this document be accepted into evidence and bound into the record as if read.

JUDGE SMITH: Mr. Fierce?

MR. FIERCE: Objection.

I do have, really it's three answers. They are in two categories, though, that I'm objecting to on the grounds that this witness is not qualified in that area of expertise. The first is the answer to Question 16.

Question 16 asks, "Is there any reason to believe the Massachusetts drivers will be confused by potentially different EBS messages due to existence of multistate jurisdictions?"

This is a question, Your Honor, that really calls for experience in the field of human behavior and emergency warning messages.

And as you know, we have heard in the past from witnesses in this particular field. Next week, in fact, the Mass AG will be putting on a witness in this particular field of expertise, and I believe the Applicants have a panel as well.

But I have again reviewed Dr. Urbanik's resume and his statement of qualifications which appeared back in his traffic management testimony. He gave us a summary of his qualifications again. And as we know from his background and experience, it's in the field of traffic engineering and ETEs.

And what we have here is a leap, a leap into a different field which I submit he's not qualified to make. And that's the objection.

MR. BACHMANN. Your Honor, in response, I would like to have Dr. Urbanik state why he believes he is competent to make this judgement.

BY MR. BACHMANN:

Q Dr. Urbanik, you have heard the objection of Mr. Fierce.

Could you explain to the Board why you believe that you are competent to make the statement that you do as a response to Question 16?

A (Urbanik) Yes.

I'm not offering myself as a human behavior

expert, but the implications of multiple messages on the ETEs themselves. And I have the experience with ETEs throughout the United States. Seabrook is in no way unique in terms of having multistate jurisdictions. And I'm aware of no problems in this regard in the development of ETEs at plants such as Zion, which involve multistate jurisdictions.

MR. TROUT: Your Honor, Your Honor --

MR. TURK: Your Honor, I would also note, in the New Hampshire hearings Dr. Urbanik testified that while his main body of expertise was in traffic engineering, he did consider himself to have expertise in the field of human behavior as it related to driver conduct performance.

JUDGE SMITH: Yes.

As a matter of fact, we accepted in our decision certain expertise along that line.

MR. TURK: Yes.

JUDGE SMITH: This, I think, is somewhat different, however.

MR. TROUT: Your Honor, if I might also just take the liberty of pointing out that Dr. Adler, in his testimony on ETEs, which was received earlier this week, addresses the same question.

And I would respectfully suggest that Dr. Urbanik is at least as qualified as Dr. Adler to comment on this issue.

JUDGE SMITH: Well, did you object to --

MR. TROUT: Well, Your Honor, will recall that it was suggested that we not do that with regard to Dr. Adler.

JUDGE SMITH: And that was your call.

MR. TROUT: All right.

JUDGE SMITH: That was your call.

(The Board confers.)

JUDGE SMITH: The Board is sitting here speculating as to what he means by the answer to A.16. He has conceded he does not have the expertise to determine for himself that the potentially different emergency messages will cause a problem. He's using it solely as his experience.

But what is his experience?

Only that he's aware that other states have potentially different emergency messages, because more than state is involved.

He does not claim to have experience of driver conduct under those circumstances. All he is doing is pointing to other states that have the same problem, if there is a problem.

I see that he may have the power to observe that, but it means nothing to me that other states have multiple state EPZs. I don't know what he's learned from it. All he's saying is if there is a problem, Seabrook is not the

only one to have the problem, which gives us very little comfort.

The Board doesn't believe that the answer contributes anything to us. Aside from expertise, it just doesn't contribute anything.

MR. BACHMANN: Your Honor, I believe what is being said here is that in the generation of ETEs this is a factor taken into account and that this is not the first plant that he's seen where you had to consider conflicting jurisdictions.

I might ask the witness.

BY MR. BACHMANN:

Q Did I characterize that correctly?

A (Urbanik) I think that's a reasonable characterization.

JUDGE SMITH: What is it?

MR. BACHMANN: Well, the fact that when they were creating ETEs at other plants that had multiple jurisdictions, that he is aware of how they would take this into account. I mean that's the extent of which, I believe, he is testifying, not that he knows.

In other words, how this is considered when you generate an ETE.

JUDGE SMITH: Well, if that's what he's saying, it's not responsive to Question 16.

I don't think he's competent to answer Question 16 under any basis, and his answer is not really responsive.

Only if he could tell us that he is aware of similar circumstances which could be encountered of potentially different emergency messages, and he's aware that drivers in fact were not confused, and he doesn't suggest that.

All he's saying is that other plants have the same problem, which tells me nothing. Those could be bad problems over there or not.

So we are going to strike Question and Answer 16.

MR. FIERCE: Your Honor, the next point is one addressed to the answer to Question 20 and the answer to Question 22.

Both of these questions relate to protective action decision-making and require the witness to have some expertise in that particular field, protective action decision-making as opposed to the field of ETEs, one of the inputs to that process.

And focusing first on Question 20, I think what you have to do is look at the question and then look at the answer. The question is slightly different, I think, than the one he answers.

The question is, "Have the Applicants supplied sufficiently realistic ETEs for consideration by decision-

makers?"

It looks, in reading the question, that the focus is on the word "realistic". And if the answer had been that, that the ETEs are realistic, I would have no quarrel.

What I find in the answer, however, is the focus shifting from the word "realistic" over to the word "sufficient" as in enough ETEs, enough numbers. And I see after the answer "yes", a sentence which says, "The Applicants have provided sufficient time estimates for use by decision-makers to enable them to make informed decisions."

And in the next sentence after that, it says, "Decision-makers would be not be aided by the generation of still more."

So the focus of the answer is on the number, the quantity of ETEs that are provided, in that sense sufficient. And it's in that sense that I'm objecting, because that requires knowledge of what protective action decision-makers need, how many ETEs for what range of situations they think would be useful to them. And that's the point where I think Dr. Urbanik goes beyond his particular area of expertise and steps into the expertise that requires a much wider range of knowledge about radiological health considerations and all of the considerations that go into protective action decision-

making.

And as well with Question 22, that is a focus on more ETEs, do they need more of them.

MR. FIERCE: Again, it's stepping into the realm of a protective action decision-maker with all of the interest that that person would have to make the kind of a decision they want to make. He's just not in that area of expertise.

Realistic ETEs, I would have no problem with. But he's answering, I think, perhaps slightly a different question than was asked in question 20.

MR. BACHMANN: Your Honor, I think if you consider the entire question which also indicates or states: "For a wide range of times and conditions," we sort of covered most of that argument.

But also, in the answer itself where -- in fact, I think it was the last full sentence which is on page 8 where Dr. Urbanik talks about the fundamental philosophy of NUREG-0654, Appendix 4 and states that NUREG-0654 does not suggest that there should be an enumeration of countless alternatives.

I believe he is imminently qualified to explain the intent and meaning of Appendix 4 to NUREG-0654 since he essentially wrote it.

MR. FIERCE: I have no quarrel with that part of the answer. The very last part of that sentence is: "Nor would provision of such additional ETEs be of any practical utility." That I think is a step beyond.

His comments about NUREG-0654, if you want to leave those in, I have no objection.

MR. BACHMANN: Well, I guess the point I'm trying to make is that you can't just take ETEs and when you're looking at NUREG-0654 and completely divorce them from the recommendations for protective action process.

When Mr. Urbanik was putting this together, and albeit he has said on the stand previously in this proceeding that it was probably not written as well as he would have liked in hindsight. He had to interact with the people who would need to use these to have an idea of what type of ETEs they would need.

You just can't say, give me ETEs in a vacuum; there had to be interaction. And that's essentially what, in question 20, is what we're talking about here.

I don't believe that he is getting into the specifics of protective action decision-making. But he is sort of describing somewhat an interface and describing how generally the reason why ETEs are generated and I'm sure he's familiar with this interface and as to what the decision-maker would need.

That's basically the thrust of what we're looking at here. That's just question 20.

MR. FIERCE: It's the bald-faced statements that they would be of no practical utility: "Provisions of

additional ETEs," would not be of any practical utility.

And above that he makes the flat-out statement: "The decision-makers would not be aided by the generation of more ETEs."

MR. BACHMANN: Well, again I say, this is part of the interface. Sorry.

JUDGE SMITH: That's enough.

We've heard enough.

(The Board confers.)

JUDGE SMITH: We were persuaded by Mr. Bachmann's argument that Dr. Urbanik just doesn't generate ETEs or look at ETEs in a vacuum. He has to look at them, necessarily, in the light of how they are going to be used. And he has to have and does have through his long experience in this area an expert's judgment within the scope of his expertise as to how ETEs are to be used and the point as to which further refinements of the ETEs would not accomplish a purpose.

He has to have some feeling for the use being put to his product before he's capable of even generating the product.

So with that in mind we accept the answer with full recognition that he does not have full expertise as a decision-maker.

And we believe by the same reasoning that question

and answer 22 should remain.

Is that all you have?

MR. FIERCE: That's all I have.

JUDGE SMITH: All right.

MR. FIERCE: I think you should receive the testimony in that fashion.

JUDGE SMITH: With the deletion of question and answer 16 the testimony is offered and we accept it.

(Testimony of Thomas Urbanik II on behalf of the NRC Staff on JI-1 through 3 (SPMC) follows:)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	Docket Nos. 50-443 OL
PUBLIC SERVICE COMPANY OF	)	50-444 OL
NEW HAMPSHIRE, et al.	)	Off-site Emergency Planning
	)	
(Seabrook Station, Units 1 and 2)	)	

TESTIMONY OF THOMAS URBANIK II
ON BEHALF OF THE NRC STAFF ON
JOINT INTERVENOR CONTENTIONS 1-3 (SPMC)

Q.1. Please state your name and occupation.

A.1. My name is Thomas Urbanik II. I am a Research Engineer associated with the Texas Transportation Institute of the Texas A&M University System, College Station, Texas.

Q.2. Have you a prepared statement of your qualifications?

A.2. Yes. A statement of my professional qualifications is attached to my testimony filed in the NHRERP phase of this proceeding and is bound in the transcript following Tr. page 7372.

Q.3. What is the purpose of this testimony?

A.3 The purpose of this testimony is to address three contentions concerning evacuation time estimates (ETEs) as they relate to the Seabrook Plan for Massachusetts Communities (SPMC). Specifically, this testimony addresses Contention JI-1, which alleges that no ETE study has been done for the Massachusetts portion of the EPZ; Contention JI-2, which alleges

that the ETEs contained in the SPMC are unrealistic; and Contention JI-3, which alleges that a real-time monitoring and ETE calculation system should be installed.

Q.4. Have you reviewed the ETEs contained in the SPMC?

A.4. Yes. ETEs are set forth in the SPMC at IP 2.5, Attachment 4. I have also reviewed Volume 6 of the New Hampshire Radiological Emergency Response Plan (NHRERP), which provides much of the documentation on the ETEs; and I have reviewed the Applicants' NHRERP and SPMC testimony concerning ETEs for Seabrook Station, as well as the Licensing Board's Partial Initial Decision on NHRERP issues, dated December 30, 1988.

Q.5. Please identify the regulatory standard or guidance criteria against which ETEs are evaluated.

A.5. ETEs are required to be provided by an Applicant pursuant to 10 C.F.R. Part 50, Appendix E, § IV, and are addressed in NUREG-0654, § II.J.10. In particular, NUREG-0654, Appendix 4, provides guidance as to what is to be included in an evacuation time estimate study and how it might be presented.

Q.6. Do you agree with the assertion that an evacuation time estimate study has not been done for the Massachusetts portion of the Seabrook EPZ, and/or that a new study needs to be done to comport with the guidance of NUREG-0654?

A.6. No. KLD Associates has performed an ETE study for both Massachusetts and New Hampshire portions of the Seabrook EPZ, which was

published in Volume 6 of the NHRERP. Additional consideration was afforded Massachusetts portions of the Seabrook EPZ in the Applicants' NHRERP ETE testimony and the Licensing Board's Partial Initial Decision on NHRERP ETE issues. In addition, KLD has performed a series of further studies for the Applicants, which are described in Applicants' Rebuttal Testimony No. 16. These studies include consideration of the Massachusetts portions of the Seabrook EPZ.

Q.7. Have KLD's further studies, which are discussed in Applicants' Rebuttal Testimony No. 16, been published as part of either the SPMC or the NHRERP?

A.7. No. These studies and the resulting ETEs are provided in Applicants' Rebuttal Testimony No. 16, but have not yet been incorporated into either of the two emergency plans.

Q.8. Do the KLD ETEs account for the specific circumstances, difficulties and delays which might exist in conducting an evacuation in Massachusetts due to a radiological emergency at Seabrook Station?

A.8. Yes. KLD has considered Massachusetts-specific circumstances in its study published in Volume 6 of the NHRERP, and in its later analyses as set forth in Applicants' Rebuttal Testimony No. 16.

Q.9. Is there any significance to the fact that the SPMC ETEs differ from KLD's ETEs of August 1986 (published in the NHRERP) and those in Applicants' Rebuttal Testimony No. 16?

A.9. No. The emergency planning process is intended to be ongoing, with revisions made as appropriate to reflect changing conditions and new information. The revised ETEs in Appendix D of Applicants' Rebuttal Testimony No. 16 are part of this ongoing refinement of the plans. It is of no consequence that the SPMC ETEs differ from the prior NHRERP ETEs and those presented in Applicants' Rebuttal Testimony No. 16; however, the SPMC ETEs should be formally revised to incorporate the modifications set forth in Applicants' rebuttal testimony.

Q.10. Do the ETEs fail to account for less than full staffing of traffic control points (TCPs)?

A.10. No. As I indicated during the NHRERP hearings, ETEs need not reflect delayed staffing of TCPs; if any such delay should occur, that fact may be considered by the decision-makers, along with the ETEs, in selecting an appropriate protective action. In addition, however, KLD has performed sensitivity studies for a variety of scenarios, including delayed staffing and no staffing of traffic control points in Massachusetts (see p. 46 of Applicants' Rebuttal Testimony No. 16). No further consideration of this issue is necessary.

Q.11. Are the SPMC evacuation time estimates unrealistic?

A.11. No. I have reviewed KLD's methodology and assumptions, and I am satisfied that they afford appropriate consideration of all significant factors. KLD's ETEs represent the results of many years of study and refinement, and they represent realistic evacuation time estimates. KLD's ETEs are also generally consistent with the results of previous analyses

performed by myself and others for the NRC Staff as reflected in NUREG/CR-2903.

Q.12. Do the Applicants' ETEs adequately consider the removal of road blockages by tow trucks?

A.12. Yes. The accommodation of vehicle breakdowns and accidents is largely an issue of resource availability and deployment. The Applicants have provided for the removal of road blockages and impediments by tow trucks. Nonetheless, if any unusual and protracted road blockages should occur, that is the type of fact which would be taken into consideration by decision-makers at the time of an emergency and dealt with accordingly. In addition, however, the Applicants here have conducted sensitivity studies with respect to various road blockage scenarios, as set out on p. 63 of Applicants' NHRERP Direct Testimony No. 7. No further consideration of this issue is necessary.

Q.13. Assuming that notification of a precautionary beach closure in Massachusetts is delayed, such that beach closure occurs simultaneously with an order to evacuate in Massachusetts, what effect would there be upon the Applicants' ETEs?

A.13. There may well be little or no effect on the ETEs, depending upon what events and circumstances have transpired prior to issuance of the order to evacuate in Massachusetts. Even if the ETEs do increase, however, the resulting ETEs would be no greater than 25 minutes longer than the ETEs calculated by KLD.

Q.14. Is there any reason to believe that an orderly and efficient traffic flow will not take place, due to the existence of deficiencies in SPMC planning?

A.14. No. Appropriate planning has taken place to mitigate any uncertainties which might otherwise affect an orderly and efficient traffic flow.

Q.15. Have the Applicants made any incorrect assumptions concerning the number of vehicles that will use roads, intersections, and ramps in Massachusetts, or in estimating the number of vehicles that may be evacuating from and through Massachusetts?

A.15. No. The number of evacuating vehicles have been estimated using a systematic process that has been extensively examined. The ETE assumptions and inputs are set out in Applicants' Rebuttal Testimony No. 16, Section V. There is no reason to believe that any significant errors exist.

~~Q.16. Is there any reason to believe that Massachusetts drivers will be confused by potentially different emergency messages due to the existence of multistate jurisdictions?~~

~~A.16. No. The existence of more than one state (or local) jurisdiction in EPZ emergency planning is not unusual and is not likely to create unique problems.~~

Q.17. Are the Applicants' ETEs based upon any traffic management plans in Massachusetts which overestimate traffic flow rates?

A.17 No. Appropriate traffic flow rates have been used with respect to Massachusetts traffic management plans.

Q.18. Do the traffic management plans for Massachusetts adversely affect returning traffic at TCPs and access control points (ACPs)?

A.18. No. The traffic management plans have been developed in a way to encourage efficient evacuation. The ETEs for returning commuters are unlikely to be greater than the ETEs already calculated for Massachusetts residents.

Q.19. Has adequate consideration been given to special facility ETEs?

A.19. Yes. The critical issues in special facilities planning are identification of the locations of all such facilities, the number of persons to be served, and the necessary resources available for this purpose; this has been reviewed and found to be adequate by FEMA. The remainder of the process involves a determination of the overall time required to respond; this has been done sufficiently to demonstrate that the ETEs are similar for the general population and persons in special facilities. KLD's method of calculating special population ETEs is included in NHREPP Volume 6, pp. 11-1 to 11-27.

Q.20. Have the Applicants supplied sufficiently realistic ETEs for consideration by decision-makers with respect to the Massachusetts portions of the EPZ, for a wide range of times and conditions?

A.20. Yes. The Applicants have provided sufficient time estimates for use by decision-makers, to enable them to make informed decisions under a

wide range of conditions, including situations not specifically addressed in the ETE study. Decision-makers would not be aided by the generation of still more evacuation time estimates, because ultimately they must use some judgment in deciding upon a protective action. The fundamental philosophy of NUREG-0654, Appendix 4, is that evacuation time estimates should provide an understanding of the sensitivity of the ETEs to a variety of conditions; NUREG-0654 does not suggest that there should be an enumeration of countless alternatives to account for an infinite array of possible evacuation scenarios, nor would the provision of such additional ETEs be of any practical utility.

Q.21. Are the traffic cones and/or barricades provided for in SPMC traffic management plans likely to delay or block vehicles seeking to cross or travel against the evacuation traffic flow, such that the ETEs will be longer than are currently calculated?

A.21. No. See my testimony concerning JI Contention 4.

Q.22. Do you believe a real-time computer-based data collection and ETE calculation system could produce more useful evacuation time estimates than those calculated by KLD?

A.22. No. The current state of the art in evacuation time estimates and real-time data collection suggests that the current system of estimating ETEs in conjunction with sensitivity analyses is the most reasonable approach. For instance, with respect to varying beach populations, KLD has done a series of sensitivity runs which would provide sufficient information for use by decision-makers at the time of an

emergency. Furthermore, there does not appear to be any reason to believe that emergency planners could better use a real-time ETE than the evacuation time estimates which are currently available.

Q.23. Have you reached a conclusion concerning the adequacy of the ETEs for Massachusetts portions of the Seabrook Station EPZ?

A.23. Yes. A very large number of ETEs have been developed for Seabrook Station over a period of years. The evacuation time estimates developed by KLD have been prepared in a manner consistent with the guidance of NUREG-0654, and are responsive to a large number of issues. However, there is a need for an organized presentation of the ETEs which have been prepared by KLD, including assumptions and methodology, that could readily be used by decision-makers at the time of an emergency. With the exception of the need for such an organized presentation of the ETEs, the evacuation time estimates which have been provided by the Applicants are fully responsive to the guidance of NUREG-0654, Appendix 4, and satisfy all applicable regulatory requirements.

MR. FIERCE: Mr. Bachmann, are you going to offer the returning commuters piece now, too?

MR. BACHMANN: One moment, please.

(Pause)

MR. BACHMANN: Not at this time.

MR. FIERCE: After this one, okay.

MR. BACHMANN: Your Honor, I now offer the witness for cross-examination.

JUDGE SMITH: Mr. Fierce?

CROSS-EXAMINATION

BY MR. FIERCE:

Q Good morning, Dr. Urbanik.

In your answer to question 13 which is on page 5 of your testimony you're discussing a situation where you were asked to assume notification of a precautionary beach closure in Massachusetts and it was delayed in such a way that the beach closure occurred simultaneously with the order to evacuate in Massachusetts.

And you say that there may well be little or no affect on ETEs. And at the latter part of your answer you say: "Even if the ETEs do increase,however, the resulting ETEs would be no greater than 25 minutes than the ETEs calculated by KLD."

How do you know it would be no greater than 25 minutes?

A (Urbanik) Because that's fundamentally how the ETEs are generated. All we are doing is moving a time point back and forth relative to the simulation. And because of the large number of vehicles that are being put on the roadway network it becomes immaterial whether or not a few of them are earlier or later.

So all you're doing by saying where the order to evacuate is is defining your time zero for purposes of ETE purposes.

The numbers that are actually presented out of the simulation are not the numbers that are in the report, but you actually work and move this 25 minute point back and forth.

Q Now I think I understand what you were doing and I didn't before.

We have a planning basis that you were looking at originally which has the order to evacuate 25 minutes after a precautionary beach closure is called for in both Massachusetts and in New Hampshire. And you're assuming that the question is: assuming that the Massachusetts beach closure does not occur until the order to evacuate, then it would be 25 minutes later.

That's what you're doing, I gather, from your answer?

A (Urbanik) At most, but there's other possible

scenarios that occur.

Q That's right.

I mean, there could be, in fact, be --

A (Urbanik) That's the worst case scenario.

Q I'm not sure -- hold worst case, because I'm not sure what that means.

A (Urbanik) Yes, bad choice of terms.

That's the longest number that can be generated given the traffic management strategies we're talking about; given the number of evacuees that we're talking about; and given the roadway system that's modeled here.

Q You were here yesterday when I was questioning Dr. Lieberman about, perhaps, not identical but similar kinds of situations with the delayed Massachusetts reach closing, were you not?

A (Urbanik) Yes, I was.

Q As I understood Mr. Lieberman he was hedging.

There were a number of considerations that he saw that had positive and negative affects on the Massachusetts ETEs based on that.

Did you hear those answers he gave?

A (Urbanik) I don't know that I caught all of them, but I understand that --

Q He saw it as a slightly --

MR. BACHMANN: Would you let the witness answer

the question. You're continually interpreting him and I have held up until now. But it's just getting too much. Just let him answer the question.

THE WITNESS: (Urbanik) I think Mr. Lieberman gave a more calculated answer to cover the fact that there is obviously a large number of, you know, infinite number of scenarios that could be postulated.

I gave a more narrowly-bound set of conditions perhaps than he was thinking when he was keeping it open to a wider range.

BY MR. FIERCE:

Q Did you hear him say that, with respect to a delayed beach closure in Massachusetts, the concern would be primarily that the ETE for Massachusetts would not be higher but lower?

A (Urbanik) Again, we're getting into semantic questions of what ETE number are we talking about and what is the zero time reference.

I mean, we can keep badgering back and forth, are we talking about time zero for Massachusetts being relative to the order to evacuate Massachusetts when an evacuation has already begun in New Hampshire.

So now you've got two different numbers, but there is no meaning in that. Once you order an evacuation, you've ordered one. And computing another estimate from another time base makes no real sense to me.

Q Well, let's just pick any of the regions that encompass the beach.

The ETE would likely be smaller, would it not, if there were a beach closure in New Hampshire without one in Massachusetts, and then there was delay of 25 minutes or longer before an order to evacuate with no prior beach closure in Massachusetts?

A (Urbanik) What is your time reference relative to this shorter evacuation time?

Are you talking about the time relative to an order issued in Massachusetts, or are you talking about a time estimate relative to when the first order to evacuate is issued?

Q I'm not sure I had two orders to evacuate. I think I had early beach closure in New Hampshire, delay of 25 minutes or more, and then order to evacuate New Hampshire and Massachusetts.

Under that scenario, isn't the more likely concern that the ETE for the region, any of the regions that encompass the beach areas, are going to be lower, not higher?

A (Urbanik) Unless I'm missing something here, what you said is in fact very close to what the planning basis is.

Q If we had a situation, however, where we had an early beach closure in New Hampshire and a delay in Massachusetts of closing the beaches of at least 25 minutes

or longer, and the longer you go with that delay, the greater the decrease in the ETE will be.

Isn't that going to be true?

A (Urbanik) At some point, yes, that's true.

We've never argued that the time couldn't be less if we have a slowly escalating event and there are in fact people leaving over a longer period before an order to evacuate.

Yes, that's in fact true.

Q And at that point in time, when the first decision needs to be made regarding whether to evacuate or shelter, the ETE for any of the regions that encompass the beach areas could be substantially shorter than is shown in the charts, correct?

A (Urbanik) Right, the ETE could be in fact zero. It started three days earlier. Everybody has left. And now the decision-maker is faced with the fact that there are no people in the EPZ, and he can estimate the evacuation time with certainty.

Q But if it's somewhere in the range between a certainty of zero and where they started on the chart, the decision-maker really has no way of knowing what that ETE is, correct?

A (Urbanik) He can make a very informed estimate.

Q How would he make a very informed estimate?

Let's assume that there had been a beach closure, as occurred during the exercise, at 11:00 in New Hampshire, and as occurred during the exercise, at 12: -- I forget -- 12:35, I think it was 12:25, in Massachusetts.

A (Urbanik) 12:25 in Massachusetts what?

Q There was a beach closure.

And that it's now four hours later, and you've reached a general emergency.

How does one make an informed judgment about what the ETE is for any of those regions that encompass the beach areas?

A (Urbanik) And what is the scenario that we're looking at?

Q Summer.

A (Urbanik) Summer.

Q If we're using the exercise scenario, it was a good weather, a weekday.

JUDGE SMITH: Where did you get your four hours?

MR. FIERCE: I'm just trying --

JUDGE SMITH: You just picked it out?

MR. FIERCE: I'm picking a time that's between zero and the certainty principle that Dr. Urbanik had picked of three days later when you could pretty fairly assume everybody had gone.

JUDGE SMITH: And you could pick out four hours or

five hours?

MR. FIERCE: Well, I'm asking somewhere in the range where you have uncertainty, however, you've got some problems would be my question.

JUDGE SMITH: But what are your ranges of uncertainty?

MR. FIERCE: Well, I'm trying to explore what he believes. I don't have ranges.

JUDGE SMITH: Is it zero to three days that you are following up on or what?

How did you happen to pick four hours?

MR. FIERCE: It just --

JUDGE SMITH: Just picked it up?

MR. FIERCE: -- occurs to me that that might be in the range where you might not have an idea.

JUDGE SMITH: What are the boundaries of your range that you are alluding to?

Even though he said it, you tell me what you think they are.

MR. FIERCE: Well, I think probably for the next six or seven or perhaps eight hours there is going to be uncertainty about how many people are left in the beach areas.

JUDGE SMITH: Okay, so zero to eight.

MR. FIERCE: This is totally unexpert.

JUDGE SMITH: You are the one to ask for the ranges. I just want to follow you because I want to know where you got your four: why you didn't pick four and a half, five, six, seven.

MR. FIERCE: I could have.

JUDGE SMITH: All right, that's my point. You could pick any hour, right?

MR. FIERCE: My point is I'm trying to explore with him where that range of uncertainty is. I'm not an expert.

JUDGE SMITH: And you are suggesting that whatever hour you might pick, another ETE could be useful.

Is that what you are suggesting?

MR. FIERCE: No, he just told me there would be a way to make an informed judgment in the internal between zero and three days in areas where there was uncertainly. And I'm questioning, give me an example of how you would do that.

I'm not going to go through the whole range of zero to three days.

JUDGE SMITH: But your ultimate suggestion is the decision-maker would find useful an ETE which takes into account the uncertainties: the lapse of time, the diminishing population as it diminishes. That's your ultimate suggestion.

MR. FIERCE: That's right.

JUDGE SMITH: And you picked four hours. You could have picked four and a half, four hours and 15 minutes, five hours, five hours and 25 minutes. You could pick a whole spectrum of times where you would apply that.

MR. FIERCE: I certainly could have picked a whole spectrum.

JUDGE SMITH: And you are suggesting that maybe an ETE for each one of these units would be useful to a decision-maker.

MR. FIERCE: No, I haven't, You are taking me a step farther than I'm going at this point.

I am not and I have never said that we need an ETE for every minute of the day or even every hour. We have, in Dr. Adler's testimony, set forth a scheme of statistical analysis of data that would help a decision maker pick an ETE for the time that would be much closer and much more relevant to the time he's facing.

JUDGE SMITH: You mean run out an measure --

MR. FIERCE: We're being painted into a corner.

JUDGE SMITH: -- the water.

MR. FIERCE: Pardon?

JUDGE SMITH: YOu mean the water temperature?

MR. FIERCE: Using water temperature, air temperature, you know, correlating with aerial photo data on

known days.

JUDGE SMITH: Okay.

MR. FIERCE: At times of the year.

JUDGE SMITH: I know where you're going.

MR. FIERCE: And I know that the Applicants and the Staff are trying to paint me into a corner of trying to make it look like I'm advocating a system where you need a number for every hour of every day of the year, which is absurd.

JUDGE SMITH: All right.

Okay, you have explained.

MR. TROUT: Your Honor, let me just make sure I've got this straight.

So another variable to be added to the calculus is the distance of the amount of time difference between the beach closures, is that now going to be another variable to be figured in?

Is that the premise?

MR. FIERCE: Well, there was another aspect to Dr. Adler's piece of advice, which was there are indicators that can be looked to at the time that would provide additional information about at that moment. And he mentioned such things as they have helicopters available. They can check the number of cars left in the Salisbury Beach state lot, if any. They can check the --

JUDGE SMITH: All right.

MR. FIERCE: -- traffic queue.

BY MR. FIERCE:

Q Well, can you answer that question that I originally asked you, Doctor?

A (Urbanik) Well, sure, you have lots of information. You have ETE estimates with and without beach populations. You can look at your numbers and see what is the minimum time to evacuate with and without. I don't have all the current numbers summarized in the way I would like to see them.

But you can take, for example, and see that with the beach full it takes seven-hours and with the beach empty it takes five-hours; and now four-hours have transpired and you look out the window and the beach is empty, you can now use the five-hour estimate.

There's a lot of feedback that's possible in the system while all these things are going on.

Some of your indicators that you say could be used in decision-making wouldn't in reality be used. You have people out in the field with radios and lots of other things.

So you would in a real emergency be monitoring what's going on in a real-time sense.

Q You heard -- I'm sorry, did I cut you off?

A (Urbanik) No.

Q You heard Mr. Callendrello yesterday describe how

their people were trained to use the ETE numbers.

Would you disagree then with him that that's the proper way to use the ETEs by just taking the number off the chart that seemed to be closest and using it in the work sheet?

A (Urbanik) I can't disagree with Mr. Can- --

Q Callendrello.

A (Urbanik) Callendrello, because my expertise as we have so noted is not as an emergency planning decision-maker. What my expertise is, is in evacuation time estimates. And I can with the information currently available provide a very good estimate for any scenario that you want to dream up.

Now, whether he can use that or not is his call. I'm just telling you that I can give him whatever number he needs with as good a confidence as necessary based on what exists now today.

Q In answer 14, Dr. Urbanik, you say: "Appropriate planning has taken place to mitigate any uncertainties which might otherwise affect an orderly and efficient traffic flow."

Can you tell me what those uncertainties are?

A (Urbanik) I'm sorry, I don't know, what question are you on?

Q Question 14/answer 14.

You say: "Appropriate planning has taken place to mitigate any uncertainties."

A (Urbanik) Right.

Accidents, breakdowns, provision of tow trucks, communications, that's all that comes to mind at the moment.

Q And what is the appropriate planning you're referring to?

A (Urbanik) The fact that these --

Q The provision of tow trucks?

A (Urbanik) Right.

The fact that these resources will be available and can be relied on to handle whatever might transpire in an emergency that we can't you know -- we can't simulate every contingency that could possibly take place. So we plan to deal with those on an "as needed" basis.

And we've also quantified the impact and demonstrated that accidents and other things are not of such concern that we can't deal with them in that way.

Q In question and answer 15 you say: "The number of" -- in the answer, "number of evacuating vehicles has been estimated using a systematic process that has been extensively examined."

Would it be a concern of yours, Dr. Urbanik, if an important element in the total number of evacuating vehicles from a site had not been extensively examined?

A (Urbanik) I'm not quite sure what you're aiming at.

But I would be certainly relatively unconcerned in an EPZ with a 20,000 population and no facilities whether or not we refined the number to the extent that we did here.

If, in fact, the demand capacity relationship has no impact on ETEs and no probable impact even if it was off by a factor of two or three, there's no reason to make extensive studies.

In fact, I've argued against overkill in low population EPZs.

Q What about in higher population EPZs?

A (Urbanik) Then, you know, in a site like Seabrook where there's a large number of people, what transpired is certainly very appropriate.

Q And at a site like Seabrook if there were an important element in the total number of evacuating vehicles that hadn't been extensively examined?

A (Urbanik) Well, if there is one, I don't know how it could have slipped through the cracks.

I'm unaware of any large number of people that are hiding anyplace.

Q I know you're unaware of it, but I'm asking you again: if there were an element of the population and it were a significant element and it hadn't been extensively

examined, would that be of a concern for you?

A (Urbanik) Certainly, if someone could document with factual data that a large number of the population hadn't been accounted for, I certainly would suggest that the ETEs be revised to reflect those numbers.

Q In answer 18, I just want to make sure you're not subtracting something that I thought you had provided in your traffic management testimony.

You say in answer to the question: do the traffic management plans adversely affect returning traffic at TCPs and ACPs? And you say: "No."

As I recall your traffic management plan testimony you had supported a recommendation that there be a more gradual phase-in of control measures. Channelization, I think, you were speaking of at the -- and advanced warnings, I think you mentioned, at two critical access control points.

You're not subtracting from that statement with this one here, are you?

A (Urbanik) Not at all.

You're talking about a very technical detail of where we're talking about placing the cones and what color signs and things to use.

This is not -- doesn't take away from the need to do that.

Q But absent a proper spacing of cones in a high speed interstate situation, there could be adverse affects, could there not?

A (Urbanik) I don't know what you're referring to.

Q Accidents?

A (Urbanik) Adverse affects of what causing accidents?

Q Too rapid a channelization of the type that is depicted on the ACP diagrams has a potential to cause accidents and serious accidents because these are high speed travelers.

MR. TURK: And the question is: would they have an adverse impact on the ETEs?

MR. FIERCE: No.

BY MR. FIERCE:

Q Isn't that, in and of itself, an adverse affect if you're doing something in an evacuation, setting up cones in a way that cause serious accidents?

A (Urbanik) Well, there's no way to know whether or not if the plan were implemented the way it's drawn as opposed to the way we're recommending it be done would, in fact, generate accidents.

Obviously, there's a somewhat higher probability of accidents for returning -- well, accidents for people on the interstate facility if you use less cones or shorter

tapers.

So this testimony is not in isolation with the traffic management testimony. It just happens to be presented separately.

Q Okay.

A (Urbanik) And it certainly doesn't -- it's not intended to contradict in any way that testimony.

Q I'm going to jump ahead to your answer to question 22, which concerns the real-time system.

Your interest here is in the sensitivity analyses I see: "That the current system of estimating ETEs in conjunction with sensitivity analyses is the most reasonable approach."

Again, Doctor, would you agree that if ORO and Massachusetts officials are not provided relevant sensitivity runs that there are a large number of situations for which ETEs are not provided and for which they could only guess at the ETEs, if they don't have relevant sensitivity runs?

A (Urbanik) I can't accept your hypothesis.

We have run sensitivity analysis 35 ways to Sunday. We're at a point where we know the sensitivity of the Seabrook EPZ in a way that's unseen anyplace else in the world.

Q And if officials were not provided with relevant sensitivity runs, that would be a problem, wouldn't it?

A (Urbanik) Under your hypothetical, yes, which I reject.

Q Just a final question regarding your last answer where you indicate a need for an organized presentation of ETEs for Massachusetts.

If this is done, your recommendation is accepted here, should the NRC have you review that organized presentation before it awards an operating license to ensure that the presentation is complete and clearly written and readily usable by decision-makers?

MR. TURK: Your Honor, I believe what he is asking for is a legal conclusion by this witness --

MR. FIERCE: No, his recommendation

MR. TURK: -- as to how the Board should go about determining what needs to be done.

MR. FIERCE: I'm looking for his recommendation, Your Honor.

MR. TURK: Well, it's a legal judgment, Your Honor.

MR. FIERCE: It's not a legal judgment. It's his recommendation whether a plant --

MR. TURK: You're asking should the Board have him do the review.

MR. FIERCE: No.

JUDGE SMITH: What's the question?

MR. FIERCE: I asked him would he recommend that -- it could be he or anybody -- that somebody review this organized presentation of --

JUDGE SMITH: That's the -- go ahead.

MR. FIERCE: -- this ETE information before the plant gets an operating license.

JUDGE SMITH: All right.

MR. FIERCE: So that you can make sure that the presentation is organized well, complete, clearly written and readily usable by decision-makers in the event of an accident.

(The Board confers.)

JUDGE McCOLLOM: Are you implying that it's after the corrections are made that he has recommended?

MR. FIERCE: No.

He's recommending here that there be an organized presentation of the ETEs and the analysis therein for Massachusetts in one coherent place.

JUDGE McCOLLOM: Oh, okay.

MR. FIERCE: A document be prepared essentially.

MR. TURK: Perhaps it's easily solved by just asking Dr. Urbanik how would this be accomplished.

MR. FIERCE: Well, that's not my question.

MR. TURK: Well, that would have solved the problem. You would understand --

MR. FIERCE: Well, it can obviously be accomplished by putting it together in an organized presentation. That's what I'm talking about here.

MR. TURK: Oh, you don't want to know what he wants to say about it.

MR. FIERCE: The question is when, in his view, should decision-makers be put in a position where they might have to operate without that or not.

In other words, would he recommend that the plant not get a license until this organized presentation is completed so that the decision-makers, if there is an accident after a license is granted, will have it.

JUDGE SMITH: The question goes not to the substance of the body of ETEs that have been prepared, but how it is delivered to the decision-makers, the form in which is delivered. Is it useful to them or not.

MR. FIERCE: To review that organized presentation to make sure --

JUDGE SMITH: Right.

MR. FIERCE: -- that it's complete, that it's accurate and would be usable to protective action decision-makers in the way that, Your Honor, has found he is qualified to comment on.

JUDGE SMITH: And I think Mr. Turk's variation of your question is the only one that makes any sense, is how would he implement his recommendation.

What's wrong with that question?

MR. FIERCE: Well, you can ask it. I don't think it's my question.

JUDGE SMITH: What's your question again?

I mean everyone is struggling with your question.

MR. FIERCE: I think I've said it twice, and I'll try to say it a different way.

JUDGE SMITH: All right.

BY MR. FIERCE:

Q Given your knowledge of protective actio. decision-makers, is it going to be important for these decision-makers to have this organized presentation of the ETEs for Massachusetts, with all of these sensitivity runs that you know are out there in kind of different places and in testimony here and in Volume 6 in New Hampshire and perhaps some additional ones as well, put in a organized coherent form, as you seem to be recommending here, have that available for protective action decision-makers before they would ever be in a situation where there might be an accident at Seabrook?

MR. TURK: That's the legal judgement.

JUDGE SMITH: Right, it is.

MR. FIERCE: No.

That's a judgment about the --

MR. TURK: I mean cut off the last phrase and I've got no objection.

MR. FIERCE: It is not --

MR. TURK: Cut off the "before a license can issue" or all that. That's a legal judgment.

MR. FIERCE: It's a question about whether this document is --

JUDGE SMITH: You have gone beyond his -- whether it's legal or subject matter, you have gone beyond his expertise, in any event.

It's well within his expertise to observe and report the need for an organized presentation. That is well within his expertise.

Now you want him to really go into areas which you yourself argued was beyond his expertise.

MR. FIERCE: No. This is, I believe, realm of the expertise that you gave to him in terms of how protective action decision-makers use ETEs.

JUDGE SMITH: You know, the record doesn't show, but you even banged the table "before this plant is allowed to operate".

You know, you have gone far beyond -- objection sustained. Objection sustained.

MR. FIERCE: I have no further questions.

JUDGE SMITH: You are permitted, however, to ask how he would implement it. And the Board might point out that if the Staff is recommending that the Board adopt the recommendation, we might need some more help on it.

MR. TURK: The witness able to answer that, Your Honor.

JUDGE SMITH: Well, I'll tell you --

MR. TURK: If you don't ask, I'll --

JUDGE SMITH: -- that I think it's the Staff's problem.

MR. TURK: If you don't ask, we'll do it with redirect.

EXAMINATION BY JUDGE COLE

JUDGE COLE: Dr. Urbanik, do you have any thoughts on just exactly how you might implement your recommendation in Question 23?

THE WITNESS: (Urbanik) I think there are a number of alternatives and perhaps that's part of the reasons why I hesitate to prescribe a path.

I think Mr. Fierce mischaracterizes what I have said here, in that I'm not talking about an evacuation time study for Massachusetts. Everything that I refer to are evacuation time estimates for Seabrook Station.

Because of the multistate jurisdictional issue,

it's a little harder to say that only one course of action would be the most appropriate.

One option would be to update the New Hampshire study and put the latest numbers into that particular document. I don't think that's necessary. That document is already overly cumbersome and contains a lot of historical data that's already on the record, so to speak. It exists. That document could be condensed and the numbers presented in a more summary form.

Perhaps a more logical approach would be to publish a separate ETE study that could be referenced by each of the states as the basis on which the numbers that they adopt out of it come from. I think that's probably the cleaner approach.

There is nothing in the guidance that says that it has to be part of a plan. It isn't a plan. It's just a technical study on which one is to develop plans.

So that's why I would see it better as just a separate ETE study published and documenting.

JUDGE COLE: To whom or for whom?

THE WITNESS: (Urbanik) Well, in the normal course of events, they would submit it to the NRC and it would be reviewed through a normal course of action, or to FEMA, I guess.

JUDGE COLE: I get the impression that you've got

to get this information to the decision-makers.

How would you go about that?

THE WITNESS: (Urbanik) Well, I think the information largely is already there. I mean, the process of developing the plans is ongoing. And how each of the states or each of the organizations, in this case, implements it is really more of a local issue. And I don't think that's part of the purview of the study itself.

The reason for the documentation is so that, as time passes and we need to update it or come up with new numbers, we know how we got where we are. Or if someone wants to later on decide that decision-makers could use numbers in a different way, they have a basis to revise their process.

The ETE study is an input into the plans. It is not the plan. It's really a separate process, in my estimation.

(The Board confers.)

JUDGE SMITH: Do you have anything further?

Do you want to continue your cross or address --

MR. FIERCE: No.

No, I have nothing further.

JUDGE SMITH: All right.

Who is going to examine for the Applicants?

MR. TROUT: I would, Your Honor, except that

Applicants have no questions.

MR. TURK: I have a few, Your Honor.

JUDGE SMITH: All right.

MR. TURK: And I would like to see if I can start by --

JUDGE SMITH: Go ahead.

MR. TURK: -- clearing up a little confusion with respect to the question raised by Mr. Fierce at the end of his cross and addressed also by Dr. Cole.

REDIRECT EXAMINATION

BY MR. TURK:

Q Dr. Urbanik, I want to understand a little bit better what kinds of options you see as being possible to meet your recommendation on Answer 23.

You've already testified in New Hampshire that you accepted the New Hampshire ETE study. I'm sorry.

You have accepted Volume 6 of the NHRERP, correct?

A (Urbanik) Yes, I did.

Q You are not rejecting that conclusion now, are you?

A (Urbanik) No, I'm not.

Q All right.

Would one acceptable option to you be to simply have Volume 6 republished with the additional data which has now been -- additional data and revised ETEs which has now

been presented by Applicants in their testimony here?

A (Urbanik) I thought that was one of the options that I said.

Q And that would satisfy you?

A (Urbanik) Certainly.

Q Do you see a need for any further analytical work to be done with respect to ETEs for any portion of the Seabrook EPZ?

A (Urbanik) No, I don't.

Q So what you are really asking for at this time, if I understand it, a ministerial task of assembling from the Applicants' testimony, from the Licensing Board's PID of last December those additional sensitivity runs, discussions and ETEs and put them together in one place along with the New Hampshire Volume 6?

Perhaps updating Volume 6 with that information?

A (Urbanik) That's correct.

I would add that the sensitivity studies are a further embellishment of the analysis, and there is not necessarily a requirement or any specification in the guidance for presenting these.

I think it would be helpful if they were summarized in a way that gave some insight into the sensitivity of the ETEs.

Q You also had some comments in response to Dr. Cole

that discussed the fact that there are several different jurisdictions present here.

Now, if I understand the thrust of your comment, and tell me if I'm right, it's that you are not directing, or you're not suggesting that New Hampshire be directed to update its ETE, is that correct?

That's one part of it.

If that's unclear, let me try it again.

As I understand what you are saying, there needs to be an updated ETE such as an updated Volume 6 with the new information. But what you are saying here is that you are not saying that New Hampshire or the ORO or Massachusetts has to do that work.

You are saying as long as the Applicant revises that ETE study in Volume 6, and that document would then be available for anyone to use, that's sufficient as far as you are concerned.

Is that right?

JUDGE SMITH: I think you have gone beyond his -- I mean are you asking for a legal opinion of whose responsibility it is?

MR. TURK: No. No, what I said --

JUDGE SMITH: Or administration of --

MR. TURK: I sensed in Dr. Urbanik's answer to Dr. Cole that he did not want to be in a position here of

directing a state to take a certain action.

All that he's saying, as I understand it, is that the study has to be available as a reference document for decision-makers to use.

JUDGE SMITH: That's right.

MR. TURK: And as far as he's concerned --

JUDGE SMITH: And that's the law, too.

MR. TURK: That's right.

And as far as he's concerned, updating Volume 6 by any organization --

JUDGE SMITH: All right.

MR. TURK: -- and making that document available would meet the intent of his answer.

JUDGE SMITH: It's a rather simple question and answer. I shouldn't read too much into it.

BY MR. TURK:

Q Am I correct, Dr. Urbanik?

A (Urbanik) Yes, you are.

MR. TURK: I hope that clears up any confusion.

And I want to do just a very limited redirect on Mr. Fierce's other cross.

JUDGE SMITH: Yes.

And you don't have anything to say? Applicants don't have anything to say about this?

MR. DIGNAN: On what, Your Honor?

JUDGE SMITH: ON this last bit of testimony. We just go home and what do we do?

Wait for proposed findings?

MR. DIGNAN: On what Dr. Urbanik is suggesting be done?

JUDGE SMITH: Yes.

MR. DIGNAN: I imagine what we will be giving you -- my problem in doing it right now is I don't have the management people to give me the actual authority.

JUDGE SMITH: I understand.

MR. DIGNAN: You will get a commitment in the proposed findings is what I'm assuming, Your Honor.

JUDGE SMITH: All right.

MR. DIGNAN: Your Honor, could I have a moment?

JUDGE SMITH: Yes.

But don't misunderstand me. I'm not asking for a response right now. But I don't want to read too much either into a failure to address the issue or cross-examine. I should assume that you are very sensitive to what has happened, and that's all I'm --

MR. DIGNAN: Yes, he's saying he wants the information collated in one place in a reference document.

And what I want to find out is whether I can give you the commitment now or I have to wait and get some more authority to do it. It's no big problem.

JUDGE SMITH: It's probably not necessary.

MR. DIGNAN: All of Dr. Urbanik's suggestions are before our people. And without doing it now, simply because I am have an authority-seeking problem.

JUDGE SMITH: Right.

MR. DIGNAN: What I can represent to you is I imagine what you are going to find, either in writing or possibly in the record before we close it, is a commitment from the Applicant to me.

JUDGE SMITH: All right.

MR. DIGNAN: Because my understanding is our technical people and Dr. Urbanik are not at odds on any of this. This is my point.

JUDGE SMITH: All right.

You do not have to this very moment --

(Counsel consults.)

MR. DIGNAN: Yes, okay, that's what I wanted.

Your Honor, in the prefiled testimony actually, we have a commitment to publish a new one, and that's what we are going to do.

JUDGE SMITH: Okay.

MR. TURK: Your Honor, I think where we are at on this issue --

MR. DIGNAN: I don't mean to lengthen these things.

My problem is I don't like to make commitments without the management having given me the authority.

JUDGE SMITH: Exactly right.

MR. DIGNAN: That's all. Right.

MR. TURK: Where we are at, as I see it, is Volume 6 was published back in 1986. Mass AG has conducted extensive litigation which has resulted in the Applicants doing additional sensitivity runs in order to address those contentions.

Those sensitivity runs done for the purpose of this litigation have been presented to you and are known by Dr. Urbanik.

In addition, some numbers have changed such as the numbers for the beach population which is part of Your Honor's December decision. Dr. Urbanik is aware of that change which is not yet in Volume 6.

And as I understand the thrust of his testimony, he is saying now that the litigation is concluding on ETEs, let's take the Applicants' work, put it all together. No more work. Just put it in a document that's available for reference.

JUDGE SMITH: Right.

MR. TURK: And as I understand Dr. Urbanik's testimony, one easy way to do that would be to simply update Volume 6, or have someone update Volume 6 so that you don't

really need a whole new study. You just --

JUDGE SMITH: Right.

MR. TURK: -- put some additional pieces in there and change the numbers a little bit and that's it, consistent with this litigation.

JUDGE SMITH: I understand.

All right.

MR. TURK: I just have a few other questions, Your Honor.

JUDGE SMITH: All right.

MR. DIGNAN: Mr. Turk, could I have just a minute before you proceed?

(Counsel confer.)

MR. DIGNAN: Your Honor, on page 3 of the direct testimony which we filed on this matter and it's transcript 26,681, page 3 is what I'm talking about.

And in there we state: "Additionally, revise evacuation time estimate study will be published in the future either as an amendment to NHRERP, Volume 6 or as a separate document." We are planning to do it.

I'm sorry I wasn't more on top of it when you asked.

JUDGE SMITH: I guess we should have picked it up, too.

Mr. Turk?

BY MR. TURK:

Q Dr. Urbanik, one of the questions Mr. Fierce asked you today was a hypothetical, that if someone could document that there were a large number of people unaccounted for, would you want more work done on the ETEs. I assume that was the thrust of the question.

And you refused to accept the premise -- well, let me ask you: do you believe that there are a large number of people that have been unaccounted for in the ETEs?

A (Urbanik) No, I don't?

Q For Seabrook.

Also, at one point you indicated that your testimony here is not intended to contradict your testimony

on traffic management.

In light of your traffic management testimony which, of course, you presented earlier this week, is your current testimony on ETEs still true and correct?

A (Urbanik) Yes, it is.

MR. TURK: That's all I have, Your Honor.

JUDGE SMITH: Anything further?

Mr. Fierce?

MR. FIERCE: Yes, just a couple.

RECROSS-EXAMINATION

BY MR. FIERCE:

Q This study that will be published, organizing the material and analyses that is already there. Isn't this study something the protective action decision-makers will need in order to do what you're describing in your answer on page 20 -- answer 22 on page 8, in order to be able to use the ETEs in conjunction with sensitivity analyses?

MR. TURK: Will they need it beyond what has already been done?

JUDGE SMITH: I think the question is pretty clear. I think he has already said that they need it.

MR. TURK: Well -- okay.

JUDGE SMITH: Your question is: is it more than just nice? Is it something that they need?

Is that it?

MR. FIERCE: Yes.

JUDGE SMITH: Right.

And he says, there's a need for organized presentation.

MR. DIGNAN: My problem with the question is, where does he get the premise that the decision-maker uses the sensitivity study?

The sensitivity study is an analytical tool. It's not something decision-makers use the day of the accident. And I don't know of any testimony in the record that says they do use these on the day of the accident.

JUDGE SMITH: Is your question narrowed to sensitivity studies or was your question as broad as the answer of answer A-23?

MR. FIERCE: Well, I did reference it to answer 22 in order to do what he's saying needs to be done here. That using the current system of estimated ETEs in conjunction with sensitivity analyses, isn't that what needs to be done by protective action decision-makers at the time by referencing this organized presentation you're recommending.

JUDGE SMITH: Look, we're not going to get into a litigation now as to decision-makers using sensitivity studies in addition to the ETEs that they assess.

MR. FIERCE: Well, let me just ask the simple question: is this something that he expects that decision-

makers would have available to them at the time of an accident?

JUDGE SMITH: What?

MR. FIERCE: This organized presentation?

JUDGE SMITH: Right, organized presentation.

Is this more complicated -- you said an organized presentation is needed; right?

And now he wants you to say: is an organized presentation needed by decision-makers, that's what he wants you to say.

What did you say in your answer?

(Pause)

JUDGE SMITH: Do you have a question that is in any way different than the question and answer 23?

(The Board confers.)

MR. FIERCE: I guess I don't, Your Honor. I guess I don't.

JUDGE SMITH: I think it's there.

MR. FIERCE: I'll withdraw the question.

JUDGE SMITH: All right.

BY MR. FIERCE:

Q The next question, and I heard Mr. Turk use the word "ministerial," that this process would be a ministerial process.

Is this something a clerk could do or wouldn't we

need some expertise from Mr. Lieberman or his staff, his professional staff in order to put this document together?

JUDGE SMITH: Well here again, I think what Mr. Turk is saying is: we don't have to have a hearing on it.

Isn't that your point?

MR. TURK: That's my belief, Your Honor.

JUDGE SMITH: Yes.

But it is something that when it is directed to be done, if it is by the Board or if it's committed to be done, then we assume that it will be done by competent people; that's what you meant by that.

But not by policy-makers or judgment people or judicial people. Just by the people who are trained to do it.

MR. TURK: That's right.

There's no ETE technical expertise involved at this point.

JUDGE SMITH: That's right.

MR. FIERCE: Well, I just disagree.

MR. TURK: Let him ask that question: is there any technical expertise?

JUDGE SMITH: You guys just go zinging off on a tangent. Mr. Turk was trying to cover his basis. He didn't want to leave it open that you're going to have to have a hearing. And now we're going down that trail to say, what

are their names? Who is going to do it? We're not going to hear that.

Do you have a legitimate concern it's going to be turned over to the watchman at the plant or something to be done? If that's your concern, then raise it and we'll do it.

MR. FIERCE: Well, obviously, Mr. Turk is trying to minimize the importance of this document.

JUDGE SMITH: Anytime --

MR. FIERCE: I just think it's an important document.

JUDGE SMITH: Anytime this Board conditions an approval, if it does, upon an expectation that something will be done. And anytime the Applicants make a commitment, Mr. Dignan, anytime the Applicants make a commitment to this Board we're not going to quibble on whether it's a ministerial act or executive act or anything else.

We are going to assume that it is done by the people competent to do it.

Does that help you?

MR. FIERCE: Fine.

I have no further questions.

JUDGE SMITH: All right.

Anything further of Dr. Urbanik?

Oh, you still have more on this one?

Are we done with this testimony?

MR. TURK: Mr. Fierce just raised a question which he withdrew or at least he didn't want to pose and that is: is there any evacuation time estimate expertise necessary in preparing the document.

I won't open it up, Your Honor. I think the horse is on the table.

(Laughter)

MR. DIGNAN: And he's dead.

(Laughter)

JUDGE SMITH: Why did you change your mind, Mr. Turk?

MR. TURK: Don't encourage me.

THE WITNESS: (Urbanik) Please don't.

(Laughter)

MR. TURK: I told you yesterday, this witness has no problems with attorneys except for this one.

JUDGE SMITH: Anymore questions of Dr. Urbanik on the testimony on Contentions 1 to 3 that he just testified about; anything further?

MR. FIERCE: Well, the returning commuters issue, I believe, would be encompassed within Contentions 1 through 3.

Are we going to do that?

JUDGE SMITH: I'm talking simply about the piece

of written testimony just brought into the record.

(No response)

JUDGE SMITH: All right.

We'll move on to the next one.

MR. TURK: Next, Your Honor, back in May on May 18th Dr. Urbanik filed an affidavit addressing his views or setting forth his views as to whether there is a need for any further modeling of I-DYNEV to account for returning commuters.

And I would like to put that in the record and have it adopted by Dr. Urbanik, if he is so inclined.

I don't know if there's any intent to cross-examine on it, but I think it will be useful to have it in the record for future purposes.

JUDGE SMITH: You have to bring me up to speed on this.

MR. TURK: Okay.

JUDGE SMITH: It was originally offered to see if the Board would ask for it and we said, that's your call.

MR. TURK: That's right.

JUDGE SMITH: We saw no need.

So your call is, you do want it in the record?

MR. TURK: Yes.

JUDGE SMITH: Okay.

MR. FIERCE: Well, I will have a few questions on

it.

DIRECT EXAMINATION

BY MR. TURK:

Q Dr. Urbanik, I have placed before you a document entitled, "Affidavit of Thomas Urbanik II regarding Commuter Traffic and Evacuating Traffic Flow within the Seabrook Station EPZ," dated May 18, 1989. It's a four page document.

I ask you if you have seen this document before?

A (Urbanik) Yes, I have.

Q And is it an affidavit which you prepared and executed under oath?

A (Urbanik) Yes, it is.

Q Dr. Urbanik, you had an opportunity to read the prefiled supplemental testimony filed by the Applicants with respect to returning commuters.

Just one minute.

(Pause to search for document.)

BY MR. TURK:

Q It's dated June 13, 1989 and it's entitled, "Supplement to Applicants' Rebuttal Testimony No. 16, Interaction of Commuter Traffic Flow and Evacuation Traffic Flow within the Seabrook EPZ?"

A (Urbanik) Yes, I've read that document.

Q All right.

Having read that document can you tell us whether your views as stated in this affidavit are true and correct, as you sit here today?

A (Urbanik) Yes, they are.

MR. TURK: Your Honor, at this time I would ask that Dr. Urbanik's affidavit be admitted and bound into the record as if read. In essence, it now constitutes sworn testimony.

JUDGE SMITH: Mr. Fierce?

MR. FIERCE: Well, Your Honor, I am tempted to object to this testimony on the grounds that it really is a piece that is directed at the entire problem of returning commuters and not the narrow issue that Your Honor is focusing on except for question 8.

Well, perhaps I should just make that objection for the record.

JUDGE SMITH: Well, I just disagree with you there. I think the main thread of it all the way through is -- the discussion that we had -- our memorandum and order laying out our concerns and what we wanted.

No, overruled.

MR. FIERCE: Okay.

No further objections.

Is it received, Your Honor?

JUDGE SMITH: Yes.

We'll receive Dr. Urbanik's affidavit.

(The affidavit of Thomas Urbanik II re: commuter traffic and evacuating traffic flow within the EPZ follows:)

5/18/89

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	Docket Nos. 50-443 OL
PUBLIC SERVICE COMPANY OF	)	50-444 OL
NEW HAMPSHIRE, et al.	)	Off-site Emergency Planning
	)	
(Seabrook Station, Units 1 and 2)	)	

AFFIDAVIT OF THOMAS URBANIK II REGARDING
COMMUTER TRAFFIC AND EVACUATING TRAFFIC
FLOW WITHIN THE SEABROOK STATION EPZ

I, Thomas Urbanik II, being duly sworn, state as follows:

1. I am a consultant to the NRC Staff on evacuation time estimates. My background and qualifications are a matter of record in this proceeding.

2. I have reviewed the Atomic Safety and Licensing Board's Memorandum and Order of May 5, 1989 concerning the effects of commuter traffic on evacuation times, and the affidavits of Mr. Lieberman and Dr. Adler referred to therein. This affidavit is prepared in response to that Memorandum and Order, as discussed in the hearing session held on May 15, 1989.

3. In a generic sense, returning commuters are not explicitly accounted for in ETE studies because they generally travel in directions opposite to evacuees and are traveling during the time period when the general public is assumed to be preparing to evacuate.

4. A unique aspect of the Seabrook Station emergency plans is the early closing of area beaches, which results in some evacuation

routes being used almost immediately. Nevertheless, I have not seen any data nor analysis which suggests that a problem exists with respect to the effects of returning commuters on evacuation times.

5. Explicit modeling of returning commuters is not a simple task. Evacuation modeling involves a very limited matrix of origins (i.e. ERPA's) and destinations (essentially the roads leaving the EPZ). To model returning commuters it would be necessary, for example, to have another, larger, matrix of origins and destinations to account for the trips from work to home. Second, it is necessary to know the likely routes that would be taken by the returning commuters, inasmuch as the commuters may need to perform other activities on the way home (such as carpooling) or may, due to their intimate knowledge of the area, follow lesser-travelled or more familiar routes than simply the most direct routes between their origin and destination points. Third, the evacuation road network would have to be revised and expanded substantially, to include additional inbound roads and non-evacuation routes which might be used by returning commuters. Fourth, information would be needed as to the returning commuters' actual hours of employment relative to the hours of significant beach usage. Fifth, the interaction between returning commuters and evacuees would have to be explicitly modeled, which is not a direct capability of any existing models. This very large effort would only be appropriate if there was some reason to believe that returning commuters could have a significant impact on the ETEs.

6. To affect the ETE, the returning commuters must pass through critical intersections (i.e. those operating at or near capacity) in a manner that could increase evacuation times. This could only occur with respect to a limited number of intersections.

7. It should be noted that the critical and near critical intersections are known from the ETE modeling effort. Any analysis of returning commuters, if further analysis is to be performed, should make use of this information in order to avoid the needless analysis of a multitude of trivial cases; that is, non-critical intersections need not be modeled.

8. Returning commuters can effect the ETE only if they cross the evacuation path at critical or near critical locations or pass in the same direction as evacuees. Clearly, the number of returning commuters who will be travelling between job locations near the center of the EPZ and homes which are also within the EPZ is limited in number (note that the vehicles of beach area employees have already been counted in the beach population estimates).

9. None of the data available to date suggests that there would be large numbers of returning commuters moving in directions that would impede evacuation. Also, alternate paths (non-evacuation routes and lesser-travelled roads) exist which would help to avoid bottleneck locations.

9. The Applicants have presented a number of analyses that suggest the impact of returning commuters is minimal. Absent any significant new

data, no additional analysis of returning commuters appears warranted. In sum, no further modeling of I-DYNEV to account for returning commuters is appropriate at this time.

Thomas Urbanik II

Subscribed and sworn to before me this 15 of May, 1989

Notary Public

My commission expires: 2-25-90

CLURES A. RHODES
Notary Public, State of Texas
My Commission Expires 2-25-90

JUDGE SMITH: Is he available for cross-examination now?

MR. TURK: Yes, Your Honor.

CROSS-EXAMINATION

BY MR. FIERCE:

Q Dr. Urbanik, in your point number 4 here you say --

JUDGE SMITH: This is received as if it is testimony; it is testimony.

BY MR. FIERCE:

Q You say you haven't seen any data or analysis which suggests that a problem exists with respect to returning commuters.

Let me just clarify: you are talking about the problem of all returning commuters here rather than just the narrow issue that addresses traveling from the center of the EPZ outbound?

A (Urbanik) Yes, I'm talking about returning commuters in general.

Q Can you tell me what data you have?

MR. TURK: Did the witness finish his answer?

THE WITNESS: (Urbanik) Yes, I did.

BY MR. FIERCE:

Q Can you tell me what data you have seen regarding returning commuters now?

A (Urbanik) Well, I've also seen the Applicants' Supplemental Testimony as was asked me.

Q Well, at the time you wrote this piece you hadn't seen the Applicants' Testimony; correct?

Supplemental testimony?

MR. TURK: I think we can stipulate to the dates.

THE WITNESS: (Urbanik) Yes, that's true.

THE WITNESS: (Urbanik) I think Item 2 also addresses the affidavits of Mr. Lieberman and Dr. Adler.

BY MR. FIERCE:

Q Basically, you have reviewed the documents that we have all seen that have been made available in this proceeding.

Is that what you are saying?

I'm just wondering if there is special data that you have examined regarding returning commuters?

A (Urbanik) No, there is not.

Q Do you know what the percent of the total number of trips after an order to evacuate in the summertime will be commuter trips?

A (Urbanik) Not offhand.

Q Do you know what the range is?

A (Urbanik) I don't recall.

Q In .6, Dr. Urbanik, you introduce your comment with a clause "to affect the ETE".

And again for clarification, what do you mean by "the ETE"?

Are we talking about the overall ETE for Region 1?

A (Urbanik) Where are you at?

Q Top of page 3, first four words.

(Pause.)

A (Urbanik) It looks like that should be plural, or

"to affect any ETE".

Q There obviously are a number of regions, each of which has an ETE that can be referenced and we have seen the tables.

If there are a limited number of critical intersections for each of those regions, which are critical for their ETEs, altogether for the 17 regions that we now have in the ETE studies, there could be 20 or more critical intersections, couldn't there?

A (Urbanik) I guess I wouldn't perceive that the number of critical ones are that high.

Just because we have an ETE for a number of different regions or scenarios doesn't mean that the ETE is overly affected by capacity. In fact, the lower ETEs that you get in some areas are because other factors, preparation and returning home affect the ETEs. So it's not necessarily capacity-driven.

And if an intersection is not capacity-driven, it was the argument that was given the other day. You know, you just stop and either catch up with the queue later on, or the people behind you, who are the last ones to leave, are unaffected because you weren't pushed in their way.

So I guess I don't agree with you that there are necessarily 20 critical intersections.

Q In .8, you say, "Clearly, the number of returning

commuters who will be traveling between job locations near the center of the EPZ and homes, which are also within the EPZ, is limited in number."

What data regarding employment up and down Route 1 have you examined?

Up and down Route 1 in the EPZ?

MR. TURK: Data about returning commuters specifically?

BY MR. FIERCE:

Q I said what data regarding employment up and down Route 1 in the EPZ have you considered?

A (Urbanik) Well, I haven't reviewed any data beyond that that's been provided in the various studies done over the years.

Q But you are aware that there are many places of employment, retail stores and manufacturing concerns up and down Route 1, correct?

A (Urbanik) There are a variety of places of employment, but certainly they don't constitute -- I'm not aware of any single huge employment center.

And the issue here, or part of what we're referring to is that as far as the employees go when we get into the beach areas, we counted their cars as opposed to enumerating them through the process of identifying them at their place of employment.

Realize that my concern only relates to beach evacuation in the sense that the unique aspect of Seabrook is that early beach evacuation. If it weren't for that -- absent concern about beach populations, the concern about return commuters essentially goes away.

So you have to be careful. You know, one thing that gets confused in this process is we start posing illogical combinations of scenarios. And you always want to make sure that you're talking about things that could happen. That the evacuation that you are looking at, in terms of a time estimate, is one that occurs when people are their place of employment.

If that's not the case, then the issue of returning commuters is not appropriate.

Q Again in No. .9, I was going to ask you where you mention "data available", what data you had examined.

Is it the same data you've described earlier?

A (Urbanik) Right. Nothing beyond what's been identified.

Q And you say nothing to suggest there would be large numbers of returning commuters moving in directions that would impede evacuation.

What directions are you referring to there?

Are you talking about more than "with flow"?

A (Urbanik) Well, I think Answer 8 specifies what

I'm talking about.

It can only impede if they cross the evacuation path at critical or near critical locations or paths in the same direction as evacuees.

Q Okay.

A (Urbanik) All other possibilities are excluded.

MR. FIERCE: Fine, thank you.

No further questions.

JUDGE SMITH: Are you going to examine, Mr. Trout?

MR. TROUT: Applicants have no questions, Your Honor.

MR. TURK: One very brief moment, Your Honor.

REDIRECT EXAMINATION

BY MR. TURK:

Q Dr. Urbanik, Mr. Fierce was kind enough to have you correct a word in paragraph 6 of your affidavit so that it now reads, "to affect any ETE".

Should we make the same sort of change in the top of paragraph 8 where you say, "returning commuters can affect the ETE"?

Should we change that to say "an ETE"?

A (Urbanik) That would be a fair thing to do.

ETE is often used throughout this process in illogical ways. I mean we say "ETE estimates". ETE is evacuation time estimates. So "ETE estimates" is redundant.

So we are a little sloppy sometimes with our ETE notations. I apologize for that.

Q Also, Mr. Fierce asked you about Question No. 4, whether your statement in paragraph No. 4 relates to outbound returning commuters.

And you said, yes, it does.

Did you mean to say that this statement would apply to no returning commuters except outbound returning commuters?

A (Urbanik) No.

I thought I made it clear throughout that I'm talking about commuters in general.

MR. TURK: I have nothing else, Your Honor.

JUDGE SMITH: Mr. Fierce?

MR. FIERCE: Nothing.

JUDGE SMITH: All right.

Dr. Urbanik is excused with our thanks.

(The witness was thereupon excused.)

JUDGE SMITH: Take a 10-minute break.

(Whereupon, a recess was taken.)

JUDGE SMITH: Let's go with Rebuttal Testimony No. 22. We have objections on it, don't we?

MS. GREER: Yes.

I sent down a short motion in limine in the nature of objection yesterday.

JUDGE SMITH: All right.

The objections are all to the point that the testimony is beyond the scope of the testimony to which it rebuts, beginning on top of page 9.

Do you agree?

MR. SMITH: I do not agree.

I just have a very short response to the motion in its entirety, Your Honor.

JUDGE SMITH: All right.

MR. SMITH: Applicants submit that there is no requirement that Applicants' testimony be limited to the scope of Mass AG's direct testimony.

Mass AG is free to attempt to rebut the FEMA presumption within the bounds of admitted contentions by other means. For example, through cross-examination of Mr. Donovan.

Consequently, Applicants should not be limited to filing testimony limited to the scope of Mass AG's direct testimony.

JUDGE SMITH: What do we do with it?

What do we do with a finding that seems to be floating in free space some place?

How do we plug this paragraph in? To what does it relate? Does it relate to the contention?

MR. SMITH: Yes.

All three passages do relate to one of the admitted contentions.

Our concern, Your Honor, is that although it may not be addressed directly in the direct testimony, that through some other means Mass AG may try to propose a finding going to one of these issues. And if we were not to object to the removal of this testimony we would not have any direct testimony to counter that.

JUDGE SMITH: Does it go to matters that were raised on cross-examination by Intervenors?

MR. SMITH: Not that I am aware of, Your Honor.

JUDGE SMITH: Then why wasn't it -- it is, it's put in your first piece of testimony on the issue.

MR. SMITH: Yes, Your Honor.

JUDGE SMITH: Really what it is, it's within the area reserved and carved out by Applicants at the beginning as if they will rely upon FEMA's report reserving also the right to augment the report.

Is that where you are? Is that it?

MR. SMITH: Yes, Your Honor.

JUDGE SMITH: That's right.

What do you say about that?

That's also I believe in their trial brief.

MS. GREER: The Applicants in this case have chosen to proceed with their prima facie case as being the FEMA report.

To the extent that they are now seeking to bolster the FEMA report in a way that is not addressed in our direct testimony appears to be improper rebuttal.

Now they could have sought to, after reviewing the FEMA report, sought to augment the FEMA report on their direct case by, at that time prior to resting with merely the FEMA report of Mr. Donovan, they could have at that time sought to put in testimony to fill out any gaps that they saw in the FEMA report.

But it seems to me that it is: one, inappropriate at this point in time to come back and seek to bolster the lack of evidence on any given point, factual point or issue, where, in fact, we have not directed any testimony to it in our direct case.

And two, I'm not sure I agree with Mr. Smith's statement that every single paragraph in here, the ones I have sought to have stricken, in fact, addresses issues raised in the contention.

For instance, looking at this one here, the one

that's right before us: "Communications equipment is inspected, inventoried, operationally checked out at least once each calendar quarter."

I'm not sure how, in fact, that really ties in with anything that we have raised in either OI-31 or MAG EX-8.

JUDGE SMITH: Now, wait. We're going to have to reconsider before we go down that line.

MS. GREER: All right.

JUDGE SMITH: You didn't raise that in your motion. I'm not saying you're foreclosed from doing it.

MS. GREER: No, no. I'm just addressing a point that --

JUDGE SMITH: That he made.

MS. GREER: -- that he made.

JUDGE SMITH: All right.

That's correct.

MR. DIGNAN: Your Honor, maybe a fast way to cut through this is, is the Attorney General willing to agree that they are stopped from proposing any finding that would contravene the testimony they asked to have stricken?

MS. GREER: No. What I'm saying is that --

MR. DIGNAN: That's what I thought.

And that's the reason it's in, Your Honor. It's a belt and suspenders approach.

MS. GREER: Mr. Dignan, I believe that you interrupted me. I would ask you to at least wait until I finish speaking.

To the extent that the Applicants can come forwai and show that we have, in fact, raised an issue, for instance, on cross-examination of Mr. Donovan as to -- on the point before us -- there not being adequate provisions for inspection of equipment. The Applicants are perfectly free to come forward at this time and say, no, this issue was, in fact, raised. And the Intervenors have sought to attack it; and therefore we have a right to come in and rebut at this point. I think that's appropriate.

But to the extent -- but that's not what we have had here this morning.

I simply think that to the extent that we are in the posture we are in, the Applicants are not entitled to come in and put on the table the FEMA report and say, that's sufficient.

JUDGE SMITH: Well, they are, but the trouble is they have called this rebuttal but they are backing away from that. They're really saying it's a part of their case in chief.

MS. GREER: If that's the case then it seems to me --

JUDGE SMITH: Is that right?

Do you think it's mislabeled, Mr. Dignan?

MR. DIGNAN: No, Your Honor.

Let's cut through what the title is. It's this simple: I'm perfectly prepared to admit to this Board that I am unable in this 27,000 page record at this point to be absolutely clear that no point was scored on Donovan on these various points. And we're offering the testimony.

Now as I say, if the Attorney General agrees that by bringing this motion and representing to the Board that this rebuts nothing in the record, that they are stopped from making any assertions which contravene this testimony that they seek to have stricken and they are making their representation on behalf of themselves and all other Intervenors in the case; then strike it.

My problem is that, frankly, I don't think any human being, no matter how good a lawyer, can at this point satisfy themselves that there is absolutely nothing in this record by way of cross of Donovan or representation or anything that doesn't require us to do it. And it is that simple a thing.

Now, maybe I don't have to make this argument because maybe the short answer is to let you strike it. And if they try a finding, go back on a brief to you and to the Appeal Board and say, they're stopped from asking for that finding because they came into this Board and represented

there is nothing in the record that would have been rebutted by this testimony. Now that's the short way to go.

The other way to go is, let it in and sort it out on proposed findings. And it's that simple to me, Your Honor, whether you give it a label of direct or rebuttal, I don't know. But that candidly is why it's still in there.

As you know, we have been trying to carve things out and we have done it at times. We ran out of time on this and we just didn't get the carving done.

And the problem is the law is clear that an Intervenor has a right to make their case on cross-examination of other people. And I just don't want to be caught with a finding later that says, aha, we got this point out of Donovan, and it turns out that I let something go out unopposed that would have taken care of it. It's that simple.

MS. GREER: It seems to me that the Applicants are really asking to have it both ways at this point.

They have come in to the Board --

JUDGE SMITH: There is one thing that will not happen, to the extent that we can control it and that is, there's not going to be any sandbagging. There is not going to be a proposal by the Attorney General that communications or equipment are not inspected, inventoried or operationally checked and have this testimony addressing that point

disregarded. So that will not happen.

One way or the other Mr. Dignan's concerns will have to be satisfied.

MS. GREER: I will tell you that I know of no contention, no issue that we have addressed in any of the contentions that we have raised or bases addressing the issue of inventorying equipment.

MR. SMITH: If you would read Basis B-1 of your MAG EX-8 I think you will find that exact language there.

MR. DIGNAN: Yes.

The contention is in there.

MR. SMITH: This indicates that ORO had not provided adequate inspection and inventory check for critical emergency communications equipment.

MS. GREER: Are you talking about the EMS radio at this point?

MR. SMITH: Yes.

JUDGE SMITH: See, I think you're on a no-win course here. The more you limit your contention, you have a problem. If you take your contention out, then you lose the contention. If you put it in, then you got to give them an opportunity to address it. If you narrow your contention, then your contention is, in fact, narrow.

What are you going to do?

MS. GREER: I'm simply asking that since the

Applicants have chosen a course of proceeding before this Board --

JUDGE SMITH: Well, you're not talking about what the Board is talking about now. You're talking about your original argument.

MS. GREER: Right.

JUDGE SMITH: Which we're not talking about that anymore.

Okay, we'll leave it in for the reasons advanced by Mr. Dignan.

How about the next one?

In the next one we argue about, if you want to address the point the Board is making we'll hear from you. But we already heard and understood your point about, they chose the course of action.

MS. GREER: Okay.

JUDGE SMITH: We already understand that.

MS. GREER: I believe that the next point that I sought to have stricken was over on page -- I believe it's 13.

MR. SMITH: Your Honor, I direct your attention to JI-31.

JUDGE SMITH: Given our previous ruling, should this be in or out?

MS. GREER: If Mr. Smith will just point out to me

where he believes in JI-31 MAGI it is criticized?

JUDGE SMITH: Well, you know, everything is upside down this morning. I am so accustomed to you arguing that your contentions are broad, and broad, and broad, and encompass the universe and today, it's just a different world.

I guess you ought to know your contentions.

MS. GREER: Well, I certainly know that in the rebuttal testimony that we filed I didn't see anything there about MAGI and I don't really see it here in a criticize of MAGI in JI-31 either.

JUDGE SMITH: Okay.

MS. GREER: I think our criticism is addressed to the communications network; are not primarily addressed to MAGI unless -- the only thing I can conceive of is that in some way they believe that MAGI, in fact, in some way compensates for flaws that may otherwise exist in their communications network.

MR. SMITH: Your Honor, the point is not whether MAGI was criticized or whether MAGI actually compensates for flaws.

The point of our testimony or at least one of the points of our testimony is that a vertical chain of command is essential for this type of operation in that ad hoc decision-making is not conducted; there are preplanned

procedures. There's also an advantage to vertical chain of command in the communications systems that we have in that there is an oversight capability.

The decision-makers up in the EOC and the staging area have a sense of what is going on globally. And that is what MAGI does. MAGI gives the people in the EOC a chance to monitor all these conversations and therefore know what's happening, and therefore are the people who are making the decisions. And therefore, then transmitting that information back down.

JUDGE SMITH: Well, this one doesn't even have to come in under that umbrella that Mr. Dignan was talking about.

This one you assert as direct rebuttal to --

MR. SMITH: That is correct, Your Honor.

JUDGE SMITH: Right.

It seems to be.

MS. GREER: If that's the reason it's being offered then I will withdraw my objection, too.

JUDGE SMITH: All right.

Then what's the next one?

MS. GREER: I believe the third one is over on page -- I believe it's 20 --

JUDGE COLE: 19, isn't it?

MS. GREER: Yes, starting on 19.

MS. GREER: Nineteen, and it goes over --

JUDGE COLE: It's all of Section VI and Section VII?

MS. GREER: Right.

JUDGE COLE: Roman VI and Roman VII.

MS. GREER: Which, as I read that section, it merely tells you what transfer point dispatchers do and that road crews are dispatched and also access onto the ERN.

I'm just not even sure for what point it's offered.

MR. SMITH: Okay.

Actually, it's offered for two different points. There are two sections.

On Section VI, which is the transfer point dispatchers. That is being offered to rebut the statement in the first sentence of JI-31 which states that there is no provision for horizontal communications. That there are provisions for horizontal communications, if necessary, in limited circumstances.

The second point, 3(b) is -- well, I'm counting 3(b) which would be under Section VII, provisions for communication with road crews.

That is meant to address MAG EX-B(4) going to communications overload. This is to illustrate procedures of the road crews which would limit the need for unnecessary

communications.

The reason why road crews are mentioned is that that they are on the same channel as the route guides, and therefore that, we felt, needed to be addressed as well just so that there wouldn't be an argument made that road crews are going to take up the route guide channel.

MS. GREER: Are you through?

MR. SMITH: Yes.

MS. GREER: If that's the reason it's being offered with respect to the road crews, I would withdraw it on road crews.

However, on transfer point dispatchers, it seems to me that the plan, which is in the record, speaks as to what transfer point dispatchers do. And the Applicants that are reading JI-31 as saying there exists no horizontal or lateral network of communications are plainly misreading the language of the contention which says, "There is no provision for an effective horizontal or lateral network of communications."

I don't see how --

JUDGE SMITH: Well, this goes that, too. I think this goes to that point.

It will succeed. These radios allow to communicate. I mean it says it's effective.

MS. GREER: I honestly don't see how this adds

anything besides just doubling up on their direct case of the plan, the FEMA report.

JUDGE SMITH: Well, that's another objection which we have already ruled upon.

But this does seem to be direct rebuttal to the contention, the horizontal communication contention.

So that objection is overruled.

Now, gentlemen, who have not been sworn, would you rise and be sworn, please?

MR. SMITH: I believe all the Panel has been sworn previously either in New Hampshire or --

JUDGE SMITH: Oh, yes, right Excuse me.

JUDGE COLE: Way back then.

JUDGE SMITH: Oh, yes, I remember.

Welcome back, Mr. Renz, Mr. Catapano.

You recognize that you are still under oath from your previous testimony.

Whereupon,

ANTHONY M. CALLENDRELLO

GARY CATAPANO

WILLIAM F. RENZ

having been previously duly sworn, were recalled as witnesses herein and were examined and testified further as follows:

MR. SMITH: Your Honor, on the subject of

communications, Applicants are presenting a panel composed of Mr. William Renz, Mr. Anthony Callendrello and Mr. Gary Catapano, from left to right.

DIRECT EXAMINATION

BY MR. SMITH:

Q Gentlemen, I have caused to be placed before you a document 23 pages in length entitled "Applicants' Rebuttal Testimony No. 22 (Provisions for Prompt Communications Among ORO Field Personnel).

Do each of you have that document before you?

A (Callendrello) Yes, I do.

A (Catapano) Yes, I do.

A (Renz) Yes, I do.

Q I would like each of you to examine that document, if you would, and why don't I go one at a time.

Mr. Renz, could you identify the document and tell us what it is?

A (Renz) It's a piece of testimony that the three of us have worked together to put together and are sponsoring in response to essentially lateral communications contentions and testimony provided by Mr. Stan Cohn for the Mass AG.

Q Is that testimony true and accurate to the best of your of your knowledge and belief?

A (Renz) Yes, sir, it is.

Q Mr. Callendrello, the same questions.

Could you identify the document and tell us what it is?

A (Callendrello) Yes.

It's a document that incorporates my testimony regarding the issues of communications among ORO field personnel.

Q And is that testimony true and accurate to the best of your knowledge and belief?

A (Callendrello) Yes, it is.

Q Mr. Catapano, could you identify the document and tell us what it is?

A (Catapano) This is the testimony regarding provisions for prompt communications among ORO field personnel.

Q And is that testimony true and accurate to the best of your knowledge and belief?

A (Catapano) Yes, it is.

Q I have also placed before Mr. Renz and Mr. Catapano copies of your professional qualifications.

Mr. Renz, I have caused to be placed before you a document four pages in length and entitled "William F. Renz".

Can you identify that document?

A (Renz) Yes.

It's a statement of my professional experience and education.

Q And does that document accurately reflect your professional qualifications and experience?

A (Renz) To the best of my knowledge, it does.

Q Mr. Callendrello, I have placed before you a document six pages in length entitled "Professional Qualifications of Gary J. Catapano, President, AllComm, Inc."

A (Callendrello) You mean Mr. Catapano.

Q Oh, I'm sorry. Did I say Callendrello?

I mean Mr. Catapano.

Entitled "Professional Qualifications of Gary J. Catapano, President, AllComm, Inc."

Can you identify that document?

A (Catapano) Yes.

Q And does that document accurately set forth your professional qualifications?

A (Catapano) Yes, it does.

MR. SMITH: At this time, Your Honor, I would like to offer the testimony and qualifications of the Panel into evidence, to be bound into the transcript as if read.

JUDGE SMITH: Do you have extra copies of their professional qualifications?

We received them back in April some time.

MR. SMITH: Yes, I have extra copies.

JUDGE SMITH: Are there additional objections?

MS. GREER: No.

JUDGE SMITH: All right, the testimony and the qualification statements are received into evidence and bound into the transcript.

(Applicants' Rebuttal Testimony No. 22 (Provisions for Prompt Communications Among ORO Field Personnel follows:)

(Professional Qualifications of Gary J. Catapano follows:)

(Professional Experience of William F. Renz follows:)

June 16, 1989

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

before the

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, et al.	Docket Nos. 50-443-OL 50-444-OL
(Seabrook Station, Units 1 and 2)	(Off-site Emergency Planning Issues)

ERRATA TO APPLICANTS' REBUTTAL TESTIMONY NO. 22
(PROVISIONS FOR PROMPT
COMMUNICATIONS AMONG ORO FIELD PERSONNEL)

The following changes have been made to the testimony filed on April 18, 1989:

Page (Line)	Errata
ii (16-21)	Strikeover lines
5 (16-24)	Strikeover lines
6	Strikeover page
7 (1-19)	Strikeover lines
10 (23-24)	Strikeover lines
11 (1-9)	Strikeover lines
11 (10)	Strikeover "network"

PLWRB22F.NH

Page (Line)	Errata
11 (10)	Strikeover "in fact"
11 (14-15)	Strikeover ", not (4) as alleged in the Intervenors' testimony"
22 (5-13)	Strikeover lines

June 16, 1989

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

before the

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, et al.	)	Docket Nos. 50-443-OL 50-444-OL
(Seabrook Station, Units 1 and 2)	)	(Off-site Emergency Planning Issues)

APPLICANTS' REBUTTAL TESTIMONY NO. 22 (PROVISIONS FOR PROMPT COMMUNICATIONS AMONG ORO FIELD PERSONNEL)

Panel Members: Anthony M. Callendrello, Manager, Emergency Planning Licensing, New Hampshire Yankee

Gary Catapano, President, AllComm, Inc.

William F. Renz, Emergency Planning Specialist, Aldikoff Associates

TABLE OF CONTENTS

I. INTRODUCTION

The purpose of this testimony is to respond to those contentions that concern the adequacy of the plans, procedures and resources for providing the Offsite Response Organization (ORO) with prompt communications to support emergency response functions.

In addition, this testimony will address the contention that alleges that the Seabrook Station 1988 FEMA Graded Exercise (the Exercise) failed to demonstrate the adequacy of these provisions. Specifically this testimony addresses the following paraphrased contentions:

JI-31 The SPMC does not provide an effective horizontal or lateral network of communications directly linking emergency field personnel with each other. The failure to provide a lateral communications system will result in an ineffective emergency response.

MAG EX-08 The exercise revealed a fundamental flaw in the SPMC in that the ORO demonstrated that it did not have the ability to communicate with all appropriate locations, organizations and field personnel.

II. PROVISIONS FOR PROMPT COMMUNICATIONS AMONG ORO FIELD PERSONNEL

Before beginning to design a communications support system for the ORO, an assessment of the ORO's functions was made and its operating structure was analyzed. The nature of

the responsibilities assigned ORO field workers dictated the adoption of a vertical chain of command. Thus, the most effective design for a communication system for the ORO is one which supports the ORO's vertical chain of command infrastructure. This structure places the responsibility for problem solving and decision-making with the Staging Area and Emergency Operations Center (EOC) command personnel and not with Traffic Guides, Route Guides or other field personnel.

The Intervenors testimony criticizes this vertical chain of command utilized by the ORO for its alleged failure to provide for lateral communications. Their basis for this is their apparent misunderstanding about the functions which ORO field workers perform during an emergency. The Intervenors have erroneously concluded that the need for ORO field workers to communicate is the same as the need police and fire personnel have in carrying out their daily activities.

During the time of an emergency, ORO field personnel primarily execute preplanned actions and have a very narrow scope of responsibilities. Accordingly, their need to communicate laterally to other field workers is extremely limited. The primary need for ORO field personnel to communicate is in a vertical fashion (up or down the chain of command). The circumstances under which even these vertical communications are expected to occur are minimized by preset plans and procedures which to the greatest extent possible

attempt to obviate the need for any communication to take place. This contrasts greatly with the need of police and fire department personnel who must deal with a broad range of emergencies on an ad hoc basis. In order to perform effectively, police and fire personnel must be able to resolve localized problems via ad hoc decision-making and utilize lateral communications to achieve the desired results. Apparently the Intervenors feel that this approach should be applied to activities in the EPZ. Should this be the case, wide spread ad hoc decision-making by field personnel would quickly lead to chaos because it amounts to decision-making in a vacuum.

The command personnel at the Staging Area and EOC have a view of the "broad picture" relative to other emergency response activities that may be taking place beyond the "vision" of field personnel who may be involved with a response to a localized event. Additionally they have access to a pool of knowledge and information relative to resources available to the ORO for responding to an "emergency occurring within an emergency".

The vertical command structure utilized by the ORO does not require that all communications must first be vertically transmitted, processed and recommunicated through the entire ORO chain of command for resolution.

The vertical command structure utilized by the ORO allows for decisions to be made and problems to be resolved at each of the various levels of its structure. The more complex problems necessarily must move higher up the chain of command for resolution while the less complicated problems are resolved at a lower level within the command structure (Staging Area).

Additionally, there are intelligence gathering mechanisms (MAGI and ERN radio monitors), see Section IV infra, which provide information to the top of the command structure relative to all significant events (problems) taking place in the field. These information mechanisms are not dependent upon the chain of command for their operation.

Relative to the communications needs of the ORO the Intervenors have alleged that the Route Guide communications channel will suffer delays which are unacceptably long (in excess of 30 seconds by their estimates). This delay is judged as being excessive because the U.S. Department of Justice indicates that "an acceptable system access time for public safety communications systems is considered to be 2.5 seconds in 90% of access attempts." There is no citation for the recommendation, making it impossible to assess its applicability to the ERN as it is utilized by the ORO. It is known that, in general, the standards applied to public safety agency communications do not apply to ORO

communications. As described in the preceding paragraphs, the communications needs of the ORO differ from the needs of public safety agencies such as police or fire departments. Whereas the ORO is responding in a predetermined manner to the situation of evacuation, public safety agencies must respond in an ad hoc manner to a variety of emergency situations.

In order to arrive at an approximate user access delay time of 30 seconds, Intervenors assumed that each Route Guide would make one communication per hour. This assumption is not valid since Route Guides are only directed to communicate upon observation of a road impediment, lost or damaged dosimetry or upon exceeding dose reporting levels. It is highly unlikely that all Route Guides would need to communicate once an hour.

~~In support of their allegation that the SPMC's vertical communication structure is flawed, the Intervenors provided testimony of Gear, Sikich and Stan Cohn on ORO's response to one of the 1988 FEMA Exercise Impediment mini-scenarios. This testimony addresses ORO's response to exercise impediments, which was first at issue in MAG-EX-13. That contention, however, was not admitted on the grounds that it concerned "isolated easily correctable problems" and would "not constitute a fundamental flaw in the plan." Memorandum~~

and Order (Ruling on June, 1988 General Exercise Contentions), December 15, 1988, at 40-41.

Notwithstanding this, it is appropriate to address and correct misconceptions the Intervenors have alleged pertaining to ORO's response to the cited impediment mini-scenario. First, ORO Controller logs indicate that this impediment mini-scenario (No. 8.2-6) was initiated at 17:45 and not 16:45 as alleged in the Intervenor's testimony (see Attachment A hereto for excerpt from the log of the Controller at the impediment location). Thus ORO's response to this impediment was one hour shorter than purported by Intervenors.

Second, while Intervenors state that "actual clearance of the vehicle did not take place until 7:30 pm" (Intervenor's testimony at 14) they fail to mention ORO's complete road crew response associated with this event. Specifically, Controller logs indicate that one tow truck was dispatched to this impediment at approximately 18:50 and had arrived on location at 19:02. Upon arrival of the tow truck, the Controller told the driver that he (i.e., the truck) was unable to remove the impediment. The driver then informed the Evacuation Support Dispatcher by radio. A second tow truck (simulated) was subsequently dispatched at 19:10 and had arrived at the impediment location at approximately 19:25. At 19:35 the Controller issued a message that the

impediment had been cleared. (See Attachments A and B hereto for applicable excerpts from the logs of the Controllers at the Traffic Control Point and West Newbury Transfer Point, respectively.)

Third, the maximum delay (approximately 59 minutes from the request for the tow truck (Attachment A hereto) to the time when a tow truck was dispatched (Attachment B hereto)), is attributed to an ESB not taking the lead role in overseeing the response and was not because of a failure of the command and control structure or the communication links of the ORO. (See Attachment C hereto for excerpt from the Audit Form of the Controller at the Staging Area Communication Room). This incident does not constitute a flaw in the ORO's communications structure, but is attributable to an isolated error on the part of an individual.

Thus, based on the foregoing, ORO's response to this impediment mini-scenario cannot be construed to indicate a fundamental flaw with ORO's communications provisions.

III. ERN SYSTEM CAPABILITIES

ORO Traffic Guides, Route Guides, Transfer Point Dispatchers, Road Crews, and Vehicular Alert Notification System (VANS) Drivers are provided with two-way radios capable of operating on four paired frequencies of the Emergency Radio Network (ERN). The ERN allows field

personnel the ability to communicate directly with each other if necessary, as well as with the Offsite Response EOC and the ORO Staging Area and Reception Centers. In other words, all ERN radio equipped ORO personnel can talk directly to all other ERN radio equipped personnel. The ERN allows communications to occur in both lateral and vertical modes as needed during the emergency response.

The four paired frequencies comprise the NHY ORO ERN. Each frequency pair consists of a "repeater" channel and a "talk-around" channel. Channels 1 and 2 are designated for use by traffic control personnel. Channels 3 and 4 are designated for use by Route Guides, Road Crews and Transfer Point Dispatchers. Channels 5 and 6 are designated for use as back-up provision for interfacility communications and are available for any overflow communication. Channels 7 and 8 are designated for VANS communication and are available for any overflow communication. All odd numbered channels are repeater channels and all even numbered channels are talk around channels. Plan at § 4.5 and Figure 4.0-1. While these frequency pairs are designated for specific uses, ORO field personnel who have been issued ERN radios have the capability to communicate on any of the eight channels of the ERN. This is because all ERN field radios are equipped to operate on all eight channels.

Communications equipment is inspected, inventoried and operationally checked at least once each calendar quarter and after each use in accordance with SPMC, Sections 7.3.1, 7.4 and IP-4.3.

Wide area radio communications between ORO field personnel is accomplished through the use of four repeater stations. A repeater station operates in a "full duplex" mode receiving a transmission on its receive frequency while automatically and instantaneously re-transmitting the received information on a different frequency (its transmit frequency). During this retransmitting process the received signal is amplified or "boosted" by an RF (radio frequency) amplifier to much higher power levels. Effectively the repeater station functions as an automatic communications relay station, relaying communications between field units or between field units and the EOC, Staging Area or Reception Centers. The repeater stations provide the ORO with wide area communications directly between field units or fixed facilities beyond the range achievable with conventional (non-repeater based) communications.

When evaluating the performance of a repeater based communications system the coverage area and reliability is primarily a function of the location of the repeaters in relation to the geographic region of interest and the height of the repeater antennas in relation to the terrain

surrounding it. This is because the repeaters are relaying all communications that take place on the repeater channel. The ERN repeater stations are installed in (town, state) at (name) Hill. In the design of the ERN this location was selected because it offered an ideal communications site for providing the communications coverage area required to support the activities of ORO field workers as outlined by the SPMC. This location has a high ground elevation which when combined with the installed tower height affords a location for the ERN repeater antennas significantly higher than the terrain surrounding it for many miles. This location is well situated as it is directly adjacent to but outside the EPZ, effectively centered within the region of interest relative to the field operations of the ORO.

In light of the above, allegations contained in Intervenors testimony relative to the reliability and coverage area of the ERN outside the EPZ are without any basis in fact. Simply put, the ERN provides the required communications capabilities to support field operations as outlined by the SPMC both inside and outside the EPZ. These capabilities have been successfully demonstrated on numerous occasions during drills and the graded exercise.

~~Relative to the repeater operation it is important to correct additional misconceptions in the Intervenors'~~

testimony contained on page 3 in which they allege the following:

> "However, for the vast majority of communications between field workers the four repeaters must be used. This results in a radio capability such that only four ORO field workers can communicate with each other at any given time via the ERN."

This allegation is completely incorrect and not at all representative of the reality of the ERN communications network. The ERN repeaters in fact provide the capability to conduct (4) simultaneous complete conversations; so that four field workers can communicate with (4) other field workers. In other words a total of (8) field workers can communicate with each other at any given time via the ERN, not (4) as alleged in the Intervenors' testimony. Additionally, the structure of a repeater system allows an individual communication on the repeater to address or be "heard" by all of the "occupants" or other ERN radios on that channel. This "All Call" capability leads to communications efficiency by allowing the dispatcher or field personnel to address collectively the entire user group on that channel.

In addition to the wide area capability of the ERN provided by the repeater system, a "talk-around" capability is provided in all ORO ERN two-way field radios. This capability allows for limited range (typically one mile or less) direct communications between field personnel and is not dependent on the repeaters for its operation. The talk-

around mode in the radios is also utilized to maintain communications with field personnel from the Staging Area and the EOC via the backup high power base station in the event of a repeater failure.

Irrespective of the fact that the ORO utilizes a vertical command structure and the need for field personnel to communicate directly with one another will be minimal, there exists provisions for lateral communications amongst field personnel in the unlikely event this should become necessary. These provisions are supported by both the designed hardware capabilities of the communications networks and equipment and the training provided ORO personnel.

IV. CONTROL OF ERN COMMUNICATIONS TRAFFIC AND INFORMATION GATHERING

Radio communications with field personnel over the NHY ORO ERN is primarily controlled by the Evacuation Support Dispatchers at the Staging Area. Overall control of ERN communications is the responsibility of ORO Communications Coordinator at the EOC. SPMC, Section 2.1.

It should also be noted that all radio traffic on the NHY ORO Emergency Radio Network is monitored by the ERN Radio Operators at the Offsite Response EOC. The Radio Operators are also responsible for informing the Communications Coordinator at the EOC of offsite activities and any problems. IP 1.4 at Attachment 4. This continual monitoring

process provides a mechanism whereby important information regarding field activities and conditions can be made available to appropriate ORO personnel at the Offsite Response EOC at nearly the same time it is reported from the field to the Staging Area.

At the time of an emergency, Massachusetts State and local authorities will continue to provide the standard functions associated with police, fire and other public safety activities. The NHY ORO maintains the capability to communicate with State and local governments via the Massachusetts Governmental Interface (MAGI) radio network. The MAGI network operates on existing radio frequencies which are routinely utilized by Massachusetts State and local response organizations.

During 1985 and 1986 NHY designed or redesigned, provided and installed many of the primary communication systems now in use by many of the Massachusetts Public Safety entities that would be involved with a response to an emergency at Seabrook Station. The NHY ORO MAGI system was designed to provide a communications link to these and other public safety entities. The hardware components of MAGI were chosen and configured to allow compatibility and integration with these public safety communications systems. Accordingly, MAGI can be thought of as a "Gateway" mechanism allowing the MAGI radio operators at the EOC the ability to

monitor the public safety activities taking place in Massachusetts.

In the event it becomes necessary, due to the failure of primary communications paths between the ORO and Massachusetts Public Safety entities, MAGI will also allow a voice communications link to the various Massachusetts state and local public safety agencies.

The capability of the ORO to transmit and receive via these existing emergency radio frequencies is in accordance with guidance of NUREG-0654, Supplement 1, F.1, which states in part:

> "The utility and the offsite response organization shall establish the capability to communicate with non-participating state and local governments via normal emergency telephone number(s) (e.g., 911) and via one other backup mode such as the ability to transmit and receive via existing emergency radio frequencies."

Simply put, MAGI in its receive mode provides an informational mechanism to command personnel at the EOC relative to emergency response activities of Massachusetts state and local public safety entities.

Collectively these measures insure that important information communicated from the field is available at the EOC without having to be first vertically transmitted through the various levels of the ORO.

During an emergency, should unacceptably heavy communications traffic develop on the channel being utilized

by Route Guides or Traffic Guides, it is planned that both the overflow channel and/or the back-up interfacility channel could be utilized as additional capacity for conveying any necessary communications. This effectively provides two additional channels or a total of three (3) channels which could be made available for either Route Guide or Traffic Guide communications.

In designing the communications plan for the SPMC it was recognized that provisions needed to be in place for radio traffic to be redirected to a different channel during an emergency.

In the event that communications traffic becomes heavy for a prolonged period of time this occurrence would be reported to the Communications Coordinator who is responsible for continuously assessing the adequacy and effectiveness of all ORO communications during an emergency. Should it be determined that necessary communications are being excessively delayed by this heavy traffic, the Communications Coordinator has several options available to insure that essential communications are conveyed promptly. These options would be exercised as follows:

First, the EOC would interrupt the communications taking place on the affected channel. This interruption is achieved by generating an "alert tone" via any of the ERN radio consoles in the communications room at the EOC. This alert

tone is designed to "alert" field personnel to standby for an important message. Once alerted, the EOC can broadcast the directives to achieve the desired actions and results. ORO field personnel have been trained to the potential for this occurrence and for the role the EOC provides in functioning as "net control" to achieve this. (See Attachment E hereto.) The directive issued to the field personnel would redistribute a portion of the communications to either the interfacility channel, overflow channel or both, thus allowing all communications to take place with minimal delay.

Notwithstanding the above provisions, in the extremely unlikely event that both the overflow and interfacility channel were also in heavy use and no traffic could be redistributed to them, the Communications Coordinator has the option to interrupt the busy channel with the alert tone and broadcast a directive that "emergency traffic only" will be allowed on the channel. This procedure would insure that the highest priority traffic was communicated as quickly as possible and with minimal or no delay. This procedure is utilized by public safety entities to alleviate heavy traffic during an emergency and is effective because not all radio traffic will be emergency or priority status. ORO field personnel have been trained on these emergency message classifications and their usage.

V. PROVISIONS FOR COMMUNICATIONS WITH ROUTE GUIDES AND TRAFFIC GUIDES

Traffic Guides and Route Guides facilitate traffic management and provide evacuation support. Two-way radios are issued at the ORO Staging Area to a Traffic Guide for each Traffic Control Point (TCP) or Access Control Point (ACP), and to all Route Guides prior to their dispatch into the field. IP 2.11 at 5.1.3 and 5.1.11.

During the FEMA Graded Exercise, communication between ORO Route Guides assigned to buses and the Transfer Point Dispatchers and/or the Evacuation Support Dispatchers was successfully demonstrated. The effective range of the ERN provides reliable communications coverage to support Route Guide operations in an area that conforms to approximately a 15 to 20 mile radius of the repeaters which are located in [Town]. Relative to the above, the FEMA Exercise Report, Applicants' Exhibit 43F, characterized Route Guide communications with the Staging Area when within the range of the ERN as follows: "Radio communications between the Staging Area and school evacuation buses were effective when school buses were within the range of the ERN system". (FEMA Exercise Report, page 215 of 428.) Some of the bus yards are located outside the effective range of the ERN. Depending upon the location of the bus yard, when the buses were enroute from the bus yards but well outside the EPZ, there

were times when the route guides were outside the range of the ERN.

Route Guides are instructed as to which Bus Yard they are assigned before they leave the Staging Area. When they arrive at the Bus Yard they receive instructions regarding their destination orally (face to face) from the ORO bus dispatcher. This instruction occurs at the Bus Yard prior to the time the Route Guides leave the Bus Yard with their buses. There is therefore no plan requirement for radio communication with Route Guides prior to their entering the range of the ERN. As the buses approach the EPZ, they enter the range of the ERN and the two-way radios then allow Route Guides to communicate with the ORO Staging Area or Transfer Point Dispatcher per their procedures. IP 2.10 at Attachment 3.

During the graded exercise some Route Guides and Bus Drivers missed the one KI ingestion transmission at 1545. FEMA recommendations to alleviate this problem were as follows: "Review and revise Attachment 5 of IP 1.4 to include a roll call process or other means to insure appropriate communications are complete." The roll call process was reviewed and it was decided that it was inappropriate to achieve the desired results and in fact may be counter productive by contributing significant additional radio traffic to the channel. To address this, IP 2.8, Step

5.4.3 now instructs dispatchers to repeat KI ingestion directives to ORO field personnel approximately every 30 minutes to ensure that these personnel receive these instructions upon arrival within the ERN coverage area.

The two-way radios provide the capability for a Traffic Guide at any given Traffic or Access Control Point to directly communicate with any other TCP or ACP. Similarly, Route Guides can directly communicate with one another, both in their roles on the buses, and as the providers of notification to hearing impaired. The two-way radios also enable Traffic Guides and Route Guides to report road impediments or other information which could impact an evacuation to the appropriate personnel.

During the Graded Exercise while the Massachusetts Governmental Interface (MAGI) frequencies were being monitored, a report of a real traffic accident on Route 495 was picked up over the MAGI system. The accident was also reported over the ERN by Route Guides traversing Route 495.

VI. PROVISIONS FOR COMMUNICATIONS WITH TRANSFER POINT DISPATCHERS

Transfer Point Dispatchers are responsible for operation of the six transfer points (one per EPZ community), including directing, briefing and dispatching Bus Drivers, Route Guides and Road Crews assigned to the Transfer Points. Transfer Point Dispatchers are issued two-way radios at the Staging

Area prior to leaving for their assigned Transfer Point. IP 2.10 at 5.4.4 and 5. These radios allow Transfer Point Dispatchers to communicate, if necessary, with all ORO field personnel and with their counterparts at other Transfer Points as well as the Staging Area, EOC and Reception Center.

VII. PROVISIONS FOR COMMUNICATIONS WITH ROAD CREWS

Road Crews are also assigned evacuation support responsibilities. The Road Crews are contract personnel who take direction from the ORO Transfer Point Dispatchers who are located at the transfer points. Upon notification to report, road crews proceed to their assigned transfer point where they "standby" awaiting assignment. The road crews provide and operate tow trucks to clear disabled vehicles from evacuation routes. Road Crews are issued ERN radios upon arrival at their assigned Transfer Point, thus providing them with the capability for two-way communication with the transfer points, Staging Area and with ORO Traffic Guides and Route Guides if necessary. IP 2.10 at 5.4.7.H. The Road Crews are specifically instructed to notify the Transfer Point Dispatcher if any problems arise during their deployment. IP 2.10 at Attachment 8.

Road Crews take their direction from the Transfer Point Dispatchers who, if necessary, may communicate any necessary information to the Evacuation Support Dispatcher (ESD), per IP 2.10 at Attachment 8. Given the limited scope of road

crew responsibilities these communications are expected to be minimal. The FEMA Graded Exercise of June 28-29, 1988, demonstrated that both of these lines of communication were adequate.

VIII. PROVISIONS FOR COMMUNICATIONS WITH AMBULANCE DRIVERS

Ambulance Drivers are contract personnel who assist in evacuating special populations. Upon notification to report, they are to go to the ORO Staging Area with their emergency vehicle. At the Staging Area the Ambulance Drivers receive their specific evacuation assignment and final destination from the Special Vehicle Dispatcher. IP 2.10 at 5.3. Once dispatched from the Staging Area, any necessary communication between ambulances and the ORO Staging Area are via the Emergency Medical Services (EMS) frequencies. IP 2.10, 5.3.7.E. Radio equipment located at the Staging Area has the capability to communicate over VHF hi-band EMS frequencies. When their assignment is completed the Ambulance Drivers return to the Staging Area where, after processing, they await reassignment or dismissal. Given the specific nature of Ambulance Driver assignments, ambulance personnel will require minimal or no communications with the Staging Area nor will they have the need for direct communication with other field personnel such as traffic guides and route guides. If communication with other ORO field workers

becomes necessary, it can be relayed from the Ambulance Driver to the ORO Staging Area via the EMS radio and out to the appropriate field personnel via the NHY ORO Emergency Radio Network.

~~The Intervenors have also incorrectly interpreted the SPMC requirements for communications with ambulances to extend beyond the effective range of the EMS radio which is approximately a 12 to 15 mile radius of the Haverhill Staging Area. Given the geography involved, the coverage area of the EMS radio includes the Massachusetts EPZ and extends well beyond it. Simply put, there is no SPMC plan requirement for communications with ambulances beyond the coverage area of the EMS radio.~~

During the Exercise, the EMS radio malfunctioned. A backup radio system was used as a substitute, with two-way radios being issued to ambulance drivers as part of the backup system. This demonstrated a compensatory response to an unforeseen situation. Since the exercise, the EMS radio has been repaired, and a spare EMS radio has been obtained for use as a backup system.

IX. COMMUNICATIONS TRAINING

ORO field personnel issued two-way radios operating on the ERN have been provided training on their use. This classroom training is included in Module 20 of the NHY ORO Emergency Plan Training program, which specifically discusses

guidance for ORO field personnel on how to communicate with each other over the ERN. See Attachment D hereto for portions of this training material. In addition, walkthrough drills were conducted in preparation for the FEMA Graded Exercise of June 28 and 29, 1988. (See Attachment E hereto for portions of materials provided to participants in these drills.)

There was an appreciable amount of radio traffic during the exercise and at some points delays may have resulted. However, at no point did radio traffic preclude any needed communication from occurring. Recognizing that radio traffic can be heavy, training of all ORO personnel issued two-way radios emphasizes the need to limit radio communication to that which is required. Other important communications protocols are also emphasized (see Attachment D hereto).

The ability of the ORO to communicate with all appropriate locations, organizations and field personnel (Objective #4) was met during the FEMA Graded Exercise for Seabrook Station. FEMA Exercise Report, pages 212-215 of 428.

ATTACHMENT A

(Excerpts from Log of Controller at Impediment Location)

FORM 9.0

SEABROOK STATION EMERGENCY PREPAREDNESS
DRILL/EXERCISE CONTROLLER OBSERVATION SHEET
(continued)

Evaluator Name: L. TOWNSON Page 11 of 26

OBJECTIVE 2
ITEM 7

TIME	OBSERVATION
1735	THIRD TRAFFIC GUIDE ARRIVED ASKED BY FIRST IF HE RECEIVED KI TRAFFICKED TO ASSIGNMENT
1731	CHECKED DOSIMETRY
1743	FIRST WARNING BELL OK TO LEAVE EPZ DISPATCH TOLD TO RETURN BACK VIA EWF
1745	EXECUTED MSM SCENARIO 82-6
1748	TRAFFIC GUIDE CALLED DISPATCH ADVISED DISPATCH THEM WOULD INSPECT RAMP
⇒ *1755	ADVISED THEM RAMP WAS TOTALLY BLOCKED GUIDE ASKED ABOUT AMOUNT OF TRAFFIC TOLD THEM MODERATE TRAFFIC FLOW * I ACTIVATED MESSAGE 8.2-6A

Signature: L Townson Title: CONTROLLER (Traffic)

D/2471.4.20

FORM 9.0

SEABROOK STATION EMERGENCY PREPAREDNESS
DRILL/EXERCISE CONTROLLER OBSERVATION SHEET
(continued)

Evaluator Name: L. TOWNSON Page 12 of 26

TIME	OBSERVATION
18[00]	CALLED DISPATCH FOR WRECKER
	DISCUSSED WAYS TO REROUTE TRAFFIC
	TRIED TO BLOCK TRAFFIC ON I95
	TROOPER 2 TOLD THEM IT DID THERE WAS
	TO MUCH TRAFFIC TO TRY TO
	STOP
	ASKING PEOPLE TO HELP MOVE LUMBER
18[10]	BLOCKING TRAFFIC ONE LANE
	SOUTH TRYING TO LOCK TRAFFIC UP THE
	ON RAMP AND FACILITATE TRAFFIC
	FLOW SOUTH
SEE NEXT PAGE 18[15]	DISPATCH CALLED WRECKER WAS BEEN DISPATCHED
	FEMA Q) WHO ARE YOU CALLING
	A) SALEM DISPATCH
	Q) BACKUP FOR RADIOS
	A) 2 EXTRA BATTERY PACKS
	Q) KI DISPENSING
	A) UP TO DISPATCH
18[25]	CHECKED DOSIMETERS

Signature: [signature] Title: CONTROLLER (Traffic)

D/2871.4.20

FORM 9.0

SEABROOK STATION EMERGENCY PREPAREDNESS
DRILL/EXERCISE CONTROLLER OBSERVATION SHEET
(continued)

Evaluator Name: L. TOWNSON Page 13 of 26

TIME	OBSERVATION
18 24	NO WORD FROM DISPATCH SO FAR ON REROUTING
18 37	DISPATCH CALLED TO SEND 1 TRAFFIC GUIDE TO X SCOTTLAND RD + WHITEFIELD ROADS AND DIVERT TRAFFIC TO 95 S
18 38	DISPATCH DO NOT STOP EVACUATION BUSES FROM PROCEEDING ON SCOTTLAND RD.
18 49	TRAFFIC GUIDE CALLED TO SAY THEY HAD DISPATCHED 1 GUIDE TO - OTHER INTERSECTION (SIMULATED) THEY DID NOT SEND ONE)
18 55	DISPATCH CALLED A TOW TOW - TOW TRUCK HAS BEEN DISPATCHED FROM (W NEWBURY TOWN?)
19 02	TOW TRUCK ARRIVED D/M. DOHERTY
A 18	INFORMED TOW TRUCK DRIVER HE COULD NOT REMOVE IN ACCIDENT 8.2-6C
1906	TRAFFIC GUIDE CALLED DISPATCH

DIS. INVES 2 ITEMS

Signature: L Townson Title: (Traffic) CONTROLLER

D/2471.4.20

FORM 9.0

SEABROOK STATION EMERGENCY PREPAREDNESS
DRILL/EXERCISE CONTROLLER OBSERVATION SHEET
(continued)

WN-03

Evaluator Name: L. TOWNSON Page 14 of 26

TIME	OBSERVATION
1908	TOW TRUCK DRIVER CALLED [redacted] DISPATCH COULD NOT GET THROUGH (RADIO TRAFFIC HEAVY)
1912	DISPATCH RESPONDED THEY WOULD SEND ANOTHER TOW TRUCK (DID NOT CLARIFY SIMULATED OR REAL)
1925	DISPATCH CALLED [redacted] HAS SIMULATED TOW TRUCK [redacted] ARRIVED AT WN-03? [redacted] TOW TRUCK DRIVER [redacted] ISSUED MESSAGE (SEE NOTE)
1935	ISSUED MESSAGE TO TRAFFIC GUIDE IMPEDIMENT CLEARED DEACTIVATED TCP WN-03
1925	DISPATCH INQUIRED IF SIMULATED TOW TRUCK HAD ARRIVED [redacted] TOW TRUCK DRIVER REPLIED THAT THE [redacted] SIMULATED TOW TRUCK HAD ARRIVED (WITHOUT DIRECTION BY CONTROLLER) & [redacted] ISSUED [redacted] MESSAGE AT 1936 AFTER RADIO PROBLEM WAS RESOLVED (CONTROLLER CHANNEL WAS DOWN) RADIO PROBLEMS

Signature: L Townson Title: CONTROLLER

D/2471.4.20

ATTACHMENT B

(Excerpts from Log of Controller
at West Newbury Transfer Point)

FORM 9.0

SEABROOK STATION EMERGENCY PREPAREDNESS
DRILL/EXERCISE CONTROLLER OBSERVATION SHEET

Evaluator Name: Alan Babineau Drill/Exercise Date: 6/28/88

Work Telephone No. 617 872-8100 Ext. 2630 Location: West Newbury Transfer Point

Drill/Exercise Title: FEMA/NRC Graded Exercise 1988

Time Drill Commenced: 09.15 Time Drill Terminated: 20

OBSERVATIONS/COMMENTS

Page 1 of 2

NOTE: Observations should include the proper and effective use of procedures, equipment and personnel. Please summarize your comments on a blank observation sheet and attach to front of your gross observation sheets.

TIME	OBSERVATION
9:55	Transfer Point Controller, I have arrived at location.
10:20	2 elderly persons stopped and started asking questions about what (Activists) this location is going to be used for. Drove by again at 11:30 2 50
13:00	Transfer Point Dispatchers arrived. Doug MacDonald, Henry Reese
13:05	Cosby towing Service - wrecker arrived driver Mike Doherty
13:20	Transfer Point Completely mobilized, also notified staging Area
13:54	General Emergency declared from Salem Staging Area.
15 15	Route Guides for the Hearing Impaired arrived (5)
15:35	Release in progress and increasing.
15:40	830 health advisor instructing to administer Ingest KI in Massachusetts
15:52	Evacuation has been authorized for all towns in Mass.
16:45	1st Bus Arrived at transfer Point

Signature: Alan Babineau Title: West Newbury Transfer Point Controller

FORM 9.0

SEABROOK STATION EMERGENCY PREPAREDNESS
DRILL/EXERCISE CONTROLLER OBSERVATION SHEET
(continued)

Evaluator Name: Alan Bolduc Page 2 of 2

TIME	OBSERVATION
16 52	Sent Bus on WN 01 with decals. Bus number 188
17:13	First bus route completed picking up 20 evacuation persons
17:16	Sent bus on route 2 WN02
17:48	Bus completed WN02 and picked up 26 passengers
17:53	Sent bus out on Route WN03
17:55	Simulated sending out 1 Bus load full of passengers to the North Andover Reception Center.
18:20	Bus completed Route WN 03 picked up 27 passengers
18:30	Sent Fox Bus off completing route to North Andover Reception Center.
18:50	Receive message from Salem Transfer Point Dispatcher to dispatch 1, 10 Ton Tow Truck to the Scottland Rd Southbound and I-95.
19:10	Sent a simulated 10 Ton Tow Truck to assist the Previous 10 Ton Tow Truck to clear road Impediment = 95 cc.
19:30	Road has cleared road Impediment, traffic back to normal.
19:45	Road Crew has returned from clearing traffic Impediment.
20:20	Received instructions from Salem Staging to deactivate Transfer Point, could not deactivate transfer point because we had a hearing impaired Route Guide, a controller and 1 FEMA person still out running routes. officially deactivated West Newbury Transfer Point at 21:15 and returned to the Salem staging Area.

Signature: Alan Bolduc Title: West Newbury Transfer Point Controller

D/2471.4.20

ATTACHMENT C

(Excerpts from Audit Form of Controller
at Staging Area Communications Room)

FORM 9.1

EMERGENCY DRILL/EXERCISE CONTROLLER/EVALUATOR AUDIT FORM

Observer: William F Renz (Name) FEMA/NRC Graded Exer. (Drill Exercise) 6/28-29/88 (Date)

Drill Exercise Title: FEMA/NRC Graded Exercise

Location of Observer: Staging Area Communications Room (ORO)

Observed:

Shift No. 1:	Player	Function
Kate Carbonecesa	Dirk Deshurnais	Evacuation Support Dispatcher / Human Support
Joe Casey	Paul Hyman	
Joe Curran	Dennis Prockett	Staging Area Leader
Bob Badger	Helen Samorco	
Miscellaneous Staff	Debbie Hall, Steve Johnson	

Overall Performance: (Cross reference comments to specific objective)

(Obj.) Overall, Communications Room personnel performed their respective responsibilities well. Both internal and radio communications [redacted] were generally conducted in a timely and professional manner.

(Obj. No. 2): Personnel arrived promptly and activated the Communications Room. Actual time between callout and arrival of personnel was not observed.

(Obj. No. 3): Command and Control of the facility was clearly in the hands of the Staging Area Leader. More control and coordination in the Communications Room would have been beneficial. (See Plans/Procedure comment No. (1)).

(Obj. No. 4): All communications systems in the Communications Room worked well and personnel were familiar with the operation of the equipment. Messages were generally transmitted quickly and accurately and were always repeated to ensure accuracy. Backup communication used due to EMS frequency failure experienced minor problems (see Communication Process comment No. (1)).

(Obj. No. 18): Protective Actions and direction was communicated to Traffic Control Points and Transportation personnel via radio. Additionally, status of evacuation route buses was monitored.

[signature] (Signature) 6/29/88 (Date)

M/KK4192

FORM 9.1

EMERGENCY DRILL/EXERCISE CONTROLLER/EVALUATION AUDIT FORM
(Continued)

W F Renz
Name (print)

Recognized deficiency: (Note Objective and Criteria Number)

Adherence to Plan/Procedures Comments:

Recommendations for Improvement (Specific)

Adherence to Plan/Procedure Comments: (1) (Obj. #5) The Evacuation Support Dispatcher should have taken more of a lead and coordination role between the Staging Area leader and Bus/traffic operations. This would have prevented the confusion that arose between 1800 and 1830 over whether a wrecker had been dispatched to the 1st road impediment at TCP WN-03. The ESD should have been aware of the status of the response and informed the Staging Area leader or his assistant sooner than 1847 that a wrecker had not gone out. Recommendation: That an ESD be named lead, the Assistant SAL be appointed this responsibility, or add a position to perform this function.

(2) (Obj. 34) Procedures should provide more direction concerning shift change process. The Staging Area Leader decided to conduct a briefing of white team personnel after communications room personnel had arrived and started a turnover, thereby causing red team members to resume their duties. White team members should observe and become aquainted with situation before formal briefing is held. After briefing, turnover may take place.

Signature: WFR   Date: 6/8/88

M/KK4192.3

ATTACHMENT D

(Portions of Training Material Regarding Field Personnel to Field Personnel Communication)

RADIO OPERATING PROCEDURE

CALL TO UNIT OTHER THAN

DISPATCHER

Traffic Unit Two:	Traffic Dispatcher from Traffic Two. This is a drill. Over.
Traffic Dispatcher:	Go ahead Traffic Two. Over.
Traffic Unit Two:	Request permission to call Traffic Five. Over.
Traffic Dispatcher:	Traffic Two call Traffic Five. Over.
Traffic Unit Two:	Traffic Five from Traffic Two. Over.
Traffic Unit Five:	Go ahead Traffic Two. Over.
Traffic Unit Two:	Please meet me at the intersection of Main and West Streets to pick up your traffic cones. Over
Traffic Unit Five:	I will meet you there in five minutes. This is a drill. Traffic Five clear.
Traffic Unit Two:	Traffic Dispatcher from Traffic Two. Over.
Traffic Dispatcher:	Go ahead Traffic Two. Over.
Traffic Unit Two:	Traffic Two is clear.
Traffic Dispatcher:	This is a drill. Traffic Dispatcher clear.

6.4 Routine Message.

6.4.1 Lowest priority message category.

6.4.2 All messages not meeting emergency or priority message category requirements.

6.4.3 Routine messages must give way to emergency and priority messages.

7.0 RADIO OPERATING PROCEDURE

EO-EM1020C0600

7.1 Example of routine message directed to Dispatcher:

Situation in most cases
TP/7. Radio Operating Procedure
Routine Message to Dispatcher

Traffic Unit Two: Traffic Dispatcher from Traffic Two. This is a drill. Over.

Traffic Dispatcher: Go ahead Traffic Two. Over.

Traffic Unit Two: Traffic two is in position at Traffic Point Two. Over.

Traffic Dispatcher: This is a drill. Message received. Traffic Dispatcher clear.

7.1.1 Never assume that a message has been received unless you receive verification:

- In the above, the Dispatcher verified that the message was received

No need for field unit to make another transmission

7.1.2 Use of "Over" at end of message indicates you have finished the transmission and are turning the channel over to the other unit for a reply.

7.1.3 Use of "clear" or "out" at end of message indicates you have finished communicating.

No further message from that uni expected

7.2 Example of a call to a radio unit other than the Dispatcher:

TP/8. Radio Operating Procedure-Call To Unit Other Than Dispatche

Traffic Unit Two: Traffic Dispatcher from Traffic Two. This is a drill. Over.

Traffic Dispatcher: Go ahead Traffic Two. Over.

Traffic Unit Two: Request permission to call Traffic Five. Over.

Traffic Dispatcher: Traffic Two call Traffic Five. Over.

Traffic Unit Two: Traffic Five from Traffic Two. Over.

Traffic Unit Five: Go ahead Traffic Two. Over.

Traffic Unit Two: Please meet me at the intersection of Main and West Streets to pick up your traffic cones. Over.

Traffic Unit Five: I will meet you there in five minutes. This is a drill. Traffic Five clear.

Traffic Unit Two: Traffic Dispatcher from Traffic Two. Over.

Traffic Dispatcher: Go ahead Traffic Two. Over.

Traffic Unit Two: Traffic Two is clear.

Traffic Dispatcher: This is a drill. Traffic Dispatcher clear.

7.2.1 Protocol is necessary to maintain control and order on a radio channel.

Procedure is fairly lengthy

7.2.2 For one radio unit to call another unit, must first ask for the Dispatcher's permission.

7.2.2.1 Traffic Dispatcher passes control of radio channel to the Traffic Unit.

7.2.2.2 Later the Traffic Unit returns control back to the Dispatcher.

7.2.3 The number of words used are as brief and precise as possible to minimize transmission time.

7.3 Example of correct way to transmit fictitious Public Safety information during a drill or exercise:

TP/8, Radio Operating Procedure-Transmission of Fictitious Public Safety Information

Traffic Unit Two: This is a drill. Traffic Dispatcher from Traffic Two with a test emergency message. Over.

ATTACHMENT E

(Portions of Materials Provided to Participants
of the Walkthrough Drills Conducted in Preparation
for the FEMA Graded Exercise of June 28 and 29, 1988)

COMMUNICATIONS AND ETIQUETTE FOR FIELD RADIO OPERATORS

RADIO SYSTEM OPERATION AND THE DISPATCHER

Radio operators using the Emergency Radio Network need to be aware that there may be more than 100 field radios in use on an 800 MHz radio channel during a drill or exercise and many radio messages will be generated. Uncontrolled radio use will rapidly cause chaos on a radio channel because only one radio may be heard on a channel at a time. There must be one radio unit to control the use of a radio channel. The Dispatchers at the Staging Area control field units in the New Hampshire Yankee Off Site Response Organization. There is a separate Dispatcher for each radio channel.

The Dispatcher is the communications "policeman." He directs the flow of radio traffic between all field units on a channel. A field radio operator must always make a request to the Dispatcher for permission to transmit a message on the radio. Before granting the request, a Dispatcher will take into consideration the ongoing events and make a determination if the radio channel is clear for use. This process ensures that the highest priority message is transmitted first.

The Dispatchers at the Staging Area are responsible for receiving and controlling the tactical communications of a drill or exercise. Another set of radio operators, located in the EOC at Newington Station, are responsible for monitoring the operations of a drill or exercise and disseminating policy information affecting field units from officials at the EOC. The EOC stations are referred to as "Net Control." The Net Control radio operators will interrupt communications on the radio channel only if there is important information to be communicated from the EOC. They will transmit an "alert" tone before transmitting information to obtain the attention of all units. The EOC stations also serve as backup Dispatchers.

MORSE CODE REPEATER IDENTIFICATION

Each 800 MHz repeater is equipped with a morse code identification device that transmits the radio call letters approximately every 15 minutes. Use this identification signal as a reminder to check your dosimetry.

RADIO MESSAGES

Messages are "packets" of information communicated from one person to another. The urgency to communicate this information can be generally classified into three categories.

EMERGENCY Messages are the most important message category. Emergency Messages contain information that reports immediate danger to life and property. Messages of this type are those relating to fire, accidents with injuries and severe medical problems requiring immediate medical attention.

PRIORITY MESSAGES are the second most important message category. A Priority Message contains information that reports "potential" danger, or information that must be communicated quickly to prevent wasted time, money or duplication of effort. Examples of situations requiring Priority Messages could be:

1. Reporting a non-injury accident blocking traffic;
2. Notification of a changed status of a drill; and
3. Messages regarding fast breaking events affecting the placement of personnel.

Messages disseminated from the EOC are usually considered Priority Messages. Priority Messages are lower in priority than Emergency Messages.

ROUTINE MESSAGES are the third category. All remaining message information falls into this category. Routine Messages are of lowest priority and must give way to Emergency and Priority Messages.

RADIO OPERATING PROCEDURE

The following are examples of radio messages to demonstrate correct radio usage:

Traffic Unit Two: Traffic Dispatcher from Traffic Two. This is a drill. Over.

Traffic Dispatcher: Go ahead Traffic Two. Over.

Traffic Unit Two: Traffic Two is in position at Traffic Point Two. Over.

Traffic Dispatcher: This is a drill. Message received. Traffic Dispatcher clear.

This example shows a Routine Message that is directed to the Dispatcher. It will be the standard practice in most cases. Notice that the message required only four radio transmissions and the whole process took less than 30 seconds. Never assume that a message has been received unless you receive verification. In this case, there is no need for the field unit to make another transmission because the Dispatcher has verified that the message was received.

The use of the word "over" at the end of a radio transmission indicates that you have finished the transmission and that you are turning the channel over to the other unit for a reply. The use of the word "clear" or "out" at the end of a message indicates that you have finished communicating and you expect no further messages from that unit.

The use of "This is a drill" at the approximate beginning and end of a series of radio transmissions serves as a reminder to all, including casual observers, that a drill is being conducted on the radio channel. It is not necessary to say "This is a drill" on every radio transmission. More on this topic will be discussed later in this document.

The following example demonstrates the correct way to call a radio unit other than the dispatcher:

Traffic Unit Two: Traffic Dispatcher from Traffic Two. This is a drill. Over.

Traffic Dispatcher: Go ahead Traffic Two. Over.

Traffic Unit Two: Request permission to call Traffic Five. Over.

Traffic Dispatcher: Traffic Two call Traffic Five. Over.

Traffic Unit Two: Traffic Five from Traffic Two. Over.

Traffic Unit Five: Go ahead Traffic Two. Over.

Traffic Unit Two: Please meet me at the intersection of Main and West Streets to pick up your traffic cones. Over.

Traffic Unit Five: I will meet you there in five minutes. This is a drill. Traffic Five clear.

Traffic Unit Two: Traffic Dispatcher from Traffic Two. Over.

Traffic Dispatcher: Go ahead Traffic Two. Over.

Traffic Unit Two: Traffic Two is clear.

Traffic Dispatcher: This is a drill. Traffic Dispatcher clear.

The above example demonstrates the correct procedure for one field unit to call another. Notice that the Traffic Dispatcher passed control of the radio channel to Traffic Two. Traffic Two later returned control back to the Dispatcher. The procedure is lengthy, but it is absolutely necessary to maintain control and keep order on a radio channel. Notice that the words used are brief, clear and precise.

The following example demonstrates the correct way to transmit fictitious Public Safety information during a drill or exercise:

Traffic Unit Two: This is a drill. Traffic Dispatcher from Traffic Two with a test emergency message. Over.

Traffic Dispatcher: Go ahead Traffic Two. Over.

Traffic Unit Two: This is a test message. I am reporting a traffic accident with injuries to two people at the intersection of High and Maple Streets. This is a test message. Over.

Traffic Dispatcher: Traffic Two, I have received your test emergency message. Please standby for further instructions. Over.

Traffic Unit Two: This is a drill. Traffic Two will be standing by for further information.

(A FEW MINUTES ELAPSE)

Traffic Dispatcher: Traffic Two from Traffic Dispatcher. Over.

Traffic Unit Two: Go ahead Traffic Dispatcher. Over.

Traffic Dispatcher: As part of the drill, we are actually sending a tow truck to your location. Please standby at that location and notify us when the truck arrives. Also, as part of the drill, we are simulating the notification of Public Safety Personnel. Over.

Traffic Unit Two: This is a drill. I understand that you are actually sending a tow truck to my location. I will notify you when it arrives. Traffic Two is clear.

Traffic Dispatcher: This is a drill. Traffic Dispatcher clear.

The words "This is a test message" must be used directly before and after any fictitious Public Safety information is transmitted over a radio. This action is required by FCC rules.

It is possible for the general public to intercept these radio transmissions. Reception of information during a drill or exercise could possibly cause concern or panic to someone if they thought the information was real. It is important that personnel taking part in the drill understand when fictitious Public Safety information is being exchanged. If you have to report a real emergency during a drill or exercise, make certain that it is understood by the person to whom you are reporting the information.

In the initial portion of this example, Traffic Unit Two called the Dispatcher and indicated that he had a "test Emergency Message." This information tells the Dispatcher that he has a simulated emergency message to report. This form of request is also used to report Priority Messages ("test Priority Message"). No special announcements are used for Routine Messages.

GENERAL CONSIDERATIONS OF RADIO OPERATION

When using a portable radio, hold the radio so that the antenna is vertical.

LISTEN before transmitting. Be sure you are not interrupting a conversation in progress.

Press the transmit button and wait a second before you begin to speak. There is a slight delay between the time you press the transmit button and the time the repeater is ready to retransmit your signal.

SPEAK SLOWLY AND PRONOUNCE EACH WORD CLEARLY. If the Dispatcher tells you that you have a weak signal, try to move a few feet to a more open location and try again.

LEAVE A SHORT PAUSE between each transmission. Someone may have an Emergency Message to transmit.

DIRECT initial COMMUNICATIONS TO THE DISPATCHER. The Dispatcher is in charge of the radio channel. All requests to transmit must be directed to the Dispatcher.

Always make your radio transmissions as short as possible. REMEMBER YOU SHARE the channel with up to 100 other radio units.

Make sure the other station has verified the receipt of your message.

DO NOT COMMENT on a conversation unless absolutely necessary. Use the correct operating procedure.

LESSON: Training of ORO personnel on the use of the 800 Mhz. GE M-PD portable radio equipment.

I. OVERVIEW/INTRODUCTION:

This lesson plan is designed to train ORO personnel on the proper use of the GE M-PD portable radio. The training will include instruction on the physical aspects of the radio, overview of the 800 Mhz. radio system, overview of FCC rules and regulations, and on proper radio etiquette to communicate with other radio units.

II. PREREQUISITES:

None.

III. INSTRUCTIONAL OBJECTIVES:

Terminal Objective: Upon completion of this lesson, the student should have a basic understanding of the radio hardware, accessories, controls, and features associated with the GE M-PD portable radio. The student should also understand repeater verses talk-around radio communication operation, the role of the dispatcher, FCC rules pertaining to the use of the radio and a basic understanding of radio etiquette.

Enabling Objectives: The student will be given hands-on training of the GE M-PD portable radio. All associated accessories will be demonstrated. Classroom training will be given on the 800 Mhz. radio system, repeater verses talk-around operation, the role of the dispatcher, FCC rules, and radio etiquette. Handouts will be used to supplement verbal instructions.

IV. REFERENCES:

GE M-PD Operating Manual

V. EQUIPMENT/MATERIALS:

GE M-PD radios and accessories
Blackboard
Handout - 800 Mhz. Portable Radio Instructions
Handout - 800 Mhz. ORO Radio System Diagram
Handout - Instructions for Use of the Overflow Channel
Handout - Diagram Repeater Verses Talk-around Operation
Handout - Communications Operation and Etiquette for Field Radios
Handout - FCC Radio Regulations

VI. LESSON:

Distribute radios and handouts.

Overview of the ORO radio system.
- Discussion of ORO 800 Mhz. radio system.
- Discussion about dispatch points at Staging Area and EOC.
- Discussion about the four 800 Mhz. radio channels and the use of the overflow channel.
- Discussion of the operation of repeaters and how they differ from simplex operation.

Discussion of Communications Operation and Etiquette for Field Radios.
- Discussion of communications and the role of the dispatcher.
- Discussion of the types of messages; Emergency, Priority, and Routine.
- Discussion of proper radio operating procedure.
- Discussion of FCC regulations as they apply to the ORO Field radios.
- Summary of important highlights of radio etiquette.

Demonstration and hands on use of the GE M-PD portable radio.
- Point out location of controls and switches and how they operate.
- Discussion of display indicators and what they mean.
- Demonstrate how to properly remove and install the battery pack.
- Demonstrate the proper way to make a radio transmission.

Demonstration of radio accessories for the GE M-PD radio. (No hands on use.)

Demonstration of special equipment for use of the GE M-PD radio in cars and buses. (No hands on use.)

RADIO SYSTEM OPERATION AND THE DISPATCHER

There may be 100 or more portable radios in use on an 800 Mhz. radio channel during a drill or exercise and many radio messages will be generated. Uncontrolled radio use will quickly cause chaos on a radio channel because only one radio may transmit on a channel at a time. There must be one radio unit to control the use of a radio channel. The designated control units for the Off Site Response Organization are the dispatchers at the Staging Area. There is a different dispatcher for each radio channel.

The dispatcher is the communications "policeman" that directs the flow of radio traffic between all stations on a channel. A radio operator must always make a request to the dispatcher for permission to transmit a message on the radio. Before granting the request, a dispatcher will take into consideration the ongoing events and make a determination if the radio channel is clear for use. This process ensures that the highest priority messages are transmitted first.

RADIO MESSAGES

Messages are "packets" of information communicated from one person to another. The urgency to communicate this information can be generally classified into three categories.

The most important message category is that of emergencies. Emergency messages contain information that reports immediate danger to life and property. Messages of this type are those relating to fire, accidents with personnel injuries, and severe medical problems requiring immediate medical attention.

The second most important message category is the priority message. A priority message contains information that reports "potential" danger, or information that must be communicated within a short period of time to prevent wasted time and money. Examples of situations requiring priority messages would be reporting a non-personal injury accident blocking traffic, a notification of a changed status of a drill, and messages regarding fast breaking events affecting the placement of personnel.

The third message category is the routine message. All remaining message information falls into this category. Routine messages are of lowest priority and must give way to emergency and priority messages.

RADIO OPERATING PROCEDURE

The following are fictitious examples of radio messages to demonstrate correct radio usage:

Traffic Unit Two: Traffic Dispatcher from Traffic Two.

Traffic Dispatcher: Go ahead Traffic Two.

Traffic Unit Two: This unit is in position at Traffic Point Two.

Traffic Dispatcher: Message received. Traffic Dispatcher clear.

This example shows a routine message that is directed to the dispatcher. This example will be the situation in most cases. Notice that the message required only four radio transmissions and the whole process takes less than 30 seconds. You should never assume that a message has been received unless you receive verification. In this case, there is no need for the field unit to make another transmission because the dispatcher has verified that the message was received. The use of the word "clear" or "out" at the end of a message indicates that you have finished communicating and you expect no further messages from that unit.

The following example demonstrates the correct way to call a radio unit other than the dispatcher:

Traffic Unit Two: Traffic Dispatcher from Traffic Two.

Traffic Dispatcher: Go ahead Traffic Two.

Traffic Unit Two: Request permission to call Traffic Five?

Traffic Dispatcher: Permission granted to call Traffic Five.

Traffic Unit Two: Traffic Five from Traffic Two.

Traffic Unit Five: Go ahead Traffic Two.

Traffic Unit Two: Please meet me at the intersection of Main and West Streets to pick up your traffic cones.

Traffic Unit Five: I will meet you there in five minutes. Traffic Five clear.

Traffic Unit Two: Traffic Dispatcher from Traffic Two.

Traffic Dispatcher: Go ahead Traffic Two.

Traffic Unit Two: Traffic Two is clear.

Traffic Dispatcher: Traffic Dispatcher clear.

The above example demonstrates the correct procedure for a radio

unit to call another by asking the dispatcher's permission. Notice that the Traffic Dispatcher passed control of the radio channel to the Traffic Unit and the Traffic Unit later returned control back to the dispatcher. The procedure is lengthy, but the protocol is absolutely necessary to maintain control and order on a radio channel. Also notice that the number of words used are as brief and precise as possible to cut down on the length of transmission time.

The following example demonstrates the correct way to transmit fictitious information during a drill or exercise:

Traffic Unit Two: Traffic Dispatcher from Traffic Two with a test emergency message.

Traffic Dispatcher: Go ahead Traffic Two.

Traffic Unit Two: This is a test message. I am reporting a traffic accident with personal injury of two people at the intersection of High and Maple Streets. This is a test message.

Traffic Dispatcher: Traffic Two this is a test message. I have received your test message and I am dispatching you a simulated ambulance and tow truck to the intersection of High and Maple Street. This is a test message.

Traffic Unit Two: Message received. Traffic Two clear.

The words "This is a test message." must be used before and after any fictitious or simulated information is transmitted over a radio. This action is required by FCC rules. It is possible for the general public to intercept these radio transmissions. Reception of information transmitted during a drill or exercise could possibly cause concern and panic to someone if they thought the information was real. It is also important that our own personnel understand when fictitious information is being exchanged. If you have to report a real emergency during a drill or exercise, say so, and make certain that it is understood by the person to whom you are reporting the information.

TECHNICAL CONSIDERATIONS OF RADIO OPERATION

There are other technical aspects of radio operation that must be considered. When using a portable radio, hold the radio in such a manner that the antenna is vertical. Press the transmit button and talk in the front of the radio in a firm but normal voice. Do not speak fast and pronounce each word clearly. If the dispatcher tells you that you have a weak signal, try to move a few feet to a more open location and try again.

Personnel using base radios at the Staging Area and Reception

Centers will be using a desk microphone. This microphone is designed to pick up your voice at a distance of about 12 inches. Your voice will sound distorted if you do talk directly into the microphone.

RADIO ETIQUETTE NOTES

Always listen before trarsmitting to be sure that you are not interrupting a conversation in progress.

Always leave a short pause between each transmission. Someone may have an emergency message to transmit.

All initial communications should be directed toward the dispatcher. The dispatcher is the "boss" of the radio channel and all requests to transmit must be directed to the dispatcher.

Remember that there may be over 100 other radio units that share the use of your radio channel. Always make your radio transmissions as short and precise as possible.

Always make certain that the other station has verified the receipt of your message.

Do not use the radio unless there is a real need and there is no other practical method to deliver the message. Use a telephone if there is one available.

Do not interject your comments into a conversation unless absolutely necessary and you use the correct operating procedure.

Professional Qualifications
of
Gary J. Catapano
President, AllComm, Inc.

My name is Gary J. Catapano and my business address is AllComm, Inc., 165 Martell Court, Keene, NH 03431. I am the President of AllComm, Inc., a company specializing in design of emergency communications systems founded by me in July of 1984.

I am certified by the National Association of Radio and Telecommunications Engineers (NARTE) as Communications Engineer with special skills endorsements in three areas: Land Mobile Systems, Land Mobile Interference and Analysis and Suppression, and Inside Plant Telephone Engineering. I am also a senior member of NARTE.

I hold a "Lifetime" FCC General Class Radiotelephone Engineering license and I am certified as an R.F. Engineering Technician by the National Association of Business and Educational Radio (NABER). I am also a member of NABERS Professional Mobile Radic Service Section.

I have studied electrical engineering at Suffolk Community College and other curriculum at Keene State College and Nathaniel Hawthorne College. I am a 1970 graduate of L.A. Wilson Tech where I studied Radio and Television Electronic Communications.

I have additional special education in the following areas: microwave radio system design, telephone systems,

telephone systems traffic theory and network design. I have participated in 14 special training seminars covering all aspects of the land mobile communications field. I have developed engineering programs to aid in the prediction and elimination of the harmful interference caused by undesired radio transmissions.

Since July of 1985, my company has been employed by New Hampshire Yankee to conduct an evaluation of the communications networks utilized by governmental entities, public safety agencies and other concerns involved with the Seabrook Station Radiological Emergency Response Plan for both New Hampshire and Massachusetts. I assumed the lead responsibility for this project which consisted of four phases. The objectives of Phase I were to study and identify the types of systems currently in place and identify existing problem areas. The first phase involved extensive field work and interviews with public safety officials of the states, counties, and local municipalities. Phase 2 involved the analysis of this information in order to determine the effect that the additional RERP communications would have on the existing systems and to formulate the engineering changes. Subsequent meetings were held again with public safety officials to review the recommendations. Phase 3 involved the installation test and debug of all the equipment. Phase 4 involves further refinement of these systems, documentation and training, and drill and exercise support.

During the second half of 1985 and into late 1986, an extensive part of the project effort was focused on the six Massachusetts municipalities within the plume exposure pathway, the two "Host" communities, Massachusetts State Police and other entities involved at the time in the "draft" Massachusetts radiological emergency response plans for Seabrook Station.

Also, as part of this project, I have assisted the utility and the State of New Hampshire with design and installation of the communications networks for the NHY Emergency Operations Facility and the NH state EOC and Incident Field Office.

With the creation of the New Hampshire Yankee Offsite Response Organization, I have the responsibility for the design and installation of the ORO communications networks in support of the Seabrook Plan for Massachusetts Communities. I am also a volunteer for the NHY ORO and hold the position of Red Team Communications Coordinator. I have participated in all of the drills leading up to the graded exercise and participated on both days of the graded exercise as the communications coordinator at the NHY ORO EOC.

Prior to my founding AllComm, Inc., I was employed as the General Manager of HEW Communications, Inc. As part of my duties while at HEW I was the project manager and engineer for the design and installation of the emergency communications systems that form the backbone of the public

notification system and emergency communications networks for 34 municipalities and 3 state civil defense agencies involved with the Vermont Yankee Nuclear Power Plant and Yankee Atomic Electric Company, Rowe, MA Nuclear Power Plant. This project involved an assessment of the existing communications capabilities, extensive interviews with local public safety officials, the design of new communications systems and integration with existing systems.

I had the lead responsibility for the entire project including the training and documentation which included two comprehensive technical manuals which provide the foundation for the utilities FEMA-43 submittals. During the initial phase of this project, much of the existing guidance for the design of public notification systems and emergency communications systems did not exist. I provided technical support to Yankee Atomic Electric Company in drafting comments to FEMA's proposed guidance for the alert and notification systems.

As part of the above project, I also designed a special system in cooperation with NOAA (National Weather Service) which links vital information from the National Weather Service offices in Burlington, Vermont to over 8,000 Alert receivers located approximately 100 miles away in some of the residence within the Emergency Planning Zones of both plants. This system operates 24 hours, 365 days a year, and has done so since November of 1981.

Prior to my beginning the New Hampshire Yankee project, my firm assisted Vermont Yankee in the relocation of their Emergency Operations Facility to its new location. My main responsibility was for the design and installation of the radio communications systems for this facility and to minimize and eliminate any interference that resulted from the co-location of communications facilities. We also performed this same function for Yankee Atomic Electric Company's emergency operations facility for the Rowe, MA Nuclear Power Plant.

My firm currently has the responsibility for the surveillance and maintenance programs for the prompt notification systems for both Vermont Yankee and Yankee plants. Since early 1982, these systems have been in operation and functioning with a very high percentage of operability (over 99%).

I have also participated in fourteen full scale federally witnessed emergency exercises and many numerous full scale drills providing communications support (troubleshooting, diagnosis and emergency repair) to the utilities and state agencies. My firm currently provides these emergency communications support services to three nuclear power facilities in New England.

Prior to the Seabrook project, while at AllComm, and HEW, I have been called in as an expert to "debug" many types of communications systems that were not functioning as

intended. I have designed and installed many types of electronic communications systems. This work includes projects for state agencies, public safety dispatch centers, and regional fire mutual aid compacts, ski areas, broadcast stations, business and industrial concerns. With divestiture of the Bell System, this work has grown to include the design and installation and interfacing of telephone networks and increasing liaison work with the Bell Operating Company (New England Telephone). I currently hold technical certifications for four different manufacturers of telephone systems including two sophisticated PABX systems. I have supervised the installation of over several hundred telephone systems, including many in public safety applications.

From 1977 to 1979 while at HEW, I was the senior communications technician with the lead responsibility for the maintenance and preventive maintenance and system debug for a public safety communications network that spanned portions of three states and encompassed three counties and included 52 municipalities.

All of my prior employment dating back to 1965 include positions of increasing responsibility in the electronics field. The study of electronic communications has been a lifelong pursuit for me dating back to early childhood.

WILLIAM F. RENZ
22 Spartan Arrow Road (603) 474-9521, ext. 3189 (W)

PROFESSIONAL EXPERIENCE

Affiliated with Aidikoff Associates since January 1987:

Emergency Planning Specialist

Present Assignment: New Hampshire Yankee, Seabrook Station, presently assigned to the EP Licensing Department. While located at the Seabrook Station, I have been responsible for several special assignments. These have included development of positions in response to contentions presently before the Nuclear Regulatory Commission Atomic Safety and Licensing Board (ASLB) in the Matter of Public Service Company of New Hampshire, et al., (Seabrook Station, Units 1 and 2); supporting the development of and providing testimony before the ASLB on a summary of personnel resources available to State and local emergency response organizations resulting from an ongoing personnel resource assessment program; participating in the development of various licensing and planning efforts; participating in procedure development and revision as part of the NHREP Rev. 2 process; providing technical review of various technical and legal papers; and participating in the development of a strategy for a utility-sponsored offsite emergency response capability.

With HMM Associates May 1986 - December 1986:

Project Manager and Senior Planner

Directed and participated in projects involving emergency response plans, procedures, exercises, drills and training activities. Principle assignment was providing technical support to the Seabrook Station emergency planning effort.

With the Long Island Lighting Company 1978 - 1986:

Manager, Technical Support and Equipment & Facilities Division, Local Emergency Response Implementing Organization (Special Assignment January 1984 - May 1986)

I supervised 14 professional personnel who were responsible for the development and implementation of a Local Emergency Response Plan. This is a unique planning situation. Due to County and State non-participation in emergency preparedness for the Shoreham Nuclear Power Station, utility personnel perform functions that would otherwise be performed by County and State agencies.

Manager, Equipment & Facilities Division, Local Emergency Response Implementing Organization (Special Assignment May 1983 - January 1984)

I supervised a staff of 10 and administered a budget of $1.3 million. Under my supervision, this division established five offsite emergency response facilities and equipped each facility with communications, radiological monitoring, traffic guidance, and other equipment.

Offsite Emergency Preparedness Coordinator (February 1983 - May 1988

Supervisor, Offsite Emergency Preparedness, Nuclear Operations Support Department (February 1985 - May 1986)

Concurrent with the above special assignments, I supervised at the Offsite Emergency Preparedness Section of the Nuclear Operations Support Department and administered a budget of $3.2 million. I have provided expert testimony on all emergency notification and communication related contentions and have supervised discovery in LILCO's recent Atomic Safety & Licensing Board hearings on emergency planning for the Shoreham Nuclear Power Station. I was responsible for emergency notification and communication systems and for directing and coordinating support from other company departments. I served as the Emergency Planning Advisor #1 in the onsite response organization. I was also responsible for negotiations with outside organizations, such as New York State, U.S. Coast Guard, State of Connecticut, etc.

Environmental Scientist -- Licensing (November 1980 - February 1983

I drafted the Shoreham Nuclear Power Station Emergency Plan. The onsite emergency communication and notification systems and the Prompt Notification System were designed and installed under my supervision. In addition, I later developed or directed the development and implementing of the onsite emergency plan training program. While reporting directly to the Manager of the Nuclear Licensing Division, I was responsible for miscellaneous licensing issues.

Field Inspector -- Underground Lines Department (July 1979 - November 1980

System Mapper -- System Engineering Department (December 1978 - July 1979)

EDUCATION

Polytechnic Institute of New York, Brooklyn, New York
Master of Science Degree, Technology Management and Business Administration, August 1984

The George Washington University, Washington, D.C.
Bachelor of Science, Oceanography, May 1977

PROFESSIONAL TRAINING

Harvard University School of Public Health, Boston, MA
Environmental Radiological Surveillance, July 1983

Niagara Mohawk Corporation, NY
Transportation of Radiological Materials, February 1983

Federal Emergency Management Agency, Emmitsburg, MD
Radiological Emergency Planning Seminar, June 1981

General Physics Corporation, Pottstown, PA
Boiling Water Reactor Technology Course, February 1981

COMMUNITY ACTIVITIES

Member of Glen Cove Board of Zoning Appeals, Glen Cove, New York, 1985 - 1986

Member of the LILCO Speaker's Bureau, 1983 - 1986

TESTIMONY PROVIDED

Before the Atomic Safety and Licensing Board -- United States Nuclear Regulatory Commission; in the Matter of Public Service Company of New Hampshire, et al. (Seabrook Station, Units 1 and 2):

1. Applicants' Direct No. 3 (Emergency Response Personnel Resource Issues); contentions SAPL-8, SAP1-8A, NECNP No. NHLP-2, TOK-1, TOH-VI, TOHF-2 and TOSH-2.

Before the Atomic Safety and Licensing Board -- United States Nuclear Regulatory Commission; in the Matter of Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1):

1. Emergency Notification; Contentions EP 26A, C, D and E. (3/20/84)

2. Notification to Public; Contentions EP 55, 56, 57 and 59. (3/27/84)

3. Loss of Offsite Power; Contentions 93, 94 and 95. (4/3/84)

4. Emergency Communications; Contentions EP 28, 29, 30, 31, 32, and 34. (4/3/84)

5. Emergency Plan Training; Contentions EP 39.A, .B, 40, 41, 44.D, .E, .F, 98, 99.C, .G, 100.B, .D, .G, .H, .N. (6/14/84)

6. U.S. Department of Energy Communications; Contentions EP 33. (7/20/84)

7. Letter of Agreement with Connecticut -- Supplemental Testimony; Contention 24.R. (7/20/84)

MR. SMITH: The Panel is now available for cross-examination.

(Document proffered to the Board.)

MS. GREER: Your Honor, I have distributed to the Board a copy of my cross-examination plan. I have not at this point distributed one to the reporter, because my understanding is that if I would ask the reporter to --

JUDGE SMITH: That's right.

MS. GREER: -- have it bound --

JUDGE SMITH: You've got it.

MS. GREER: -- into the record today. And I think the odds of actually completing --

JUDGE SMITH: You are right.

MS. GREER: Okay.

JUDGE SMITH: Get on with it.

MS. GREER: Also, the Board will note that Mr. Traficonte is here and he has proposed that I stop examination of the Panel --

JUDGE SMITH: We've already thought about that problem, too.

MS. GREER: Okay.

JUDGE SMITH: So just get on with your cross-examination.

MS. GREER: Fine.

JUDGE SMITH: And we will make some time here.

CROSS-EXAMINATION

BY MS. GREER:

Q Good morning, gentlemen.

As you probably know, my name is Leslie Greer, and I am an attorney with the Department of the Attorney General.

And I would like to start off today by asking each of you in sequence which part of the testimony you are responsible for.

Mr. Renz, can you identify which part of the testimony you had primary responsibility for?

A (Renz) I would say those aspects going towards the demonstration of the ERN, or the emergency radio network contemplated in the SPMC, that were demonstrated during the exercise last June: the general application of that system, how it was demonstrated, pretty much the performance during the exercise.

Q And how do you come to have knowledge of that demonstration?

What particular insight do you have into that demonstration?

A (Renz) I served as the communications controller in the staging area which was responsible for evaluating and observing essentially the emergency radio network.

Q And is the position that you held during the

exercise, is that an ORO position?

A (Renz) No.

Q Or were you there as a controller?

A (Renz) I was there as a communications controller.

Q Okay.

And did you have responsibilities that were assigned to you by FEMA or only by New Hampshire Yankee?

A (Renz) My responsibilities were assigned by New Hampshire Yankee.

Q And can you identify any particular portions of the testimony that you are primarily responsible for?

A (Renz) My first -- I generally sponsor the entire piece of testimony, and I generally support, for example, the vertical chain of command concept, although I don't know that I'm primarily responsible for those portions of the testimony.

I would say on page 5, the middle paragraph goes directly to one of the Intervenors' -- one of Mr. Cohn's observations or statements, and therein we think that his observations are a bit excessive. And based on my observations during the exercise, I think that his position is incorrect.

Q Any other portions other than that paragraph on page 5?

A (Renz) Yes, I would say starting at the middle of page 12, generally the control of the ERN, the application of the ERN, those types of issues.

Q Okay.

Were you primarily responsible then for drafting Section IV?

A (Renz) Oh, I'm sorry.

Q Were you primarily responsible for drafting Section IV?

A (Renz) No.

I think, as is our normal practice, we sit down. There is an issue lead who is responsible for --

Q I'm sorry?

A (Renz) An issue lead who is responsible for framing out the testimony, and then the witnesses get together and review any drafts and add or edit or draft certain portions.

This particular piece of testimony, I didn't do the initial draft. However, I have been through the entire piece and I have generated comments and revisions to it.

Q So you generated some comments on Section IV?

A (Renz) Yes, I'm sure I have.

Q Okay.

Were you the issue lead on any portion of the testimony?

A (Renz) On this particular piece of testimony, no.

Q When you say this particular piece, are you talking about all --

A (Callendrello) Ms. Greer, it might be helpful -- Mr. Renz has started to describe the process.

As we've described before, I've got staff individuals who are responsible for developing, in some cases the first cut of the piece of testimony. And then the witnesses, such as myself and other members of the various panels, take that, review that, modify that, amplify on that.

And at that point once we are satisfied that it is technically accurate and factually accurate, we turn that over to Ropes and Gray, who in turn make sure that it addresses the contentions and that it needs to. And they perform as the final typing. And at that point it is filed.

To the extent that any individual has responsibility for any specific section, that is a difficult question to answer. We each have various levels of expertise and experience, but the reason we haven't identified specific individuals as being responsible for specific pieces of testimony is that we are here to try and provide the most complete and accurate answer.

And it may be that one individual does not have that answer even though they may have been the primary

person for preparing that section of testimony, or their experience most closely matches that section of testimony.

As Mr. Renz indicated, his experience is as the controller at the staging area during the exercise. He's also a knowledgeable planner.

I have general plan knowledge as well as having been the controller from the communications coordinator at the ORO EOC.

And Mr. Catapano brings to this Panel the experience of having designed the communication system as well as being one of the key participants in the ORO, and that is, the communications coordinator.

Q I'm aware from your previous testimony in this proceeding how you normally go about drafting. But in order to direct my questions to the appropriate person I think it's probably appropriate if we can identify which portions each individual has knowledge of and what expertise they, in fact, bring here.

I've heard Mr. Renz -- and, Mr. Renz, tell me if I'm wrong in this -- what I've heard you say so far this morning is your primary input into this piece of testimony was your experience at the staging area during the graded exercise, although you would generally support the rest of the testimony as well. Is that true?

MR. SMITH: Excuse me, Leslie, wouldn't it be easier just to generally direct the question to the panel and the panel can decide who is the most qualified to answer the question.

I mean, it just seems like it might save some time.

MR. DIGNAN: Ms. Greer, I can assure you, that's the instruction they're under. Their job is to give the mike to the guy who knows the most about it.

And if you try to cut them off, all you're going to do is lengthen things out because we'll redirect to the guy who does know about it.

MS. GREER: I don't think I have cut them off yet.

MR. SMITH: No, nobody is accusing that.

I'm just trying to be helpful as to what the best --

MS. GREER: Okay.

BY MS. GREER:

Q Mr. Renz, can you answer that question?

Am I correct in what I've heard you say this morning, that's your primary input into the testimony?

A (Renz) Just to make sure we're clear: my primary input into the testimony is generally my observations of how the system works based on just being a controller in the exercise and in past drills, my background in emergency planning communications, to the extent I have one.

And that background brings with it support for this entire piece.

Q And, Mr. Callendrello, I think I heard you say that you were the New Hampshire Yankee controller with responsibilities for communications at the EOC; is that correct?

A (Callendrello) Yes.

I had responsibilities for observing and controlling two areas. One was the prompt notification coordinator; and the other was the communications coordinator or the communications area.

Q Okay.

And is that the area at the EOC where the radio monitors are located?

A (Callendrello) Yes.

There are radio consoles in that area of the EOC and that was the area that I observed.

Q Were those radio consoles manned by ORO radio monitors or who were they manned by?

A (Callendrello) They are staffed by radio operators.

Q Operators.

A (Callendrello) That are New Hampshire Yankee ORO positions.

Q And, Mr. Catapano, am I then given to understand that your primary input is into the technical aspects of this piece of testimony; is that a fair characterization?

A (Catapano) That's correct, as well as my observation of the usage of the ERN during drills and the graded exercise. And my participation is a player at the EOC.

Q Okay.

And your role that you played at the EOC was what?

This is during the graded exercise we're talking about, right?

A (Catapano) Communications coordinator, yes, graded exercise.

Q Now, am I correct that Mr. Catapano would be the person with the primary expertise in the design of radio communication systems?

Am I correct in that belief from what I've just heard?

A (Callendrello) From my point of view, he is much more knowledgeable than I am on the hardware of the radio network.

As far as the planning aspects go, I think I've got some knowledge. I know Mr. Renz has some knowledge and experience in communications systems from a planning point of view.

Q And, Mr. Catapano, can you tell me a bit about what your educational background is that gives you this expertise?

JUDGE SMITH: Well, it's pretty clear, he's got a very extensive background here.

We have a lot of work to do today and next week, and we're going to get done next week and you're just eating into time that your colleagues are going to need.

MS. GREER: Okay.

I will try and make this inquiry brief. But since a substantial portion of the testimony goes to --

JUDGE SMITH: Did you read his professional qualifications?

MS. GREER: I did.

And in there he says --

MR. DIGNAN: Ms. Greer, do you understand he was found qualified once before up in New Hampshire.

MS. GREER: Right.

MR. DIGNAN: Okay.

MS. GREER: But I don't believe that he was, in fact, testifying there on design of radio systems. And I would like to essentially address my questions as to his educational background in that particular area.

JUDGE SMITH: All right.

I'm not cutting you off.

MS. GREER: Okay.

JUDGE SMITH: But we'll have a moment on the record here explaining why we believe that this case can be and should be concluded at the end of next week.

And I know that your colleagues and the Attorney General's office have plans, too. And I'm looking at the productivity and the need for the questions you are asking now. And I see a lot of information already available here that you don't seem to be aware of.

MS. GREER: I, in fact, have --

JUDGE SMITH: In due preparation for this testimony you should not have to ask this detailed a questions.

Go ahead.

BY MS. GREER:

Q Mr. Catapano, can you briefly describe any particular educational background you have in radio system design?

Do you have an engineering degree in that area?

A (Catapano) Well, as we discussed earlier during my deposition, I have extensive experience in designing and implementing of communication systems.

Q So is it fair to say that your primary expertise is gained from on-the-job experience rather than educational background in the area?

A (Catapano) It's a combination of both, but primarily it's actual experience.

Q Okay.

Now, directing your attention to the bottom of page 1 of the testimony. You say that: "Before beginning to design a communication support system for the ORO an assessment of ORO's functions was made and its operating structure was analyzed."

Mr. Catapano, did you do that analysis?

A (Catapano) In cooperation with the Emergency Planning Department, yes.

Q When did you do that analysis?

A (Catapano) That analysis really was an ongoing

process that began in probably around the June time frame of 1986.

Q Were you already under contract with New Hampshire Yankee prior to June 1986?

A (Catapano) Technically I'm not sure the contract was with New Hampshire Yankee. But, yes, we were under contract with the Seabrook Joint Owners at that point.

Q And what were you originally hired to do prior to June 1986?

A (Catapano) In 1985, mid-1985 when I began this assignment my initial task was to perform a sanity check relative to the condition of existing provisions for communications that existed in the Massachusetts portion of the EPZ as well as the New Hampshire portion of the EPZ as they relate to offsite radiological emergency plans.

Q So is it fair to say, that you were not then originally hired to design the ERN radio system?

A (Catapano) Yes.

Q In June of 1986 when you began designing the system you say there at the bottom of page 1 that: "An assessment was done of ORO's functions and its operating structure was analyzed."

Did you do any other analyses at that time other than an analysis of that nature?

A (Catapano) Well, there were other analysis that

were taking place at that time.

This particular analysis was in an effort to define the operational aspects of the ORO as it was evolving, in an effort to make sure that the necessary communications links were put in place to support that.

JUDGE SMITH: All right.

Let's cut off the questioning now, we have run out of time. Return Monday.

We're going to allocate seven minutes a piece on the issue of keeping the record open.

MR. TRAFICONTE: Don't start the clock yet.

JUDGE SMITH: What?

(Laughter)

ORAL ARGUMENT ON BEHALF OF THE INTERVENOR

MR. TRAFICONTE: I am going to address a single issue, and that is, does the motion to reopen standard apply in the event that the Board finds that the next onsite exercise is material and relevant to the issuance of a full-power license, and therefore, Intervenors hearing rights attach to it. Does the reopen the record standard apply.

And I'm going to start by directing the Board's attention to ALAB-918 which was just issued -- it's amazing the impact of a time pressure.

JUDGE SMITH: Well, we have it. It doesn't matter.

MR. TRAFICONTE: You do have it.

JUDGE SMITH: We know.

MR. TRAFICONTE: All right.

JUDGE SMITH: Go on.

MR. TRAFICONTE: I'm going to direct the Board's attention to page 12 and 13 in the slip opinion of the ALAB-918, and specifically Footnote 21.

The argument that's going to be made by the Applicants and the Staff is very simple. They are going to argue that in this footnote the Appeal Board indicated that UCS does not prohibit the application of the motion to reopen standard, because that standard, the motion to reopen standard, is not an exercise of unfettered discretion.

There are standards, you will hear from the Staff and the Applicants, there are standards that are actually codified in the NRC's rule on reopening. And because there are standards in the motion to reopen, Applicants and Staff are going to point to the last sentence on the bottom of page 13 in the footnote where the Appeal Board refers to the Agency's unfettered discretion to reopen the record, and indicate that UCS only prohibited an unfettered discretion, but otherwise did not prohibit the application of a reopening the record standard when there were, as there is in the NRC's rule, some objective criteria against which the motion is to be judged.

I would like to make two points.

First, that you have to read exactly why the footnote is there. The argument that we were making to the Appeal Board and that they were addressing in the footnote was that the logic of UCS, which quite clearly -- I'm going to come to that in a minute, or probably 30 seconds -- the logic of UCS, which prohibits the application of the reopen the record standard, should be extended to include a prohibition against applying the late-filed contention standard.

That was an argument we made to the Appeal Board. It was quite clear we were seeking an extension of the holding of UCS. I think it was a sound argument. And in

this footnote, the Appeal Board rejected the argument.

And I would refer again to the same page. This time at the end of the first paragraph there, and I'll just read this. "In reaching this decision," this is the Appeal Board, "In reaching this decision, UCS, the court also rejected the Commission's argument that a party's hearing rights were protected because a party could always seek to reopen the record if the exercise identified fundamental defects in the emergency plans."

There the Appeal Board unequivocally is stating that the UCS court rejected the Commission's argument that the hearing rights were adequately protected by a reopen the record standard.

So you have to understand the context of this whole discussion is in extending UCS to the late-filed contention standard, while the Appeal Board is quite clearly indicating that UCS does prohibit the application of the reopen the record standard.

Two quick points on UCS.

UCS, at pages 1443 and 1444, which are the precise references the Appeal Board makes, in Footnote 11 on 1444, UCS discusses the Commission's argument that the Commission was making in 1984 to the court.

And the Commission at that point said, "A party may seek to reopen a concluded hearing or file a petition

for action pursuant to 2206." That's in Footnote 11.

That is to say, that the Commission was arguing to the D.C. Circuit Court that the hearing rights were not being violated because there were two options: An intervenor could move to reopen the record, or an intervenor could file a 2206 petition.

The UCS court was discussing both of those options in these pages when it say "no go". Either one of those impermissibly burdens the hearing right.

So the page reference the Appeal Board has chosen specifically addresses both the 2206 and separately discusses the motion to reopen, and rejects both of them as impermissibly burdening the hearing right.

Last point, and I think I have about a minute and a half on my watch.

This is the case that I just distributed a portion of the case to the Board. It's the Mothers for Peace case. it was decided by the D.C. Circuit in December of the same year the UCS case was decided.

Interestingly enough, it is not a rulemaking. It is a specific proceeding. It's a case that arises out of a specific proceeding in which intervenors had a right to a hearing on a license extension for a low-power license.

In that posture, they wanted to litigate in the hearing on the license extension, they wanted to litigate a

construction issue.

The Boards at that point said, if you want to litigate a construction issue at this juncture, you are going to have to reopen the record. That was what the Commission said, the Licensing Board said, the Appeal Board said, the Commission said.

D.C. Circuit held that if they had a right to litigate the extension of the license, and it held that they did, that to subject them to the reopen the record standard, not 2206, reopen the record standard with the criteria and the objective criteria set forth in that standards violates the hearing right in the Atomic Energy Act.

And to conclude, I would refer you to pages 1312 of this Mothers for Peace case, and I will read just one sentence into the record, "Because the Commission's criteria for reopening a closed record are higher than the criteria for obtaining a hearing under Section 189(a), the mere fact that a party can seek reopening is not a sufficient substitute for the hearing rights guaranteed by Section 189(a)." That's from 1312.

And then on 1316 and onto 1317, there is an unambiguous discussion by this court of the particular criteria contained in the motion to reopen standard. They discuss each of the criteria; they enumerate them. And they hold that subjecting a contention to those criteria, when

there is a hearing right at issue, violates the motion to reopen standard.

So do not entertain for a moment the argument you are about to hear, brief though it will be, the argument you are about to hear that the issue here is unfettered versus fettered. That is not what the law is.

JUDGE SMITH: You had 20 seconds.

MR. DIGNAN: No, he had 20 seconds over.

JUDGE SMITH: Oh, excuse me.

MR. TRAFICONTE: That's a record.

JUDGE SMITH: That's on time.

ORAL ARGUMENT ON BEHALF OF THE APPLICANT

MR. DIGNAN: I take it that despite the eloquent plea of my brother, the argument at least will be entertained.

Your Honor, the focus is on the language of ALAB-918 at the end of Note 21 on page 13 of the slip opinion where the Appeal Board says of the UCS case it, "...holds that a party's statutory hearing rights on a material licensing issue cannot be made to hinge upon the Agency's unfettered discretion to reopen the record. See 735 Fed.2d at 1433-44."

If you review those pages, it focuses on the 2206 remedy then available. And what it did is say, and that section always had been interpreted and is now interpreted

77as involving essentially unfettered discretion on the part of the Agency.

Because it is important, I believe, I remind the Board UCS was decided on May 25, 1984.

The second case that is cited to you is the San Luis Obispo case, 751-1316.

As my brother indicated, it has some language, and I believe he quoted part of it. "In order to obtain reopening, Petitioners were required to show that they possess new evidence which was timely, material in the sense that it would have resulted in a different outcome had it been known earlier, and safety significant." And they cite it to the case authority that then existed so holding that to be the standard.

In particular, you will note that what the court said is that the standard was that there must be a showing that would have resulted in a different result.

Now, both St. Louis Obispo and UCS were decided before 2.734 was put on the books of this Agency's regulations. That was put on on May 30, 1986, effective June 30, 1986, and it appears at 51 Fed. Regs 19539.

I would like to read to the Board, in particular, one part of the statement of considerations. This is in addressing the "would have different result" portion of the regulation.

"The actual inquiry to be performed falls between the two standards." The Commission having indicated that two different standards had been recited in the cases to date. "The 'would' standard may be read to imply that an ultimate conclusion must be reached before all evidence is considered. The 'might' standard implies that reopening could be ordered even where a board is uncertain whether or not the new evidence is important. The inquiry should be and has been the 'likelihood' that a different result will be reached if the information is considered. See e.g., Union Electric Company (Callaway Plant, Unit 1), ALAB-750, 18 NRC 1205, 1209 (1983). Accordingly, the Commission is modifying the standard of 2.734(a)(3) to require that a materially different result would be or would have been "likely" had the newly proffered evidence been considered initially."

Thus, 2.734, as finally promulgated by the Commission to become the reopening standard, did not burden the intervenor or the movant the way the old case law did, and was, I submit, in response directly to the St. Luis Obispo and UCS cases which had been decided prior to that time.

Now what does this end us up with?

Obviously, the Appeal Board decision, whatever any of us may think the case law is, binds this Board.

What the Appeal Board is saying in that footnote is that reasonable procedural requirements are okay as long as unfettered discretion is not the standard by which the Agency will perform.

Prior to the time 2.734 was codified, the majority of the case law did put reopening in the unfettered discretion and also burdened it with that you had to demonstrate there would have been a different result. This is not the case anymore.

2.734 does provide a standard which, if met, requires reopening. And under the Appeal Board language, and I think it's what the Appeal Board intended to say is that the UCS case simply cannot be read as broadly as my brother would like to be read.

That's my argument and I hope I'm within the seven minutes.

JUDGE COLE: Four and a half.

JUDGE SMITH: Mr. Turk?

ORAL ARGUMENT ON BEHALF OF THE NRC STAFF

MR. TURK: I don't think I will use even as much time as Mr. Dignan has used, Your Honor.

I have listened to Mr. Dignan's argument and I agree with him. And I want to add just the following notes.

The only request for relief before you now is that you hold the record open. You don't have any contentions

filed before you addressing either low-power testing or the onsite exercise. You don't know if, in fact, contentions will be filed that can meet late-filing requirements under 2.714. Or with respect to the exercise, whether they are going to have contentions that even on their face present a fundamental flaw such that if an onsite exercise is material. And I say that without conceding the point but just assuming it; we don't know if they are going to have contentions which will on their face present a fundamental flaw such that you would have anything to go to hearing on.

So at this point the request to hold the record open is premature.

I think the footnote in the Appeal Board's decision on ALAB-918 does make a distinction between unfettered discretion as was considered in the UCS case where the UCS court said what we're looking at are the 2206 standards. And the Court of Appeals said those standards are the same standards that apply to reopening.

That's not the case now under 2.734. The Appeal Board did make a distinction between unfettered discretion and reopening a record under Commission rules.

As I read the footnote in ALAB-918, the Appeal Board did two things.

Number one, it said, first, the licensing board did not consider the record to be closed. They treated the

record as if it was open. But further, what the licensing board had done there was to say that the reopening criteria had not been satisfied.

And I think that the clear intent of the footnote in ALAB-918 is to hold that the reopening criteria are properly applied, that they do not unduly burden a litigant who seeks to litigate a material issue. And the only thing ALAB-918 said would not be proper would be to allow unfettered discretion to prevent a hearing.

And I would note one other thing. As I mentioned yesterday, which I believe is not on the record, if this conclusion were otherwise, there would be no way you could ever close a record any time an intervenor said, Your Honor, wait, I'm going to be bringing a new issue to you and it's a material issue which affect licensing, and therefore don't close the record.

If the Intervenors' position is correct, you would never be able to close a record, because they could always come up with one more issue which they contend would be material to a decision.

That's all I have, Your Honor.

JUDGE SMITH: All right.

I might note that these oral arguments supplementing the pleadings on this issue and the time limitations were discussed off the record yesterday and

agreed to by the parties.

Okay, if there isn't anything further, we will adjourn until 1:00 p.m., Monday.

All right, we are adjourned.

(Whereupon, at 11:15 a.m., the hearing was recessed, to reconvene at 1:00 p.m., Monday, June 26, 1989.)

MASSACHUSETTS ATTORNEY GENERAL'S
CROSS EXAMINATION PLAN FOR
THOMAS URBANIK II
ON BOTH HIS ETE AND
HIS RETURNING COMMUTER TESTIMONY

ETE TESTIMONY

1. As to A.13, how does he know it would be no greater than 25 minutes. Too many uncertainties here: depends on whether drivers from the closed beaches in New Hampshire move south to the Massachusetts beaches.

2. As to A.14, what are the uncertainties and what steps have been taken to mitigate them?

3. As to A.15, would it be of any concern to him if an important element in the total number of evacuating vehicles had not been extensively examined by the applicants?

4. As to A.16, did he carefully examine the EBS message and press releases from the Exercise? If true experts in the field had reason to believe that Massachusetts evacuees will be confused by different emergency messages, would that be of concern to you in evaluating ETEs? What would your ETE concern be?

5. (A.18) As to the TMP, do you still support the recommendation in your TMP testimony that there should be a more gradual phase-in of control measures (channelization) and advance warnings at two critical ACPs? Absent these changes, "adverse" effects could be experienced.

6. (A.19) There is guidance on special facility ETEs in NUREG-0654 App. 4, correct?

7. *(A.20) What ETE would Massachusetts officials reference for in an emergency occurring tonight at 10 P.M. (June 22, weekday, good weather)? [Use other examples] There are hardly "countless alternatives" here correct? Show him PAR worksheet.

8. *(A.22) Would he agree that if ORO and Massachusetts officials are not provided any sensitivity runs, there are a large number of situations for which ETEs are not provided and for which they could only guess at an ETE.

9. (Q.23) Should the NRC have you review that "organized presentation" before it awards an operating license to ensure that the presentation is complete, clearly written, and readily usable by decision-makers in an emergency?

COMMUTER TRAFFIC

1. (In point 4) What data have you seen?

2. (In point 6) What is meant by "the ETE". There are ETEs for each region, correct? There are a limited number of critical intersections for each region, correct? Altogether, for 17 regions, there could be 20 or more?

3. (In point 8) What data regarding employment up and down Route 1 has he examined? There are also many local shoppers up and down Route 1, correct?

4. (In point 9) What data has he examined? What "directions" are you referring to?

CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

Name: Public Service Company of New Hampshire, et al.
(Seabrook Station, Units 1 and 2)

Docket No: 50-443-OL
50-444-OL
(Off-site Emergency Planning)

Place: Boston, Massachusetts

Date: June 23, 1989

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken stenographically by me and, thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

/S/ Donna L. Cook

(Signature typed): Donna L. Cook

Official Reporter

Heritage Reporting Corporation