

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

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DATA SYSTEM

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BRIEFING ON STATUS OF EMERGENCY
RESPONSE DATA SYSTEM

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PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland

Monday, July 10, 1989

The Commission met in open session, pursuant to notice, at 2:00 p.m., Kenneth M. Carr, Chairman, presiding.

COMMISSIONERS PRESENT:

KENNETH M. CARR, Chairman of the Commission
KENNETH C. ROGERS, Commissioner
JAMES R. CURTISS, Commissioner

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STAFF SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

WILLIAM C. PARLER, General Counsel

JAMES TAYLOR, Deputy Executive Director for Operations

ED JORDAN, Director, Office for Analysis and
Evaluation of Operational Data

GARY ZECH, Chief, Incident Response Branch

P-R-O-C-E-E-D-I-N-G-S

2:00 p.m.

CHAIRMAN CARR: Good afternoon, ladies and gentlemen. Commissioner Roberts will not be with us today.

The purpose of today's meeting is for the NRC staff to brief the Commission on the status of the Agency's efforts to institute the Emergency Response Data System, or ERDS. The concept of establishing an electronic data link between the NRC and its reactor licensees to relay essential plant parameter information has been under consideration since just after the accident at Three Mile Island. It appears that we are now close to closure on this important initiative.

Copies of the slide presentation and SECY-89-193 pertaining to the brief should be available at the entrance to the meeting room.

Do my fellow Commissioners have any opening comments?

If not, Mr. Taylor, you may proceed.

MR. TAYLOR: Good afternoon, sir.

Before commencing the formal briefing, I would mention to the Commission, to the members who have participated at our Emergency Response Center the

1 struggle that we frequently have in our monitoring
2 role even in an exercise capacity, understanding
3 what's really going on within a reactor and at a
4 plant. This data system, of course, would help NRC a
5 great deal when it's instituted in the event of an
6 accident in understanding some of the key parameters
7 and understanding the progression of an accident.

8 I know those of you who have joined us in
9 exercising I hope would put high value on the
10 possibility of us having this type of data to perform
11 our monitoring role.

12 With that introduction, I'd like to turn the
13 briefing over to Mr. Jordan.

14 MR. JORDAN: Okay. Thank you.

15 I'd like to cover the background and Gary
16 Zech will cover the current status of the
17 considerations and the conclusions. And then we're
18 both available to respond to questions.

19 In the background slide, the TMI lessons
20 learned indicated, as you, Mr. Chairman, mentioned,
21 that the data collection system was important, that
22 the Agency should develop such a thing and implement
23 it. The ERDS Program is, of course, in direct
24 response to that.

25 There was considerable Congressional

1 controversy in the 1980s regarding funding or not
2 funding to a more elaborate data system. Congress
3 wanted it and they didn't want it. The key was in the
4 role definition and the Agency defined its role in a
5 clear fashion, I think, in the middle 1980s. SECY-84-
6 481 was a description of the ERDS Project that clearly
7 defined the Agency's role and needs with regard to
8 data. The Commission approved the ERDS concept in
9 March of 1985 and we've been proceeding down that path
10 since.

11 Congressional interest was again expressed
12 in H.R. 5192 and H.R. 1570 in 1986 and 1987
13 respectively. As I understand at this time, there is
14 no further Congressional interest in legislating a
15 data system.

16 A prototype of the ERD System was tested in
17 the Zion FFE in 1987 and, in fact, we tested a
18 prototype with Duke Power and Commonwealth Edison
19 preceding that Zion exercise. Plant surveys were
20 conducted by a contract in 1986 and 1987 to help the
21 NRC understand the feasibility and the extent, scope
22 and cost of such a system. This covered about 90
23 percent of the plants. There's a contractor report,
24 NUREG CR-4902, that describes in great detail the
25 results of that survey.

1 So then, I'd like to turn to Gary Zech and
2 ask him to give you a briefing on the current status.

3 CHAIRMAN CARR: Before you do that --

4 MR. JORDAN: Yes, sir.

5 CHAIRMAN CARR: -- would you want to run
6 over that role definition a little bit? I wasn't here
7 when you solved that problem. You said the role
8 definition was well laid out?

9 MR. JORDAN: Well, there was a concern, I
10 think, by Congress and by industry and the NRC as well
11 as to what our role would be in an emergency. Were we
12 going to try to run the reactor from Washington?
13 Were we going to try to intervene based on having an
14 extensive data set? The Agency clearly understood
15 that, in fact, we would not intervene from Washington,
16 but we needed to be in a position to understand the
17 nature of the event and to assure that the appropriate
18 protective actions were being taken and that the
19 utility itself understood the event that was
20 unfolding.

21 So, it was in coming to that understanding
22 that we then understood that the data system we needed
23 was not one that replicated the entire control room
24 data set of 1500 or so data elements, but one that
25 gave the critical parameters. So, that's then the

1 track that we switched to.

2 CHAIRMAN CARR: Okay.

3 MR. TAYLOR: And we also revised our
4 procedures at the response center to try to make sure
5 to all the staff and the participants just what our
6 role was, which is essentially a monitoring role,
7 limits placed upon any further action to the Chairman
8 or his stand-in from the Commission itself.

9 CHAIRMAN CARR: The responsibility clearly
10 lies with the utility?

11 MR. TAYLOR: That's accepted by all.

12 COMMISSIONER CURTISS: I gather the thinking
13 on the parameters has evolved reflecting that more
14 focused definition of the Commission's responsibility.
15 So, what we have now in the system will be the
16 critical parameters that we need narrowed down from
17 what was envisioned back in the early '80s just to
18 those limited parameters that we need, but those that
19 are significant to carrying out our role?

20 MR. JORDAN: That's correct.

21 COMMISSIONER CURTISS: Okay.

22 MR. JORDAN: And it is clear that we don't
23 have the complete parameter set for every scenario
24 that's possible that we would be responding to. We
25 have the ones that are most likely for the serious

1 events.

2 CHAIRMAN CARR: Okay. Proceed, Gary.

3 MR. ZECH: To pick up on that real quickly,
4 those are plant parameters, like temperatures,
5 containment conditions, meterological conditions and
6 radiological release information that might be there.

7 The current status then and where we stand
8 today in picking up from where Ed let off, a contract
9 was awarded to EI International in January 1988 and
10 that was a three year contract.

11 Hardware procurement and software
12 development has progressed quite well since then. It
13 continues today and with our first few plants has
14 progressed quite well.

15 We currently -- and this is an update since
16 last week -- we now have six licensees with a total of
17 18 units that have volunteered at this point to
18 participate in the program. With the current schedule
19 that we perceive, we would expect the system to be
20 operational in early 1990.

21 (Slide) Next slide.

22 In the meantime, as we have since a year
23 ago, we've had a great deal of interaction with
24 NUMARC, various meetings with them and with utilities
25 to discuss the volunteer program, what it is that we

1 would foresee it to be doing and just what would be
2 required of the licensees who would be volunteering
3 for it.

4 Concurrently with that, we have proceeded
5 with a proposed rulemaking which was initiated and
6 approved by the EDO's office in May of 1989. And also
7 concurrently, we have drafted and have ready for
8 transmittal a generic letter that would be sent to the
9 remaining licensees to ask for their participation on
10 a voluntary status.

11 In either case, we would expect that the
12 connections for the plants would be spread over about
13 a three year period starting next year and would be at
14 about 30 to 35 plants per year as we presently would
15 project. Then, the contract, under the current terms,
16 would terminate in January of 1993.

17 Other considerations in responding to the
18 Commissioner's questions, you had asked about the
19 schedule, whether or not it would be independent of
20 the Emergency Telecommunications System upgrade. That
21 was the subject of 87-290, the SECY paper. It clearly
22 is separate from that. ERDS would proceed on its own
23 schedule. It would be implemented starting this late
24 fall, early winter on the commercial public switch
25 network phone lines from the plants.

1 Concurrently then, we would proceed with our
2 ETS upgrade schedule in parallel and then as the ETS
3 System becomes operation, the media that the ERDS
4 would be transmitted over would change from the public
5 switch network to a combination of either satellite
6 lines or the back-up terrestrial lines which, as you
7 know, was approved by the Commission following 87-290
8 being presented to you.

9 So, we don't see the two, although it would
10 be part of the bigger system. ERDS would be part of
11 the ETS System, but it does not depend on ETS in order
12 to be implemented at the current schedule that we see.

13 As we see it now then, the volunteer program
14 is progressing quite well. That's based on the
15 interactions that we've had with the utilities, with
16 NUMARC, the various dialogues that we've been able to
17 continue with it. We do expect that there would be
18 wide industry participation. We believe that the
19 generic letter would continue this voluntary process.

20 The rulemaking, which I mentioned, would
21 insure 100 percent participation if we decide to go
22 with rulemaking. As I mentioned right now, it's only
23 a proposed rule. If we decide after experience in the
24 next couple years that it's proceeding to the point
25 that it may not be necessary, we will not recommend

1 rulemaking. However, parallel paths are recommended
2 at the present time in order to make sure that we have
3 all contingencies covered in event that we do need a
4 rule to insure 100 percent participation.

5 That's where we stand at this point. If
6 there are any questions, we'd sure be glad to try to
7 answer them.

8 COMMISSIONER CURTISS: Well, the voluntary
9 participation question. I guess one of the questions
10 that I had originally raised when the generic letter
11 came across my desk, is it your expectation now that a
12 rule is ultimately going to be required or do you
13 expect 100 percent of the utilities to participate?

14 MR. ZECH: Our feeling is that we would--
15 about 90 percent we'd feel we could get presently,
16 knowing what we do know about the reservations in some
17 parts of the industry out there. But we feel that
18 once the program progressed on a voluntary status that
19 there would be a great deal of initiative or pressure
20 on all utilities to participate. So, I think we'd
21 like to wait and see how it proceeds in the next year
22 to two years and only then, if we need it to insure
23 100 percent, would we propose a final rule.

24 COMMISSIONER CURTISS: I guess my interest
25 in this is -- I mean I'm a big supporter of a system

1 and would like to see the system in place as quickly
2 as possible. My interest in this at this point is
3 whether we're proceeding in a manner that will bring
4 it on line as quickly as possible, given that now it's
5 been ten years and at the end of this effort it's
6 going to be 14 years after the accident.

7 I wonder if you could address whether
8 there's any way to crank this up more quickly than
9 we're doing right now and get the system on line and
10 operational at all the utilities as soon as possible.

11 MR. JORDAN: We're proceeding as far as the
12 contractor, in fact, can support at this time. So, he
13 has fixed resources that he's applying. There's
14 software that has to be developed for each new utility
15 that connects and mating hardware that is pretty much
16 standardized.

17 It's not likely we can accelerate a great
18 deal. The method that we're going through is trying
19 to do what I call the easy ones first, so that we get
20 the larger numbers of plants in a timely fashion. So,
21 numerically, we will probably exceed our goal in terms
22 of 30 percent per year. But the last year we will be
23 attacking the ones that are physically more difficult.

24 Right now, the volunteers are not our limit
25 at all. We have sufficient utilities to work with for

1 the present future. In terms of the generic letter,
2 the generic letter is needed in order to communicate
3 with more than nine licensees formerly because of the
4 OMB rule.

5 COMMISSIONER CURTISS: Right.

6 MR. JORDAN: So that's why we've gone to a
7 generic letter. But there is -- even applying more
8 financial support I don't think would accelerate it
9 unless we opted for another contractor.

10 MR. ZECH: We're also trying -- if I could
11 add to that, trying to work with the utility schedules
12 so we don't impact an outage or impact changes that
13 they may already be planning on their process
14 computer. If they want to do some modifications, it's
15 probably better to wait until those modifications are
16 completed before we come in and ask for their
17 parameter file. That could be a year or two in some
18 cases. So, the key is to get enough utilities so we
19 can scope out the effort and schedule them over the
20 next two or three year period that our contractor
21 could handle and yet not become critical path in any
22 way to slow down the process.

23 MR. JORDAN: Maybe I should add that the
24 more difficult licensees technically I mentioned are
25 those that are upgrading their process computer or

1 installing an SPDS where they don't have one or don't
2 have an output for it that would be readily available
3 for us. So those, where there's a technical
4 difficulty and a cost to the utility that would be
5 higher than the average, we're going to wait out
6 technology, I hope, by putting them at the end of that
7 list.

8 COMMISSIONER CURTISS: To make sure I
9 understand, just on the question of the parameters,
10 exactly what you have in mind, I gather that the
11 recommendation back in '84, '85 was to -- having
12 identified the significant parameters that we need in
13 the system, the individual utilities were then to be
14 surveyed and identify what the utilities had in place.
15 But for those utilities that did not have key
16 parameters available to them that could be plugged
17 into the data link system, we would continue to get
18 that information from those utilities over the
19 telephone. And then subsequent to that, the survey of
20 the utilities identified in more detail what the
21 utilities have in place and that could be plugged into
22 the data link system or the ERD System, as well as
23 those parameters that were not present at the
24 utilities, it would have to be communicated over the
25 telephone.

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1 Two questions. One, in what you saw with
2 the survey, are there significant parameters at plants
3 that would not be available through the data link
4 system?

5 Secondly, are there plants where the
6 percentage of the availability of parameters is so low
7 that it might make sense to go in and take a look at
8 those plants and somehow insure that the parameters
9 can be communicated through the data link?

10 MR. JORDAN: On the significant parameters,
11 I would say that among those there are some that have
12 parameters that are unavailable. However, the numbers
13 are small and they're not clustered at a given
14 facility. So, in terms of percentage, the facilities
15 that don't make our list presently are those that, in
16 fact, don't have an updated process computer or don't
17 have automated data handling to the extent that would
18 be necessary for some of the very older plants. Many
19 of those are going through an upgrade of their own to
20 provide the SPDS function.

21 So, on the one hand, in terms of numbers of
22 parameters, the staff feels that the random missing
23 parameters among PWRs and BWRs is acceptable and that
24 the transmittal of those data, if it were important,
25 during that particular event sequence could be handled

1 by phone. In terms of the plants that a low
2 percentage of overall parameters available, we believe
3 that time will solve most of those.

4 COMMISSIONER CURTISS: The one that jumped
5 out at me was Peach Bottom that has 55 percent of the
6 parameters available and a couple others that are
7 lower than that. Big Rock is at 20 percent and
8 Lacrosse, I think, was awful low too. But a plant
9 like Peach Bottom where only 55 percent of the
10 parameters are available. When you say you think time
11 will solve that problem, does that mean that the
12 additional parameters will be added to the data link
13 system or that we will rely on telephone
14 communications for the other 45 percent?

15 MR. JORDAN: In most cases, additional time
16 will alleviate that. For instance, I think in Big
17 Rock's case, that's true. For Peach Bottom, I really
18 don't recall. But we could verify whether they were
19 among the group that were updating their entire data
20 processing and SPDS. But we'll get you an answer on
21 that one.

22 MR. ZECH: Just some round numbers I could
23 add to that. The survey showed, I think, an average
24 between 75 and 85 percent of parameter availability,
25 depending on if it was a PWR or a BWR. And that gave

1 us the confidence that with the few exceptions that
2 you mentioned, that we would be able to get the
3 information we needed.

4 In Big Rock Point's case, we have advised
5 Consumers Power that because of other very low numbers
6 of parameters there, that they would not be asked to
7 participate in the program and that we would just
8 supplement the voice communications, whatever would be
9 needed to handle the problem there.

10 CHAIRMAN CARR: Commissioner Rogers?

11 COMMISSIONER ROGERS: Just briefly, what
12 were the results of the contractor's study of the 59
13 sites? Is there anything that you can easily say
14 about that study?

15 MR. JORDAN: Gary, you want to take that?

16 MR. ZECH: There were a number of things.
17 One was the parameter availability, as I mentioned.
18 As a group, the PWRs and BWRs parameter availability
19 was upwards in the 70 and 80 percent area.

20 The other thing that we determined in
21 talking with the plant individuals is that there was a
22 general positive attitude toward the system in
23 general. At least the people we talked to or our
24 contractor talked to thought that it was a good
25 program and that they would react positively in a

1 voluntary manner.

2 The other thing that we noted was that
3 because of some plants not having hardware
4 availability like ports even available for their
5 process computer, that that could be a substantial
6 cost factor relative to what the norm would be. In
7 other words, there may be some plants that no hardware
8 changes would be necessary and their costs would be
9 essentially zero, whereas if a port were necessary or
10 they had to go back in, it could be upwards of over
11 \$100,000 in the dollars at that time, \$100,000 to
12 \$150,000. But those few that we saw in that category
13 we expected to be making changes anyway and would fix
14 those problems in most, if not all cases.

15 What we'll do when we go out with the
16 questionnaire, we'll reaffirm the availability of the
17 parameters and reaffirm what their problems might be
18 and go back and look at it again.

19 The other thing that we noted was that the
20 software costs that we would expect to be incurred by
21 the licensees would be relatively small as well, from
22 about \$20,000 to \$50,000, depending on if they did it
23 in house, like many of them would prefer to do, or if
24 they contracted out and had somebody do it for them.
25 So, in general, although it took some time, as you

1 noted from the handouts, there were 90 some plants, 50
2 some utilities represented and it took over a year or
3 a year and a half to complete. The information we got
4 from the survey was quite valuable, we thought.

5 COMMISSIONER ROGERS: How would you handle
6 the unlikely situation where you had two plants in
7 trouble at the same time? Would you have ability to
8 handle that in the center?

9 MR. JORDAN: Yes, we do. Well, I would say
10 that the Agency would have great difficulty responding
11 to two severe accidents simultaneously and we don't
12 really expect that just based on the probabilities.
13 However, we do have the capability to respond to one
14 severe accident and monitor another plant with similar
15 conditions.

16 COMMISSIONER ROGERS: Well, except this gets
17 turns on when there's an alert, right, of any kind?

18 MR. JORDAN: Yes.

19 COMMISSIONER ROGERS: So, that's not
20 necessarily a severe accident.

21 MR. JORDAN: Right.

22 COMMISSIONER ROGERS: Could we handle two
23 alerts?

24 MR. JORDAN: Yes.

25 MR. ZECH: Yes.

1 COMMISSIONER ROGERS: We can?

2 MR. ZECH: In fact -- excuse me.

3 MR. JORDAN: Go ahead. I think I know what
4 you're going to say.

5 MR. ZECH: In fact, we now have, in the
6 design, the ability to track four different plants
7 simultaneously. It's four channel archiving is how we
8 term it. That was based on, at the time, the fact
9 that we had -- we've had at least three alerts--
10 excuse me, three unusual events in the operation
11 center which by their nature are not significant, but
12 could lead to a more severe situation. So, we knew
13 that we needed the least redundancy, but also because
14 if you have a plant or a multiple unit plant where a
15 problem in one could effect another one on site, you
16 surely want to be able to track both plants and not
17 interrupt the signal from the first one. So, that's
18 what led us that way.

19 COMMISSIONER ROGERS: What happens with this
20 data when it comes into the center? How will it be
21 used? For example, will there be some kind of
22 standard templates for these parameters, operating
23 range templates that we'll be able to put that point
24 on and see where it stands in terms of normal
25 operation?

1 MR. JORDAN: We'll have time, temperature,
2 pressure time type displays.

3 COMMISSIONER ROGERS: Typical?

4 MR. JORDAN: Typical, yes. And so for a
5 particular set of BWRs, Mark 1s will have typical
6 displays, for B&W plants we'll have typical displays,
7 and then pulled those into it. Then, of course, we'll
8 be able to get off data lists simply as time. But I
9 think the principal value will be in having a display
10 that people can trend and observe, extrapolate from.

11 COMMISSIONER ROGERS: The general letter in
12 the packet has a statement that, "No personnel action
13 should be required for the acquisition or transmission
14 of data after activation of the system." What about
15 just verifying its operability? There will be a
16 necessity of doing that presumably.

17 MR. JORDAN: Yes. And what I think those
18 words were intended for was that we didn't expect a
19 utility to transmit the data by taking a disk from a
20 computer and putting it in another or having to
21 interact with the data stream in any fashion, that it
22 would be, in fact, automatic. But you're right. Some
23 monitoring may be necessary if there's a trouble
24 channel or some such problem.

25 COMMISSIONER ROGERS: Yes, right.

1 MR. ZECH: We would also periodically test
2 the system, ask the utility to turn it on and make
3 sure the data stream came in and that we were still in
4 sync with what they provide to us.

5 COMMISSIONER ROGERS: I guess that's all I
6 have.

7 CHAIRMAN CARR: Jim, do you have any other
8 questions?

9 COMMISSIONER CURTISS: Well, let me just add
10 one other comment because I do think this system is
11 extremely valuable. I know you have worked on it over
12 an extended period of time and against some
13 circumstances, both on the Hill and elsewhere, that
14 have complicated your ability to move forward. The
15 Congress has been divided House and Senate on the
16 issue and I know you've worked long and hard to try to
17 respond to those concerns, to come up with a system
18 that will, in fact, perform the needs that I think we
19 need here in the operation center with critical
20 parameters coming in for all the plants so that in the
21 unlikely event of an emergency we've got that
22 capability.

23 I think for those of us who have
24 participated in the FFEs, that has been a shortcoming.
25 Inaccurate information comes into the operation

1 center. It subsequently is determined to be
2 inaccurate. In short, we're not much better off today
3 in terms of transmission of data from the licensee
4 than we were right after TMI.

5 MR. JORDAN: That's correct.

6 COMMISSIONER CURTISS: We're still
7 transmitting the information over telephone. It's not
8 real time. It's not fully automated and it has all
9 the foibles that human transmission can lead to. I
10 guess I see this program as addressing a critical need
11 that unfortunately over a long period of time has
12 really gone unmet in the Agency.

13 I would like you to know and encourage you
14 to go forward with as much dispatch as you can with
15 the implementation of the system. I do think at the
16 end of the process that we're ultimately going to have
17 to come to grips with the fact that not 100 percent of
18 the utilities will volunteer for the system and,
19 either through rule or order or some other mechanism,
20 have to respond to that because we're not going to be
21 able to predict which facility has the accident and
22 which facility we want to communicate with.

23 I was also interested in looking at the data
24 from the utility survey. While there's a high
25 percentage of the parameters available, this is the

1 significant group of parameters. We've separated the
2 wheat from the chaff and this is the list of
3 parameters that we think represent critical functions
4 that ought to be available in the operation center.

5 Some of the utilities are pretty low. Peach
6 Bottom is only at 55 percent, and to the extent that
7 that percentage falls too far below 100 percent--
8 we're talking about telephonic transmission of data
9 for those additional critical parameters. To the
10 extent that you can respond to that in some fashion as
11 you implement the system, I think that's the key
12 challenge and we'd like to see what we can do on that.

13 MR. TAYLOR: I should point out, some of the
14 surveys are not a couple of years old too. Data may
15 have changed as a result of what Ed pointed out.

16 One thing you mentioned to, Commissioner
17 Curtiss, was in terms of operations at our own
18 response center. Not having this data makes us ask
19 lots of questions that we would otherwise not have to
20 ask and complicates, therefore, the voice transmission
21 of very important things that that might be restricted
22 to. We continually are concerned with the basic
23 parameters.

24 So, hopefully, this would cut down the need
25 to ask what I would think would become useful

1 questions if we have this data, make us function more
2 efficiently than what we do get by voice.

3 COMMISSIONER CURTISS: Well, I'm prepared to
4 see the generic letter go forward. I think it
5 reflects sort of the culmination of a lot of work that
6 I know Ed and Gary have done with licensees. To get
7 18 reactors to volunteer to do anything sometimes is
8 difficult. So, I encourage you to, to the extent that
9 you can, to get all of them to volunteer for the
10 system. I would like you to keep an eye as you go
11 through that on the potential that we may not get 100
12 percent participation or that we get into the
13 individual plans and get the responses from the
14 generic letter, that it may turn out the critical
15 parameters that we want to have on the system might
16 not be available or in the manner that we wanted
17 available. If that should happen, keep the Commission
18 posted on it.

19 MR. TAYLOR: We will do that.

20 CHAIRMAN CARR: Well, I certainly agree that
21 what you've got is certainly better than what we have
22 now. I see no reason to wait to try to build a Rolls
23 Royce if you're going to get a good Buick in there
24 right now.

25 As far as those parameters you've got,

1 whether they're critical or nice to have, I would
2 probably disagree that they're all critical.
3 Certainly a lot of them are interacting. You can tell
4 from some of them whether you've got the others or
5 not. But what it really does is it cuts down a lot of
6 communication. If you cut down any communication in
7 those events, why you've helped the problem
8 considerably. But right now, not only what you get is
9 time late, but you can't get very much of it.

10 I'd say that proceeding is certainly a good
11 thing to do. I also agree though that I think we
12 ought to go ahead and proceed with the rule. Then
13 you've got both bases covered. If they muster up,
14 fine. If they don't muster up, fine.

15 Have you kept close track with NUMARC on the
16 voluntary thing? They're tracking closely with our
17 information on what percentage -- that 90 percent
18 voluntary figure that you quoted?

19 MR. ZECH: I don't think they would
20 disagree. I think with our working with them,
21 although they haven't formally endorsed it as a
22 policy, they have gone public and said that they
23 recommend that utilities participate. That
24 recommendation is one that we appreciate and that we
25 continue to work with NUMARC and the utilities to try

1 to rest our concerns.

2 I think they are optimistic. Otherwise,
3 they would not be working to the extent that they are
4 with us.

5 CHAIRMAN CARR: Okay. I notice that--
6 excuse me.

7 MR. JORDAN: I would add that we have a very
8 good working relationship with NUMARC in going through
9 this process. They identified some issues that we
10 needed to pay some attention to and it helped develop
11 the Qs and As that are in back of this generic --

12 CHAIRMAN CARR: Well, if I were a plant
13 manager, I'd certainly want it in place because it
14 would keep you from asking me questions while I was so
15 busy.

16 MR. JORDAN: Yes, that's right.

17 CHAIRMAN CARR: I was curious. It says,
18 "The NRC will be responsible for maintenance of all
19 parts of the ERD System installed starting at the
20 input port of the first ERD specific piece of
21 hardware, that is the modem." So, we're responsible
22 from that modem to our office, is that correct?

23 MR. JORDAN: Yes, sir.

24 CHAIRMAN CARR: Are we going to do that with
25 contractor maintenance? How many guys is it going to

1 take to maintain this system? That's a lot of dollars
2 involved in that maintenance.

3 MR. JORDAN: We've estimated, I believe,
4 about \$350,000 a year as the maintenance expense once
5 the program is implemented. That's assuming a failure
6 rate of modems or the hardware at the end. The other
7 part is simply a telephone line.

8 CHAIRMAN CARR: And we budgeted for that?

9 MR. JORDAN: Yes.

10 CHAIRMAN CARR: I noticed, and it's a couple
11 of places in here. One says the connections will all
12 be made in early '92 and then another says everybody
13 will be hooked up in January '93. Which is the right
14 date?

15 MR. ZECH: I think the latter one is the
16 correct one. We anticipate now it will take about
17 three years to hook up, although we will push to
18 expedite it during that three year period.

19 CHAIRMAN CARR: So we're talking January
20 '93?

21 MR. ZECH: Yes.

22 CHAIRMAN CARR: If we have to go with the
23 rulemaking and we don't get the final rule out until
24 March '91, is that going to still get us there by
25 January '93?

1 MR. JORDAN: We believe so. It will be a
2 small group of utilities that would remain and there
3 would still be a reasonable time to make it an
4 effective implementation on their part.

5 COMMISSIONER CURTISS: So, we should have
6 100 percent participation by January of '93 then?

7 MR. JORDAN: Yes, sir.

8 COMMISSIONER CURTISS: Either through the
9 rule or through the voluntary --

10 MR. JORDAN: Yes.

11 CHAIRMAN CARR: And some of that still may
12 be phone. We want to have 100 percent of all the --

13 MR. ZECH: There's an overlap period we
14 anticipate. But there again -- you're talking about
15 what the ETS is doing?

16 CHAIRMAN CARR: No, I'm talking about
17 whether we're going to get all the data from all the
18 plants that we'd like to have by your two lists here.
19 Some of those will still probably be voice
20 transmission.

21 MR. JORDAN: That's right.

22 MR. ZECH: That's correct.

23 MR. JORDAN: And the full implemented
24 system, as we understand it now, would be transmitting
25 something like the 85 or so percent of those data

1 points by the ERD System and getting the rest of them
2 verbally.

3 CHAIRMAN CARR: Okay.

4 Do you all have any other questions?

5 COMMISSIONER ROGERS: No more.

6 CHAIRMAN CARR: Well, I'd like to thank you
7 for the briefing. As I say, we're long overdue in
8 getting on with this program. It's one of those where
9 the first data point helps. When you start getting
10 them in, even at an 85 percent, why the knowledge that
11 suddenly appears in that response center down there is
12 multiplied by infinity because right now usually what
13 you get you have to ask for. That's a tough way to
14 run it.

15 I think if we can bring this issue to
16 closure in three years, then we'll have made quite a
17 bit of progress.

18 I'm also encouraged by the fact that we do
19 have 18 plants that have volunteered. I would
20 encourage the rest of them to go ahead and volunteer
21 and save both of us a lot of work. I look to NUMARC
22 to continue to provide strong encouragement along
23 these lines, and I encourage you to continue to work
24 closely with them because it will enable both them and
25 I, I think, to respond more effectively to any off-

1 normal actions.

2 If you have no other comments, we stand
3 adjourned.

4 (Whereupon, at 2:37 p.m., the above-entitled
5 matter was concluded.)
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CERTIFICATE OF TRANSCRIBER

This is to certify that the attached events of a meeting
of the United States Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON STATUS OF EMERGENCY RESPONSE
DATA SYSTEM

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: JULY 10, 1989

were transcribed by me. I further certify that said transcription
is accurate and complete, to the best of my ability, and that the
transcript is a true and accurate record of the foregoing events.

Carol Lynch

Reporter's name: Peter Lynch

COMMISSION PRESENTATION ON
EMERGENCY RESPONSE DATA SYSTEM
(ERDS)
JULY 10, 1989

CONTACT:
GARY G. ZECH, AEOD
49-24193

- BACKGROUND
- CURRENT STATUS
- OTHER CONSIDERATIONS
- SUMMARY AND CONCLUSIONS

BACKGROUND

- ° TMI LESSON LEARNED - DATA COLLECTION SYSTEM
- ° CONGRESSIONAL CONTROVERSY IN EARLY 1980'S
- ° COMMISSION APPROVED ERDS CONCEPT IN MARCH 1985
- ° CONGRESSIONAL INTEREST AGAIN EXPRESSED IN 1986/1987
- ° PROTOTYPE TESTED IN ZION FFE - 1987
- ° PLANT SURVEYS CONDUCTED IN 1986-1987 (59 SITES - 92 UNITS)
- ° REQUEST FOR PROPOSAL ISSUED IN MARCH 1987

CURRENT STATUS

- ° CONTRACT AWARDED TO EI INTERNATIONAL
IN JANUARY 1988
- ° HARDWARE PROCUREMENT & SOFTWARE
DEVELOPMENT IN PROGRESS
- ° FIVE LICENSEES (17 UNITS) HAVE
VOLUNTEERED
- ° OPERATIONAL SYSTEM EXPECTED IN
JANUARY 1990

CURRENT STATUS (CONTINUED)

- ° NUMARC AND UTILITY INTERACTIONS
CONTINUE
- ° RULEMAKING INITIATED IN MAY 1989
- ° GENERIC LETTER READY FOR TRANSMITTAL
TO REMAINING LICENSEES
- ° CONNECTIONS SCHEDULED FOR 1990-1992
- ° PROJECTED IMPLEMENTATION COMPLETION
AND CONTRACT TERMINATION - JANUARY 1993

OTHER CONSIDERATIONS

- ° SCHEDULE INDEPENDENT OF EMERGENCY
TELECOMMUNICATIONS SYSTEM (SECY-87-290)
- ° INITIAL ERDS TRANSMISSIONS ON
COMMERCIAL PUBLIC SWITCHED NETWORK
- ° ERDS TRANSMISSIONS WILL BE SWITCHED
AS ETS UPGRADE OCCURS - 1991/1992

SUMMARY AND CONCLUSIONS

- ° VOLUNTEER PROGRAM PROGRESSING WELL
- ° WIDE INDUSTRY PARTICIPATION
CONSIDERED LIKELY
- ° GENERIC LETTER WILL CONTINUE
VOLUNTARY PROCESS
- ° RULEMAKING WILL ENSURE 100 PERCENT
PARTICIPATION
- ° PARALLEL PATHS RECOMMENDED TO
EXPEDITE IMPLEMENTATION



POLICY ISSUE

June 28, 1989

(NEGATIVE CONSENT)

SECY-89-193

For:

The Commissioners

From:

Victor Stello, Jr.
Executive Director for Operations

Subject:

EMERGENCY RESPONSE DATA SYSTEM

Purpose:

To address the questions of the Commission as set forth in the SECY memorandum dated June 20, 1989, regarding the implementation of the Emergency Response Data System (ERDS).

Background:

A nuclear power plant data collection system to assist in emergency response was recommended as a TMI lesson learned, but was controversial from a congressional funding standpoint in the early 1980's. The funding issues were generally resolved when the scope and planned use of a data system were clarified and defined in SECY 84-481 and approved by the Commission in March 1985. Further congressional interest was expressed in 1986 and 1987 in the method of implementation and design features via proposed legislation (HR 5192 and HR 1570). In general, those bills, in addition to legislating implementation, prescribed features that were at various times different from those previously approved by the Commission. Those proposed differences were responded to in congressional responses and testimony sponsored by the Commission.

Subsequent to Commission approval, NRC staff conducted prototype ERDS testing with Duke Power and Commonwealth Edison reactor units. For example, data was transmitted and beneficially used via an ERDS prototype during the Zion Full Federal Exercise in June 1987. Also during 1985 and 1986, detailed surveys of existing hardware and software that would interface with ERDS were conducted at 59 sites (92 units) and reported by a contractor as the first step toward implementation. Based on that survey report, a request for proposal was issued, a contractor was selected, and a contract was awarded in January 1988. The contract award was contested by one of the competitors and resolved through litigation in favor of the staff.

Contact:

Gary G. Zech, AEOD
49-24193

Discussion:ERDS Status

Hardware procurement and software development are in progress, and delivery of an operational system at the NRC Operations Center is expected in January 1990. Currently, five licensees, representing 17 reactor units have volunteered to participate in the ERDS program. Extensive interactions with industry representatives through NUMARC and with individual utilities have provided for initial implementation through a voluntary program. The staff has established credibility and trust with industry representatives and the interactions have been valuable to the staff in assuring that the issues associated with ERDS implementation have been addressed. The ERDS program has been discussed with industry in other forums including the April 1989 Regulatory Information Conference, and a number of these issues are formalized through the questions and answers attached in the proposed generic letter (Enclosure). Staff plans to send the proposed generic letter to the remaining licensees to request their voluntary participation in the program. This generic letter has been favorably reviewed by CRGR and has received the concurrences of AEOD, NRR, and OGC. Concurrent with the voluntary program, rulemaking for ERDS was initiated in May 1989.

Target Dates

July 1989: Issue generic letter

January 1990: ERDS operational at NRC
Headquarters Operations
Center with initial units

1990-1992: Approximately one-third of the operating
reactor units will be connected to the
ERDS each calendar year

January 1993: ERDS implementation complete and contract
terminated

Rulemaking

May 1989: ERDS rulemaking initiated

August 1989: Proposed rule for Division review

December 1989: Office concurrence on proposed rule
completed

March 1990: Proposed rule to EDO

April 1990: Proposed rule to Commission

May 1990: Proposed rule published

March 1991: Final rule published

Emergency Telecommunications System Upgrade Impact

The schedule for implementation of ERDS at reactor units is independent of the Emergency Telecommunications System (ETS) upgrade. Initially, the ERDS data will be transmitted over the commercial public switched network. Where practical, a leased line will be utilized from the reactor site to a distant telephone Central Office (foreign exchange) to minimize the probability of blockage resulting from increased telephone traffic related to a reactor event.

As the upgrade to the ETS progresses, the transmission media will be transferred from the public switched network to the new ETS. As currently planned, the ETS network will consist of a combination of terrestrial and satellite communication channels. The ETS system concept, approved by the Commission in January 1988, is described in SECY-87-290.

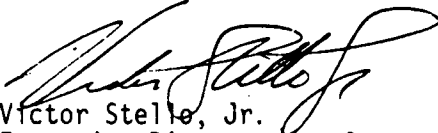
Rationale for Approach to Implement ERDS

Upon receipt of Commission approval in March 1985 to proceed with the ERDS concept, an indepth requirements analysis was performed to determine the feasibility, scope, and costs of such a project. Through the site survey program it was determined that the necessary parameter availability existed to a sufficient extent on the licensees' computer systems that the ERDS concept was a viable approach for providing the data necessary for NRC to accomplish its emergency response mission. Feedback during the site survey process, together with subsequent dialogue with NUMARC and the industry, indicated a positive attitude, in general, that suggested an approach of a voluntary program in order to avoid delays in implementation associated with rulemaking. Thus, in order to expedite ERDS implementation, the voluntary program was initiated with an initial set of receptive utilities, to be followed with a generic letter to the remainder of the industry.

Realizing that 100 percent voluntary participation may not occur, the staff also initiated rulemaking in May 1989, to ensure full industry participation.

Conclusions:

The staff considers that its concurrent efforts via the generic letter (voluntary participation) and rulemaking (required participation) will ensure an expeditious and successful implementation of the ERDS program. Unless the Commission indicates otherwise, the staff intends to issue the generic letter on July 28, 1989, or as soon thereafter as possible, and to continue with rulemaking.


Victor Stelle, Jr.
Executive Director for Operations

Enclosure:
Draft Generic Letter

cc w/encl:
SECY
OGC

SECY NOTE: A Commission meeting is scheduled on this issue on Monday, July 10, 1989. In the absence of instructions to the contrary, SECY will notify the staff on Monday, July 17, 1989, that the Commission, by negative consent, assents to the action proposed in this paper.

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Generic Letter Addressees:

The Commission is in the process of implementing an Emergency Response Data System (ERDS). The ERDS will provide direct electronic transmission of a limited set of parameters from a licensee computer to the NRC during an emergency at a licensed nuclear power facility. Implementation is proceeding on a voluntary basis and efforts are being taken to minimize the burden on the participating facilities. We believe that the implementation of this system will be beneficial to both the NRC and licensees for the reasons explained below.

The Commission has defined the NRC's primary role in an emergency at a licensed nuclear facility as one of monitoring the licensee to assure that appropriate recommendations are made with respect to offsite protective actions. Other aspects of our role include supporting the licensee with technical analysis and logistic support, supporting offsite authorities, including confirming the licensee's recommendations to offsite authorities, keeping other Federal agencies and entities informed of the status of the incident, and keeping the media informed of the NRC's knowledge of the status of the incident.

To fulfill the NRC's role, the NRC requires accurate, timely data on four types of parameters: (1) core and coolant system conditions must be known well enough to assess the extent or likelihood of core damage; (2) conditions inside the containment building must be known well enough to assess its status; (3) radioactivity release rates must be available promptly to assess the immediacy and degree of public danger by these pathways; and (4) the data from the plant's meteorological tower is necessary to provide insight into the potential distribution of a release.

Experience with the voice-only emergency communications link, currently utilized for data transmission, has demonstrated that excessive amounts of time are needed for the routine transmission of data and for verification or correction of data that appear questionable. Error rates have been excessive and the frequency of updates has been unreliable.

The ERDS concept is a direct electronic transmission of selected parameters (Attachments 1 and 2) from existing facility electronic data systems which have been established by the licensees. The ERDS would be for use only during emergencies at the facilities and would be activated by the licensees upon declaration of an ALERT or higher emergency classification to begin transmission to the NRC Operations Center. The ERDS would be supplemented with voice transmission over the existing Emergency Notification System (ENS) of essential data not available on licensees' systems, rather than requiring modifications to existing systems.

The utility is expected to provide an output port on the appropriate data system and the necessary software to assemble the data to be transmitted. No personnel action should be required for the acquisition or transmission of data after activation of the system.

Accuracy and reliability are expected to be excellent because there are no human interfaces and many data systems, such as the Safety Parameter Display System (SPDS), will incorporate automatic data validation. Timeliness should be excellent because the system would be immediately available and capable of rapid transmission with frequent updating. Parametric coverage is expected to be excellent because the primary objective of the SPDS requirement is to provide the licensee with a tool for quickly assessing the overall status of the plant, i.e., the same need that the NRC faces. Therefore, voice communications would be directed toward plant conditions and plant response rather than individual instrument readings.

Tests of the ERDS concept have been conducted with Duke Power Company (McGuire) and with Commonwealth Edison (LaSalle and Zion). These tests have demonstrated that there is great value in using electronic data transmission for obtaining a limited set of reliable, time tagged data. The NRC response teams functioned more efficiently and their assessments were more timely. Major improvements in the ability to focus on significant factors and to predict the course of events were noted. The questions that were asked of the licensee were focused on the overall status and corrective actions being considered rather than simple data requests, thereby reducing the volume of voice communications.

Actual work on the ERDS project began in 1985 with an initial feasibility survey conducted at approximately 80 percent of the licensed nuclear facilities in the United States.

An ERDS implementation contractor began work in January 1988. The initial activities of the contractor have focused on an indepth review of the survey results, the production of final NRC hardware and software designs and the procurement of the necessary hardware and software. We are currently working with an initial set of utilities that have agreed to participate and we expect to establish initial plant connections in 1989. The lessons learned in implementation with this initial group will be fed back to the subsequent participants. Extensive interactions were held with NUMARC. Additionally, the ERDS program was discussed at the NRC Regulatory Conference with industry in April, 1989. We hope to complete all plant connections by early 1992. Attached is a list of frequently asked questions and our answers to assist you in a better understanding of the ERDS program.

This request is covered by Office of Management and Budget Clearance Number 3150-0011 which expires December 31, 1989. The estimated average burden hours is 150 man-hours per licensee response, including staff and management review, formulation of licensees' position, and preparation of the requested response. These estimated average burden hours pertain only to these identified response-related matters and do not include the time for any follow on implementation. Comments on the accuracy of this estimate and suggestions to reduce the burden may be directed to the Office of Management and Budget, Room 3208, New Executive Office Building, Washington, D.C. 20503, and the U.S. Nuclear Regulatory Commission, Records and Reports Management Branch, Office of Administration and Resources Management, Washington, D.C. 20555.

We believe the benefits to the overall incident response capability are substantial and the costs to each utility are small. We would like to continue implementation on a voluntary basis. The purpose of this generic letter is to solicit the participation of those utilities which have not yet volunteered in the ERDS program. Since we also plan to contact each utility individually, please provide an appropriate contact in your organization for followup discussion. Should you have any questions, please feel free to call Gary Zech, Chief, Incident Response Branch at (301) 492-4193 or have your staff call John Jolicoeur, ERDS Project Manager at (301) 492-4155.

Sincerely,

James G. Partlow
Associate Director for Projects
Office of Nuclear Reactor Regulation

Attachments:

1. PWR Parameter List
2. BWR Parameter List
3. Questions and Answers List

PWR Parameter List

Primary Coolant System

Pressure
Temperatures - Hot Leg
Temperatures - Cold Leg
Temperatures - Core Exit Thermocouples
Subcooling Margin
Pressurizer Level
RCS Charging/Makeup Flow
Reactor Vessel Level (When Available)
Reactor Coolant Flow
Reactor Power

Secondary Coolant System

Steam Generator Levels
Steam Generator Pressures
Main Feedwater Flows
Auxiliary/Emergency Feedwater Flows

Safety Injection

High Pressure Safety Injection Flows
Low Pressure Safety Injection Flows
Safety Injection Flows (Westinghouse)
Borated Water Storage Tank Level

Containment

Containment Pressure
Containment Temperatures
Hydrogen Concentration
Containment Sump Levels

Radiation Monitoring System

Reactor Coolant Radioactivity
Containment Radiation Level
Condenser Air Removal Radiation Level
Effluent Radiation Monitors
Process Radiation Monitor Levels

Meteorological

Wind Speed
Wind Direction
Atmospheric Stability

BWR Parameter ListPrimary Coolant System

Reactor Pressure
Reactor Vessel Level
Feedwater Flow
Reactor Power

Safety Injection

RCIC Flow
HPCI/HPCS Flow
Core Spray Flow
LPCI Flow
Condensate Storage Tank Level

Containment

Drywell Pressure
Drywell Temperatures
Hydrogen and Oxygen Concentration
Drywell Sump Levels
Suppression Pool Temperature
Suppression Pool Level

Radiation Monitoring System

Reactor Coolant Radioactivity Level
Primary Containment Radiation Level
Condenser Off-Gas Radiation Level
Effluent Radiation Monitor
Process Radiation Levels

Meteorological

Wind Speed
Wind Direction
Atmospheric Stability

ERDS QUESTIONS AND ANSWERS

1. Will the implementation of the ERDS affect the NRC response role or the way that role is fulfilled?

No. The NRC response role was defined and approved by the Commission and would not change due to the ERDS. Current response activities, including discussions with the licensee, will be done more quickly and efficiently due to ERDS implementation but would not materially change.

2. What communication protocol will be set up to accomplish the ERDS implementation?

A generic letter providing information about the ERDS and plans for its implementation will be promulgated to all licensees requesting their participation in the program.

Once a utility has committed to participate in the ERDS project, it will be contacted by telephone by the AEOD ERDS project manager and the NRC contractor to make arrangements for a site specific implementation schedule.

The NRC will send a questionnaire to the licensee to obtain necessary preliminary information about the licensee's computer system and the ERDS parameters. For many licensees this questionnaire will also serve to

confirm data obtained during the ERDS feasibility study conducted in 1987. Response to this questionnaire should be forwarded to the NRC and its contractor. Any questions or problems concerning the questionnaire should be referred to John R. Jolicoeur, AEOD ERDS Project Manager at (301) 492-4155 or Tony LaRosa, ERDS Project Manager, EI International at (208) 529-1000.

After this information has been reviewed, we will proceed with the system implementation process as described in the response to the following question.

3. How will the plant specific design and implementation aspects of ERDS be finalized with a facility?

Once a utility has committed to participate in the ERDS project, an initial meeting will be held at the licensee's facilities with the NRC and our implementation contractor. The topics to be discussed include:

The data points available on the licensee's computer to be transmitted that best satisfy the NRC parameter list.

The computer or computers that will be sending the data stream and their operating characteristics.

The data stream characteristics and communications method (ASCII, EBCDIC) to be used to transmit the data.

Any hardware and software required for the ERDS implementation. The plant specific implementation schedule based on plant capabilities, the need for hardware additions or modifications, and software development requirements.

Subsequent ERDS development and initial testing will be done based on the agreed upon schedule.

4. What is the current program schedule?

Software is being developed by the NRC's contractor and should be completed by late summer 1989. The first utility on line to the NRC Operations Center in Bethesda is scheduled for early 1990 with subsequent connections scheduled over a 2 to 3 year period.

5. Will the implementation of the ERDS require significant equipment modification or addition by licensees?

The only equipment requirements are for the hardware that is needed to provide the data stream from the current licensee equipment that processes the requested data. Should the computer system not be capable of producing the data stream for transmittal, then the ERDS will be implemented as site equipment modifications permit. Approximately 5 to 10 percent of the licensee's systems are running at close to 100 percent processing capacity in the post trip or incident environment, and approximately 10 to

15 percent of the licensee systems are hardware limited (e.g. no available output port for an ERDS connection). The ERDS will follow, not drive, licensee equipment modifications. For those licensees where no new hardware is required, the costs per reactor unit are estimated in the range of \$20K to \$50K. This estimate includes labor costs associated with software development; design change notice documentation, testing, and procedure development. At the upper end of the cost spectrum, the survey revealed that two plant sites would require additional computer equipment to provide the necessary ERDS feed. The hardware costs were estimated at \$150K plus licensee staff time required to set up a custom system development effort with the appropriate contractor.

6. Will the ERDS be considered safety grade or require redundant equipment?

No. The ERDS feed will be as reliable as the current licensee equipment providing data to the licensee's own TSC and EOF. The addition of new plant instrumentation or computer data points to provide ERDS data will not be required.

7. Will the current data list be expanded?

No. The issue has been well studied since the Nuclear Data Link was originally proposed after TMI. The development of the data list followed our determination of our role in an emergency and provides the information we need to perform that role. Needed data not transmitted over ERDS will still be passed over the ENS.

8. Must the ERDS be used to transmit drill data?

That is not a design requirement. For those system configurations which only allow the transmission of real data, no modification will be expected. However, if the licensee system is used for drills and can provide the transmission of the drill data, we would like to use the capability for our drill participation.

9. Will the ERDS be an LCO or Tech Spec item?

No.

10. How soon does the NRC expect the system to be initiated after an Alert declaration?

The ERDS should be initiated when the licensee notifies the NRC of the declaration of an Alert or higher emergency classification.

11. Will the transmission of data point values for times prior to the time of the ERDS activation be required?

No. Only the data values from the time of the transmission initiation will be required over the ERDS. Information on initiating conditions and plant status will be provided over the verbal communication line as necessary. Specifically, earlier parameter values will not be required.

If a licensee system has the capability to transmit earlier data point values the NRC would like to utilize that feature but it clearly is not a design requirement.

12. Once the ERDS is implemented, will continuous manning of the ENS (Red Phone) still be required?

Yes. The ERDS will not eliminate the need for verbal transmission of information such as licensee actions, recommended protective actions, and supplemental event-specific data not provided by ERDS. Emphasis will be given to producing no new impact on Control Room personnel due to the transmission of data over the ERDS.

13. What procedures and system controls will be required for the ERDS?

A procedure will be required for activation of the system during emergencies, probably an emergency plan implementing procedure, and for conducting system tests with the NRC. Any procedures or controls for system verification and validation or configuration control should be done in conformance with existing plant procedures as modified to require prompt notification of the NRC for any change which affects ERDS parameters or the ERDS data stream.

14. Will the ERDS data be provided to State authorities?

Although the NRC is not soliciting or recommending State participation in the ERDS program, one provision of the systems design is user ports for States within the 10 mile plume exposure EPZ. This provision was made to reduce the likelihood of different data being provided to the NRC and a State because of differing data sets where the State has decided to collect data. This provision is not expected to affect States that already have a data collection system. If a State expresses a desire to participate in the ERDS program, the NRC will provide ERDS data to that State under a specific Memorandum of Understanding. The purpose of this Memorandum of Understanding would be to specify communication protocols for clarification of ERDS data and data security requirements. The NRC would provide those States with contractor developed software and make one output port available to the State from the NRC Operations Center. The States would have to obtain compatible PC hardware and licensed software used in the ERDS system to receive the data. This will ensure that all parties involved are using the same data base for their analysis. Any request made by a State to set up the capability to receive the data will be discussed with the utility.

15. Will the NRC require a periodic test of the ERDS, and if so how frequently?

The NRC does expect that periodic testing will be required to ensure system operability. Currently we expect that testing will be done quarterly. Should system reliability permit, the frequency of testing may

be reduced. Testing of a State link portion of the system will be done with the NRC. Therefore, no licensee participation will be required for this test.

16. Will participation in the ERDS program remain voluntary?

The NRC is reviewing the need for rulemaking to require the implementation of ERDS at all nuclear power plants in the event the voluntary program is not achievable. It is anticipated that the provisions of a proposed rule would be the same as those of the voluntary implementation program currently in effect.

17. What will be the boundary of system maintenance responsibility?

The NRC will be responsible for maintenance of all parts of the ERDS system installed starting at the input port of the first ERDS-specific piece of hardware (e.g. modem for single feeder plants and multiplexer for multi-feeder plants).