ACRST-1640

ORIGINAL

UNITED STATES
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF: DOCKET NO:

GENERIC ITEMS

MEETING

LOCATION: WASHINGTON DC PAGES: 1 - 105

DATE: JANUARY 29, 1988

Heritage Reporting Corporation

Official Reporters
1220 L Street, N.W.
Washington, D.C. 20005
(202) 628-4888

PUBLIC NOTICE BY THE

UNITED STATES NUCLEAR REGULATORY COMMISSION'S

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

The contents of this stenographic transcript of the proceedings of the United States Nuclear Regulatory Commission's Advisory Committee on Reactor Safeguards (ACRS), as reported herein, is an uncorrected record of the discussions recorded at the meeting held on the above date.

No member of the ACRS Staff and no participant at this meeting accepts any responsibility for errors or inaccuracies of statement or data contained in this transcript.

UNITED STATES NUCLEAR REGULATORY COMMISSION

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

In the Matter of:

MEETING OF THE SUBCOMMITTEE ON THE GENERIC ISSUES

Friday,
January 29, 1988

Room 1046
1717 H Street, N.W.
Washington, D.C. 20555

The above-entitled matter came on for hearing, pursuant to notice, at 1:00 p.m.

BEFORE: DR. CHESTER P. SIESS
Professor Emeritus of Civil Engineering
University of Illinois
Urbana, Illinois

ACRS MEMBERS PRESENT:

DR. FORREST J. REMICK
Associate Vice President for Research
and Professor of Nuclear Engineering
The Pennsylvania State University
University Park, Pennsylvania

MR. CHARLES J. WYLIE
Retired Chief Engineer
Electrical Division
Duke Power Company
Charlotte, North Carolina

MR. CARLYLE MICHELSON
Retired Principal Nuclear Engineer
Tennessee Valley Authority
Knoxville, Tennessee
and Retired Director, Office for Analysis
and Evaluaton of Operational Data
U.S. Nuclear Regulatory Commission
Washington, D.C.

MR. JESSE C. EBERSOLE
Retired Head Nuclear Engineer
Division of Engineering Design
Tennessee Valley Authority
Knoxville, Tennessee

MR. DAVID A. WARD
Research Manager on Special Assignment
E.I. du Pont de Nemours & Company
Savannah River Laboratory
Aitken, South Carolina

ACRS COGNIZANT STAFF MEMBER:

Sam Duraiswamy

NRC STAFF PRESENTERS:

Themis Speis
Newton Anderson
Robert Baer

I N D E X

Items Discussed	Page
Procedures being used by the staff in defining/modifying the scope of generic issues and USIs	4

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

CHAIRMAN SIESS: The meeting will come to order. This is a meeting of the ACRS Subcommittee on Generic Items.

I am Chester Siess, Subcommittee Chairman. Other members present are Jesse Ebersole, Dade Moeller, David Ward, Charlie Wyle, and Carl Michelson will be back in a few minutes.

The purpose of the meeting is to talk with the NRC staff about the procedures that are used to define and modify the scope of generic issues and unresolved safety issues, USIs. Forrest Remick just came in.

Sam Duraiswamy on my right is the cognizant ACRS staff member for the meeting. The rules for participating have been announced as part of the notice of the meeting published in the Federal Register. A transcript is being kept, as you may have noted, and it will be available as stated in the Federal Register, and I will ask each speaker not at this table to first identify himself or herself, use the microphone when they speak.

We have received neither written comments nor requests for time to make oral statements from members of the public.

We have an agenda that poses some questions to the staff, and the meeting will be essentially in two parts today. I think we can be through with the staff in a couple of hours,

and if we have time left, we will talk to, talk some about what kind of report we should make on this review of generic issues and USIs to the Commission, so that will be the second part of that, which is not on the agenda. We will dismiss the reporter and have some discussion about what we might do about a report.

We have had, Sam has got a status report here, and he also has--that will be more useful for the latter part of the meeting, and he will pass it out. He has got a status report prepared for the February meeting, and that reviews the history of this Subcommittee's meetings with the staff over the past few months, and the background for our review of generic issues, and we can use this as a basis for discussing what we do next.

This--I guess we more or less thought we were through with our review of the process of identifying, prioritizing, resolving and implementing and so forth generic issues, but something came up at the last Full Committee meeting that brought out some concerns about the scope of the issues, and how the scope is determined and how modifications are made to it. Specifically the last month's meeting we were dealing with--what is it called, Sam?

MR. DURAISWAMY: A-47.

CHAIRMAN SIESS: Safety implication of control systems, and it was pointed out that the resolution dealt with

only a portion of the issue and that somewhere in the process from the time it was originally defined until it was resolved, the scope had been reduced, and because the scope had been changed, the issue was defined as resolved when we didn't think it had been.

Now the NUREG 1217, it was pretty clearly stated that the scope had been changed, and near the back of that NUREG there was a very interesting statement by the staff that--I'm not sure I can find it--pointing out the problem of defining scope. Make it too large, you don't know what to do about it. If you make it too small--it is in five-one, the conclusions. Okay. I thought it was a pretty clear-cut statement.

MR. DURAISWAMY: Status report.

CHAIRMAN SIESS: Sam says he has in the status report that statement.

One thing that concerned us was, it looked like the scope of A-47 was modified as part of the resolution, which didn't quite seem to be right. You get a certain point, say I have resolved this, so I will now redefine the scope and say I have resolved the issue. That may be a caricature of what it was, but that's essentially what it looks like.

Now this is I suspect only the tip of the iceberg. The more we look at USIs, the more we have problems with scope. A-17, called systems interactions, is obvious, an

obvious one. The staff has pointed out a couple of times orally that gee, systems interaction is everything and in fact A-47 is a systems interaction. Would you guys be more comfortable coming up to the table?

A-47 is one of a subset of A-17, and there must be a lot of other subsets of A-17, and maybe that's the way to go about systems interaction. Don't try to solve the global problem of systems interaction, but to take out this interaction and work on it, this one and work on it, divide the problem up or subdivide the problem, but as we look at the thing, it looks like some of the generic issues and some of the USIs that are complex are a conglomeration, a number of things have come up like this and been lumped together, and yesterday we had a meeting on DHR, decay heat removal, and somebody pointed out that that's practically the severe accident problem.

MR. SPEIS: Eight percent.

CHAIRMAN SIESS: You see, and yet it is listed as one USI, and a significant contributor to core damage probability in the DHR area is Station Blackout. Station Blackout is another USI, and if you solve DHR, resolve DHR before you resolve Station Blackout, you go one way, and if you do it the other way, you do it something else, and the way the USIs have developed bottom up, we have ended up with this thing up here, and now when you try to resolve them top down,

it doesn't make a whole lot of sense.

Now the process of identifying these things is very formal. It is the bottom up process, and we don't quite know what to do with it. We have asked you to address here rather specifically this question of scope. I was told that at one time if you changed the scope there was a fairly formal process.

Now what the Committee agreed on last month about A-47 was that we thought what you have resolved was fine. It just wasn't the whole problem. Part of the problem you had resolved. You had come up with a good solution, and we didn't have any objection to going out for public comment on that, but we didn't want to sign off on A-47 because the scope had been reduced and we wouldn't find out where the rest of it had ended up. That is the statement, some of this should be at about 7 and some should be here and some should be there, but is there a formal process for transferring the residual to somewhere else? And this is the specific instance that brought it up.

Just as a personal comment, it seems to me that if we could set up our safety assurance questions as we heard this morning like this, now we can carve out individual questions out of that total and work on them at managable levels, but do it in such away that we always know what we have solved and what we haven't solved.

Now we have got clumps over here and clumps over there and we move them, moving them back and forth, so is there a better way of handling these things so that they can be managable resolutions in some logical fashion? I hate to use the word integrated bit I guess it is integrated. We talk about integrating the implementation. You know, instead of a serial implementation of these things where you fix this and then next year you fix that, a serial integrated implementation, why couldn't there be a more integrated resolution?

The process is a long one. Maybe some of the integration occurs at the resolution, at the implementation level even though it wasn't done in the resolution process, but you know, if it is five years between the two stages, it is not going to go, so with that start, explicit questions we have are listed here, but first, additional comments?

MR. EBERSOLE: I would like to just jump ahead a little bit. I would like to make a 4:50 plane. I have some particular interest in A-47. I would like to just make a few introductory remarks about how I look at that problem.

I am going back into some dark history, and I am going to take up just the implications of control systems which is truly a subset of the system interactions.

I am going to talk about control systems now as they affect critical safety operations, and I hope I haven't retold

these yarns too often to too many before.

Some 44 years ago, I had to do with the old B-29 airplanes, and I saw and witnessed a fascinating evolution of the events whereupon an airplane crashed not as a cause of a failure of air dynamics or power or anything like that, but it was failure of a control system, and it was a system interactive process. I guess I cut my teeth on this business at that time. It amounted to the fact that the engine vibrated the ship so much they had to put the voltage regulators on the tail which are insulated with rubber lard mounts. They made the mistake in one, if not many of the old plants, to assemble all six voltage regulators on a column, aluminum table, which was then isolated from the ship frame with rubber lard mounts. The ground reference was secured by pigtail, fastened by three Phillip head screws at each end.

All it took for the terminal events to happen was one screw to come out and the loss of reference voltage to occur whereupon the voltage in the plant rose to 70 or 80 instead of 28 and a half and burned out everything that was going which turned out to be the propulsive power, the flaps, the gear, the whole works, so the plant collapsed.

That was a control system interaction. It was in physical aspect to it. That sort of keyed me into this single point failure as well to the control system aspects of failure.

That was 44 years ago. About 35 years ago, I happened to be involved in some electrical work and I think it was me, I can't remember, I was told to fix some switch. I am not sure it was me, to control the water level in a domestic water tank. So I did, with what I thought was a consistent view of the importance of that water level, which was if the water level fell, the toilets wouldn't flush, you couldn't drink from the upper floors. Unbeknownst to me, a gentleman named Bolio had permitted the use of a domestic water system to open and close about 20-foot piston-driven needle valves that controlled main condenser water flows. This was a water flow from ten units.

One day some years later domestic water tank float switch, true to the $40.00 cost, betrayed the domestic water level and the cascade shut down all ten units, threatened the entire grid.

In later years, at the Browns Ferry nuclear plant we noticed the aspect of extending the coincident circuitry, redundant, coincident circuitry, to protect against spurious plant trips terminated the position valve and we needed the power. There were many switches out in the turbine generator complex, drains, et cetera, vibration instruments, all of which had no, not even a trace of conversation of coincident circuitry, and the failure, spurious failure of a single one of them would lead the plant into a nasty loss of its

primarily heat sink which was the condenser, as well as loss of steam flow to its main feedwater pumps. This was a challenge to the safety system rather than direct system. It is, indirectly affects challenge frequency.

In the particular case of the Westinghouse plant, you will note that it always requires that you jump up and run the aux feedwater pumps, and you may--in fact, if you lose condenser vacuum, you have lost your normal heat sink, so you can find out in the turbine plant many single point sources of challenges to safety systems.

I am going to go out in the turbine plant, just pick up a couple which I think should be obvious to spread this matter of A-47 broader than it has been spread, I will take, just to go out to the perimeter. I will take the matter of the main generator excitation and speed control. Those are control systems. Every time the turbine dumps its main load, and in the newer plants, attempts to seize and hold house load, there are two things that have some substantial potential I think, and I don't think they have been investigated. One of them is it may not hold voltage regulation. I don't know of any process now that will limit excessive voltage from what is analogous to the wire problem, and remember you are now coupled to critical station loads which ultimately hope to see the diesel if the generator would fall out as it properly should.

The other one is the ancient business of where we had to consider the rupture of the turbine, last stage blades particularly, throws big pieces around the plant and crashing into critical apparatus. That was put to bed sometime ago by cooperation with I think mostly Westinghouse, who convinced the NRC that by appropriate testing, quality control on the turbines, they could pretty well form a structure having massive chunks of metal thrown into critical apparatus at 180 percent of rotor speed. I have never been satisfied with that decision, and I don't think the Japanese permit it today.

If now, though, you look back at that problem, and realize that in the carrying of house loads we not only have this voltage I mentioned earlier, if we run away while still connected to the station grid, we have essentially unloaded the turbine, and so it is running away with part throttle or more than that, and 5 to 10 percent load it will carry with it all of the AC connected parallel equipment that goes along with it and tear such equipment up before it can ever slow down and be picked up by the diesels.

I only mention these things to say to me the A-47 scope means that you should go out not just at the back end by looking at reactive parameters directly, like level. You should go out and look at the service systems, and if you can find it practical to go around and list ever control system there is, and erace it if it doesn't have some potential for

affecting a parameter that can ultimately lead by cascade to the parameters of interest here and the primarily system, but you have to go out and look at the whole field, not just pick as you do a large LOCA which I think is characteristic of the way we do business, pick the few that look wonderful and interesting and promising--I think you have got to go back and just methodically pick them all up, I don't see that's too broad scope to entertain.

That's all.

CHAIRMAN SIESS: Thank you, Jesse. Before going on to the next one, let me say something to the staff.

In the NUREG, Section 22, there was a very clear statement of limitations of the study, and I was going to ask you to tell us where those things that were eliminated by those eliminations are being attacked, and then what controls you have within the staff for seeing that things that were removed from beyond scope by limitation are appropriately addressed somewhere else.

In addition to those limitations, which narrow the scope, I think Jesse has given you a class of interactions that may not have been consciously eliminated by those limitations, and they want to address those that is even within the scope you define for yourself. There are some you may want to--control system interactions concern. I don't know whether Carl has any more.

MR. MICHELSON: No, I don't have any additional comments. I would like to hear what the staff has to day.

CHAIRMAN SIESS: Dave?

DR. MOELLER: No.

MR. WARD: Just briefly. I guess I would like to see a philosophy or strategy for dealing with USIs and GIAs developed by the staff that would be something along the following lines -- where each, each issue would be rather fairly narrowly and quite explicitly defined, and that would have to recognize that there may not be good integration between that narrowly-defined issue and adjacent, what I call adjacent issues.

Also recognize that there might, for some time would be gaps because of the narrow definition. It seems to me where the integration might come in, I recognize being ongoing, because inevitably new issues are going to be introduced, but I would like to see the licensees have an opportunity--through an explicit staff program providing for this process, the licensees would have an opportunity to integrate their responses to generic issue requirements, and I think what that would mean is--I am not sure I am using the term of resolution and implementation correctly or as the staff uses it, but I see resolution of an issue, that is when the staff is finished its work and laid out new requirements or whatever for the licensees to follow. Implementation is

when the licensee gets something done in the plant, but it seems to me if the staff would lay out its resolutions, and then permit some significant period of time for compliance with those implementation, those resolutions so that licensees could gather up two or more groups of generic issue resolutions, and provide integrated solutions to those, it seems to me that concern--well, and I think another feature is the staff would have to have a policy, informal policy for permitting time for such implementation of programming.

CHAIRMAN SIESS: Would ISAP 2 do that?

MR. WARD: It seems to me--I haven't really read this.

CHAIRMAN SIESS: I have

MR. WARD: I hope it does.

CHAIRMAN SIESS: Allows for integrated solutions. I am not sure to what extent it allows for time, but the whole process takes time.

MR. MICHELSON: What is ISAP 2?

CHAIRMAN SIESS: You haven't seen it yet?

MR. WARD: We just got it.

CHAIRMAN SIESS: Generic letter, somewhat different from anything we have seen.

MR. MICHELSON: Different than IEA? IPE, different than that?

CHAIRMAN SIESS: No. It has nothing to do with IPE.

At least it has something to do with it.

MR. WARD: I think I--just one other brief point. I think furthermore in the staff's policy, and maybe this is it, I would like to see the staff, you know, explicitly say under this policy they will credit, credit risk arguments, probabalistic arguments.

CHAIRMAN SIESS: That again is part of ISAP. PRA plays a significant role. Incidentally, when you talked about the clearly-defined scopes, and there might be gaps, I think it is important that there be some kind of a structure so we know where the gaps are. I don't mind having gaps if I know they are there and somebody can at least assess the possible significance and see some day they get worked on if they are important.

Charlie?

MR. WYLIE: Nothing.

DR. REMICK: No comment.

DR. MOELLER: Chet, I guess when you went passed me, I--

CHAIRMAN SIESS: We will come back to you.

DR. MOELLER: I subsequently looked at my notes, and I really couldn't understand, I'm not sure I fully understood the Subcommittee's quote, complaint, unquote on, or Committee's complaint, unquote. I looked at the scope of the examples given in NUREG 1217 and I thought some appeared to be

narrowed and some appeared to be broadened.

CHAIRMAN SIESS: Yes, but if you look back at the original scope of A-47, which they have ended up with, it is much narrower.

DR. MOELLER: Yes.

CHAIRMAN SIESS: Than they started out with, and one of our concerns is how do you, what is the process for changing the scope? And when it says this might be better addressed under A-17, what is the process to see that it gets properly added into A-17 which is where you put everything now, but I think you understand our concern.

MR. SPEIS: Well, I thought in the beginning--

MR. MICHELSON: You have heard too much already!

MR. MINNERS: We are going to put everything in A-17. That's the answer!

MR. MICHELSON: Residuals is the problem.

MR. SPEIS: I am ready to start.

CHAIRMAN SIESS: I wonder if you had any questions to ask us before you started?

MR. SPEIS: Well, I guess I have some vugraphs up there and and I will start up there and then Newt here will go through some specific examples.

I heard the things that you gentlemen said going around in circles, and we have been saying somewhat the same things. Our mind has been saying the same thing. Some of

them say integrate, coordinate, you know, all these beautiful things that you hear in Washington, you know, and there are merits to all these things.

On the other side, some other people say, you know, let's make sure that we can pinpoint some areas that we can indeed see improvements where we can put our hands around it like Station Blackout. Even though I am in total agreement with the reliability of power source on site, off site, are an integral part of decay heat removal, and so is the diesel generator reliability issue, B-56, and so the issue of reactor coolant pump seal integrity, same parcel, part--sometimes I cannot say those good phrases that you people have been brought up with, you know.

MR. EBERSOLE: Don't you get a feeling there is too many things laced together?

MR. SPEIS: But we have been extremely conscious of that the last few years and tried to you know, see the relationship, how they fit together, and project not only the interrelationship but implementation.

Right now, you know, at least my staff and myself and many other people feel confident that you will have integrated A-45, and A-44, and B-56, and B-23. I am referring to the decay heat removal and Station Blackout, and reactor coolant pump seal and diesel generator.

CHAIRMAN SIESS: May have done more than we know

about. We haven't been looking at the whole picture, either, you know. We have been taking them one by one when you bring them in.

MR. SPEIS: On the other hand, if you make everything one issue, you know, like systems interaction includes everything, it is difficult to--I am just kind of rumbling through. I will try to give you more coherent presentation. One of the difficulties we had with the systems interaction, provide to you the detailed chronology, was that it was an unbounded scope and it was in the eyes of the beholder, you know.

One time before we changed the scope, it was '83, I brought in my office about ten people and I gave them a scope and I told them come back two hours later and tell me what mix, and I got ten different answers, and I think we discussed that with you. I recall the issue of systems interaction being an emotional one and one of the staff persons, you know, raised different professional opinion. We went to the Commission. We came to you people, and I am not so sure you wrote a letter, presented, but we went around in circles on that for about a year or so. So it is, we have to keep constantly struggling to find the perfect role, you know.

CHAIRMAN SIESS: You know, systems interaction is easy to say, but hard to define. Take a narrow portion of it like control systems, and even that was a problem obviously.

MR. SPEIS: That was a problem. That's right.

CHAIRMAN SIESS: But the part of it you attacked, you came up with a good solution to it. It looked like one that wouldn't be too much affected by the things that might be done.

MR. SPEIS: That's one issue that we have some maybe slight disagreement with you because I don't think we changed the scope of that one, but we can have your views and we can go and give you some details.

CHAIRMAN SIESS: All we can do is what we read.

MR. SPEIS: Yes. Now on that one, many times on some of these issues we go through the process and all of a sudden, you know, we lay on the table the elements of the resolution, and a lot of, many people don't like that, you know. The resolution doesn't involve this particular concern or this particular prejudices or like or whatever it is, you know, and we have criteria. We have cost/benefit. We have all kinds of things that we have to consider in going through the process, and many times we will, these things drop out. Another time other things are added to the menu, and sometimes the impression is given to many people that gee, you know, those guys didn't come up with the requirement in this particular area and the scope was changed, and well, again, that would be argued, but--

CHAIRMAN SIESS: Excuse me.

MR. SPEIS: Yes, sir.

CHAIRMAN SIESS: Let me quote, perform systematic review of control system failures, it became quickly evident that scope of the review had to be confined. Confined means different than changed.

MR. BAER: We don't know what you are reading from.

CHAIRMAN SIESS: NUREG 1217, evaluation of safety implications.

MR. BAER: Fine.

CHAIRMAN SIESS: That's the first we knew this scope had been confined and I think we have, may have misled you, maybe even mislead ourselves. That is a very poor choice of words because I think that we did do a fairly global study. We did a lot of scenario development. We did, and we did itemize when we began this study all the control systems that we felt had any potential for affecting the, what we consider to be the events of concern.

MR. EBERSOLE: It goes to main generator voltage frequency and I can't tell you whether those systems were on this list or not.

CHAIRMAN SIESS: If you did those things--I am getting into procedures, but if that's what you want to argue, I would expect to find in this document all of the things you did and that you eliminated and why you eliminated them, and if you went to the main generator voltage, I expect to find a

statement in here that you went and looked at that, and decided that it wasn't a problem, such and such a reason. And I don't find that, the disposition of all the items within the scope, except you know, in here.

MR. ANDERSON: You are correct. They are not in that NUREG. That NUREG is a summary. I am going to answer that. Okay. I can tell you exactly where it is. It is in about 15 different NUREGs CRs that were developed by the contractors. It is such a mass of information and we didn't want to send you a 15 or 20 volume epistle that told you everything little thing that we looked at.

CHAIRMAN SIESS: No, but in a short paragraph say that this was resolved in such and such a thing. Are those listed as references in here?

MR. ANDERSON: Yes.

MR. SPEIS: That still doesn't mean we addressed every question that Jesse mentioned.

CHAIRMAN SIESS: That's two separate things.

MR. ANDERSON: Maybe I am getting more insight into your problem. See, I guess we assumed that by osmosis you would understand everything that is in all the contractor reports, and I admit this is cryptic and a lot of the information isn't presented there and it is a summary.

There were four different plants done and they were done by two different contractors and there is a great many

reports, a stack this high of NUREG reports, presents all the detailed information.

CHAIRMAN SIESS: You didn't write this for us I guess, but what we need to know is why we should say to the Commission that we agree with the staff that USI-47 is resolved.

MR. ANDERSON: I understand.

MR. BAER: May I comment on a somewhat different approach that I have discussed with Jesse a little bit on the phone and do hope to pursue?

We took an approach, as Newt indicated, where we looked at primarily system parameters of importance and then went back and looked at those control systems that we could see would have any effect on them.

Now Jesse, and Carl in particular, would very much want us to have approached the problem a different way, look at individual control systems and see what they could affect.

I think the only way--we feel we have bounded if not all, almost all, of the concerns raised, but I think the only way we can ever come to that conclusion consistently is for the Committee, members of the Committee, Subcommittee, to sit down, define three, four, a half a dozen of the scenarios in enough detail that we understand them, and we would then try and show how what we did bounded them.

Now we would have to go back in many cases to our

contractors, you know, and especially can't do it off the top of our heads, especially when some of this is done four or five years ago.

CHAIRMAN SIESS: Have you read the transcript of the last Subcommittee meeting at which Mr. Michelson I think listed a half a dozen scenarios that you hadn't covered?

MR. BAER: Jesse and I have talked about a couple on the phone and then we have tried to get back to Jesse on understanding the details because we go to our electrical people on these exciter ones and they start kicking off eight or ten systems or components that would protect against it, and if we are dealing with seven or eight failures, you know, I know it is not going to pass any sort of cost/benefit analysis, but there is something. It is obvious Jesse is a very intelligent man. There is something in that, in there that we are not understanding. That's --

CHAIRMAN SIESS: Put down somewhere that is why you eliminated that.

MR. EBERSOLE: You haven't told me what protection to overvoltage, excess frequency.

MR. BAER: We have been told the generators have beside the turbine speed.

MR. EBERSOLE: But it ended up we have no problem with these two matters.

CHAIRMAN SIESS: It reads external events such as

earthquake event, flooding, fire and sabotage, have not been considered in this study.

Now how am I supposed to interpret that? Have not been considered in this study. And this study now is the resolution of A-47, not the resolution of steam generator overfill or vessel overcooling.

MR. ANDERSON: I understand.

CHAIRMAN SIESS: We may be talking language, but that is really the only way we communicate.

MR. ANDERSON: I think it is the, more of a communication problem, and I don't think that it should say that they weren't considering it. What we are intending to say is we don't consider that, we didn't consider it any further, after we looked at it, and determined that it was being handled someplace else or that we had decided that it wasn't, wasn't in any payoff in it.

Now I don't believe that sabotage, for instance, was ever defined in the scope of A-47. We had never agreed that we were going to work that.

With regard to external events, we have I think a rational reason for not, not considering that in A-47. We may not have articulated it very well, but there is, certainly wasn't any intent to just--

MR. MICHELSON: Are you going to tell us what that reason is for external events in general? What is the reason

why you don't?

MR. ANDERSON: Well, there is a--

MR. MICHELSON: It wasn't articulated. You are quite right.

MR. EBERSOLE: Let me ask are we talking about A-47 or are we talking about--

CHAIRMAN SIESS: Right now we are talking A-47.

MR. EBERSOLE: A-47 I tried to avoid --

MR. MICHELSON: We are trying to go through the logic now.

MR. EBERSOLE: Has the flavor of A-47--I was trying to just stick to on any good day some damn control system went crazy and pressure rose up.

MR. MICHELSON: We are trying to ratchet through the problem to understand.

CHAIRMAN SIESS: We are tying to do two things. We have a concern in the Committee about what to do with the resolution. Tell the Commission about resolution of A-47, and we are trying to address the procedural thing, you know, and I hate to use the term paper trail, but you know where this was handled and that was handled, but if you operate then on the QA system like a licensee, you have been, you would have been dead.

MR. ANDERSON: We would have had a lot of paper; might not have done anything.

CHAIRMAN SIESS: Is it in your memory or is it somewhere on paper? If somebody raises this issue again three years from now, how do we decide that you properly eliminated earthquakes?

MR. MICHELSON: Let's use fire specifically since you indicated a reason in here why you didn't include fire.

MR. ANDERSON: There are several categories of that information. A lot of it may never come to light again. It is buried in contractor's reports. Unless somebody wants to dig through them, it is not really going to come light. Now with regard to some of them, we made the judgment that they were, either didn't bear further looking at or they were being handled in other programs, or--

MR. MICHELSON: That's the problem. You said, for instance, fire was handled under Appendix R; fire in non-safety areas whereas was not handled under Appendix R, so I don't know what a fire in a non-safety area will do in terms of control systems interacting with safety systems because you haven't looked at it and you did not look at it under Appendix R. You did not specifically look at that.

MR. EBERSOLE: Let me help out.

MR. SPEIS: I want to answer one at a time. On the other hand, you know, you just, the way you are describing the problem, going about ten years all together, but in A-47, areas that are not familiar, we looked at many scenarios in

the mechanistic sense to see, you know, what type of bounds or numbers we could get as far as their implication on the safety systems, and again it was our judgment, you know, coming off--the individual scenarios were faulted into that, those bounds calculations.

MR. MICHELSON: Keep in mind your scenario approach essentially works with one failure at a time. Fire is a common mode failure cause, and it results in a number of things happening to safety systems or non-safety systems. You looked at it oh, reasonably closely for Appendix R in the safety system area. You didn't look at it at all in the non-safety system area, including such things as the air compressors and things and so forth. In the non-safety area, you just didn't look at it.

MR. ANDERSON: With regard to common mode failure problem, we did assume multiple failures and selected multiple failures and we looked at them from two standpoints--which ones were the most likely from common cause effect and which ones in A-47

MR. MICHELSON: You said you looked at some. You didn't tell me how many.

MR. ANDERSON: I'm sorry. Then that was cryptic. Well, that's true, we did, but we looked at them in a very systematic way and the objective was to, was to bound the common cause failures both from the standpoint of what would

be the most serious in terms of plant safety and what was the most likely with regard to equipment locations and types.

MR. MICHELSON: I think, although you will have to correct me because I am probably wrong, I think you looked at such thing as loss of power supply and how many things that got. You didn't look at it in terms of a fire in a given area and how many things that might have gotten which might have been, included both power and air and a number of other devices, not alone relating to feedwater, but perhaps relating to building ventilation or air-conditioning, or a number of other factors.

This is, I would like to see those studies if you have done them, so I think what we are saying is have you really included the external events? And I think the answer is no, you explicitly excluded them. And you gave some reasons which I think were less than acceptable such as Appendix R is good enough. Appendix R isn't good enough for the non-safety areas. It wasn't even included.

MR. ANDERSON: Appendix R works part of the problem. I will accept that. I don't think that we did put probably enough information with regard to what our contractors did in those areas.

MR. MICHELSON: At least your justification is not very solid for excluding external events.

CHAIRMAN SIESS: As I said, your objective, once you

saw this thing, presumably is to convince us that you solved this so we can tell the Commission we think it is solved. That is what they have asked us to do. Now when you--

MR. SPEIS: That is part of it. Also along the way here you are using the approach and --

CHAIRMAN SIESS: That's not required. That you get as an extra.

MR. SPEIS: I see.

MR. BAER: Free!

CHAIRMAN SIESS: You have been working on it for ten years and you have gone through a lot, and reached some conclusions, and we have our Subcommittee meeting and it seems to me that you are not going to take the Subcommittee through every one of those contracts, but as the members question you what did you do about this and what did you do about that, to select a couple of instances of that to affirm to the contractor I take it and convince them that you did look at it, you know, and convince us, the Subcommittee, that you have done the whole thing, and then it is a big help--we don't see something where it says we do recommend this to take care of steam generator overfill, this to take care of reactor vessel overcooling, and that's the resolution of A-47.

MR. ANDERSON: There was so much material to present that we had a couple of choices. I suspect we could have taken a couple of examples, walked through and shown the logic

and how we got there and the procedures we went through, but we chose to take the other approach, which may have been a mistake, which was to try to walk you through the process we used to show completeness, and didn't really hit on a number of individual areas.

CHAIRMAN SIESS: I wasn't there. I don't know what happened.

MR. MICHELSON: I will be very surprised if your contractor walked through fire potential in non-safety areas, and its effects on control systems that can interact with safety systems. I would be extremely surprised if you did it. Correct me if I--I am just telling it the way I read it.

MR. ANDERSON: I can't speak in how much detail it was done, but I do know it was in consideration. It may have been put to bed or--I am just not sure exactly how that, how that was done.

CHAIRMAN SIESS: There has been a lack of communication because according to what I read, you went before CRGR and said that the ACRS wanted to increase the scope of A-47, and you didn't want to.

MR. BAER: No. Since Newt and I made the presentation, what we said was we had told the ACRS that we had covered the full scope, but based on my conversations with Jesse Ebersole--and we did feel we covered the full scope. I did say that and we said that to ACRS, but based on the

conversations I have had with Jesse subsequent, he called me subsequent to the ACRS Full Committee meeting, that the specific requirements that we wanted to impose, the Committee didn't have a problem of that.

CHAIRMAN SIESS: You were misquoted in the CRGR minutes?

MR. ANDERSON: We haven't seen them.

CHAIRMAN SIESS: We have, see them for some reason when you don't I guess, but they said that, they quoted you saying the ACRS wanted to increase the scope and you were going to stick to your scope.

MR. ANDERSON: I don't remember that.

CHAIRMAN SIESS: If the ACRS does want to increase the scope, maybe the ACRS thought that you had decreased the scope. See, there is a lack of communication, but you can see the problem.

MR. EBERSOLE: Let me try to simplify.

CHAIRMAN SIESS: If you can simplify this, go ahead!

MR. EBERSOLE: I hate to ask anything, anybody to do anything I don't think I could do myself, although I do it all the time, but in this particular matter, I want to, I tried to write something in the--I thought I would go at this. You can go look for yourselves, but it took up the direct connective, and space connected flow of influence as I call it, but let me go down to the control systems. There are in these plants a

whole bunch of parameters which have to do with safety. I think I could list them. And in general, there are certainly--

CHAIRMAN SIESS: I have got to figure out where we are going first.

CHAIRMAN SIESS: I don't want to go into the--

MR. EBERSOLE: Go into control systems; this is a broad, general topic.

CHAIRMAN SIESS: I know. We are not trying to solve the topic. We are talking about--

MR. MICHELSON: Procedure.

MR. EBERSOLE: It is procedure. This is procedure.

CHAIRMAN SIESS: It is not procedure.

MR. EBERSOLE: How do you go at this?

CHAIRMAN SIESS: Don't want to know how they go at solving A-47.

MR. EBERSOLE: I am going to tell them.

DR. SIESS: This is not the time to do it. We have to have a Subcommittee meeting on A-47 to clear this up.

MR. MICHELSON: Let me ask a procedure question.

MR. EBERSOLE: It is just not so wicked I think I am trying to say.

CHAIRMAN SIESS: What it is going to take--one issue, of course, is what does it take to convince the ACRS that A-47 is resolved? And I would like to decide today, find

out today what it is going to take and then the appropriate Subcommittee, which is not this one as I recall--which one was it?

MR. MICHELSON: Jesse's.

MR. EBERSOLE: Instrumentation control.

CHAIRMAN SIESS: Find out today what is necessary to resolve this and you have a meeting on it. The next step is to find out what we can do to avoid these kinds of things in the future.

MR. EBERSOLE: This is procedures, how they are going to go in and pick the residuals.

CHAIRMAN SIESS: No. What it takes to convince the ACRS that they have solved, resolved A-47, or if we do not think they have resolved A-47, what it takes to convince them that they have not resolved A-47.

MR. EBERSOLE: I was right on track with what you were going to say and you interrupted me.

CHAIRMAN SIESS: I don't want to do it now, Jesse. I want to know what it takes. Do you have a Subcommittee meeting?

MR. EBERSOLE: Sure. Yes. We can do that.

CHAIRMAN SIESS: Can you learn from that Subcommittee meeting how to do it?

MR. EBERSOLE: Why go away from here without at least some kind of idea of what I expect?

CHAIRMAN SIESS: Go ahead and try it.

MR. EBERSOLE: Just where I was when I started when I got interrupted.

CHAIRMAN SIESS: They will come back and say we have done all that.

MR. EBERSOLE: I don't think they will.

CHAIRMAN SIESS: Have you read the twelve volumes?

MR. EBERSOLE: No.

CHAIRMAN SIESS: They say a lot of things.

MR. EBERSOLE: Maybe I should defer this until I get an abstract of what they have done.

CHAIRMAN SIESS: That's what I think is the problem. They say they have done a lot of these things.

MR. EBERSOLE: It may well be, Chet.

CHAIRMAN SIESS: They just haven't told us about them or told you about them.

MR. ANDERSON: We did look through scenario development, and looked at all the, what was considered by other contractors to be credible scenarios, and I can't guarantee that we included the scenarios you are talking about.

MR. EBERSOLE: It was just samples.

CHAIRMAN SIESS: So but now this is a generic type of issue.

MR. EBERSOLE: Let me make a general observation.

You didn't include parameters which indirectly--these are parameters of service systems I will say, which indirectly cascade to event effects on the systems that you did look at.

MR. ANDERSON: The procedures used call for going clear back to the support systems and the support systems for the support systems. When you come, came to a situation where it took multiple independen' failures, then we scrapped that scenario.

MR. EBERSOLE: I would agree with you.

MR. MICHELSON: Could I ask a procedural question?

CHAIRMAN SIESS: Yes.

MR. MICHELSON: When we read the scopes, oftentimes they make no mention say of external events. They don't, remain silent. This scope I think remains silent on this.

Now the procedural question in my mind is when you remain silent on things like earthquake, fire, and so forth, knowing that they are part of the GDC, of course, or they are covered by the GDC, is it automatically to be inferred that they are really a part of your scope, or do they have to be explicitly stated?

MR. ANDERSON: No. The way--

MR. MICHELSON: That would be an interesting --

MR. ANDERSON: We have an obligation to prepare a task action plan that sometimes are not as specific as they could be, but it tells what part of the problem or what the

problem is that we are going to work on, outlines the tasks and what our approach will be to it.

It doesn't say all the things that we are not going to do. And now that goes through extensive peer review and in the case of USIs, it is reviewed by the ACRS, and then we have, we have an obligation to work to that task action plan unless we formally make a change to it.

CHAIRMAN SIESS: How do you form --

MR. MICHELSON: I am trying to pursue my question. I didn't get an answer. In pursuing that question further then, I guess you are saying that external events were not to be included in A-47?

MR. ANDERSON: They weren't explicitly called out in the task action plan.

MR. MICHELSON: They were explicitly excluded in the wording of your final NUREG? They will not be considered in this study.

MR. ANDERSON: That is correct.

MR. MICHELSON: So I can't take issue with you not covering the scope because we never included it. I guess we should have read these scopes years ago a little differently and realized that it is not explicitly included, it is excluded.

MR. ANDERSON: Well, it is not always possible to, it is not always possible to be that explicit, you know, and

it was, we certainly don't want to throw something out if it that appears to be significant for this work that we are doing.

MR. MICHELSON: I guess what we now have to do if we think that external events should have been included, we have to create a new generic issue that says we rework the old generic issue with external events? Is that the procedure? And if it is decided that it is important that that be a part of it, we have got two choices, really only one, and that's work as a separate issue or someplace else, because if we really find the work, the scope of A-47, for instance, at this time, you know, we are going back and starting over and we will come back in two or three more years.

In that respect, of course, you, we realize that you hadn't included it. I thought intuitively that it was included. I thought external events were a part of the problem. That's oftentimes the major source of the problem on control system interaction, or safety system action, and I, I didn't--and I bet you if I read A-17 there is no mention of external events there, either.

MR. ANDERSON: Yes, there is.

MR. SPEIS: It is not included.

MR. ANDERSON: Yes, it is included in A-17.

MR. MICHELSON: I just didn't think that, I am just understanding today how you are really doing the business. I

would have to go back and look at otner scopes the same way.

CHAIRMAN SIESS: When you say look at the scopes, what are ycu looking at?

MR. MICHELSON: The old aqua book.

MR. BAER: There was a NUREG witn all the scopes published.

CHAIRMAN SIESS: The thing you want to look at is the task action plan.

MR. MICHELSON: I am just trying to understand the process and know what happened.

CHAIRMAN SIESS: Don't trust that.

MR. MICHELSON: I realize that, Chet. But is, are external events a part of A-17 specifically?

MR. ANDERSON: Not all of it.

MR. SPEIS: Some parts.

CHAIRMAN SIESS: Seismic is or seismic interaction.

MR. MICHELSON: Do you know from reading or do you have to know from your head?

MR. ANDERSON: Both.

MR. MICHELSON: What does the charter say?

MR. SPEIS: It is interesting that you bring up A-17 because that is thu one that it took us a year to redefine based on unbounded thinking, and we came to you twice and in fact you people requested personally that Dirk since he is bigger present it.

MR. MICHELSON: We haven't heard on A-17.

MR. SPEIS: Vick Stello to define the new scope; every time we made a presentation with this specific vugraph it said what it includes, what it doesn't. You can go back to all the ACRS meetings--I think Jesse remembers this, and some of you liked it, some of you didn't like it, but you never told us explicitly, you know, because here we tried to tell you it includes these things, it doesn't include some other things, and that--

MR. ANDERSON: We were trying to get everybody to understand.

MR. SPEIS: It is in your package.

MR. ANDERSON: But part--seismic systems interaction is under A-17, but the seismic design and the adequacy of seismic designs per se is not.

MR. MICHELSON: I am just trying to learn what--now that I have learned, I have fallen into one pitfall and that is don't assume you are meeting the GDC for examinations because you may not be in the process of the examination.

MR. MINNERS: GDC generic issues have almost nothing to do with each other.

MR. MICHELSON: I realize that, but I have just, what do you, you know, what do you intuitively assume that they do? You don't want to write a ten-page report.

CHAIRMAN SIESS: You should read the task action

plan. That's the lesson we are getting. Don't assume you know from a title what is being done. We are supposed to look at task action plans I think way back, and one of the concerns today is that some people thought that the scope as approved at one time had been changed. Now I think you will admit that this document doesn't really make a strong attempt to convince us that everything was done and the things that were eliminated were eliminated for good reason, not because you changed the scope.

Now one of the problems in this business is when you get into a scenario-related approach as you have mentioned, you have got sitting on my right over here the way I am facing, two guys that are geniuses at developing scenarios, and they are credible scenarios. They may in some cases be extremely low probability scenarios that you can eliminate, but that's the object of the game, and there has got to be some way you can that advantage of those abilities before we get down to the bottom line.

MR. MICHELSON: Well, I think we understand what the scope is, of course, and I didn't, I didn't know that you didn't include external events from looking at things like control system interaction. My gosh, you know, that's, interaction is usually the most severe in an external event. Internal events have been well thought through, failure modes effect analyses and so forth. I have never raised the issue

what you are doing internally. I have raised the issue whether you are doing it on external events, and this is the first time you have told me, you know, it was never intended to be in the scope to begin with. I didn't realize that.

MR. ANDERSON: I went back through the task action plans for A-47. The various publications in the task action plan, it was initially developed in 1977, and it was the first report to Congress on USIs, and in January '78, and there have been several updates. Most of these, I won't call them changes or update, most of the reasons, time we update one unless there is some technical reason to change the scope, which never gas been here, it is just to change resource requirements, and schedules, and you know, just administrative things. The task action plan reads almost identically today as it did when it was first developed in 1977. And that--

CHAIRMAN SIESS: The original one said something about all other interactions.

MR. MICHELSON: No.

MR. SPEIS: A-17; yes. We changed that.

CHAIRMAN SIESS: Forty-seven I am talking about.

MR. ANDERSON: All the task action plans were published in NUREG 0649.

CHAIRMAN SIESS: All other control system failures that have safety implications--item 3 in the technical assistance contract, and I haven't got the task action plan,

but you contracted with somebody to evaluate the proposed system facility leading to steam generator reactor overfill leading to reactor overcooling. All other control system failures would have safety implications, and then the effect of loss of power.

Now that all other may not have been employed, but it is part of the contract.

MR. ANDERSON: It was part of the contractor's scope. We asked them for the world.

CHAIRMAN SIESS: Somebody would like to see what all others were and how were they disposed of.

MR. ANDERSON: That is in the scope.

CHAIRMAN SIESS: You see, Mr. Ward said earlier that he thinks that each of the issues ought to have a clearly defined scope. I don't think you said narrowly, did you, Dave?

MR. WARD: Yes.

CHAIRMAN SIESS: Narrow, if you did that, the things you came up with as the fixes here in A-47 would be one sub-item and that would be a scope and that would be the resolution. Something else that was disposed of in contract would be a sub-item and it was disposed of by finding it no never mind, and so forth, but by lumping the whole thing together, the problem of communication of the resolution of what you did becomes difficult.

MR. SPEIS: We are all smarter. You know, this is, we put those things down seven years ago, ten years ago.

MR. MICHELSON: What do we do with the residual, the things we have learned since then that we should have done? Are they a new issue, external events?

MR. SPEIS: We have a process in place. It is called--every issue that has been identified by Research or LERs or by personal experience or people like you on the Committee, or by foreign experience, we have a branch in NRC now who takes all these issues, and with the help of the people who identify those issues, try to define them, and see maybe they were handled before because once you come up with the definition, you know, it clears the way for us to tell us if something was done previously or whatever, and then once we do that, then we go through the system. We try to prioritize it. We prioritize it, and in fact the interaction that takes place between us and you people, you review every single issue that goes through our priortization scheme basically.

CHAIRMAN SIESS: Yes, but that is priortization stage. I don't know that we have given it much attention. If we did, I don't know whether we get through it, you know. We would have to be meeting with you guys.

MR. SPEIS: Let me proceed right now because I am on the, one of the vugraphs discusses the process we go through on generic issues. The process that we go through regarding

the generic issues and USIs, it is a bit different. You guys get involved with every step of the way on USIs. We do send you the task action plan in USIs, but not on ge ic issues, okay? The only interaction that you people have with us on generic issues is you review every issue that is prioritized.

CHAIRMAN SIESS: Why are we making that distinction?

MR. SPEIS: I guess--this is why I brought you here. Do you know the history of that?

CHAIRMAN SIESS: While we are on the subject, memo from Bechtel to a number of people, including Fraley, December 3rd, 1987, Research Office letter No. 1, procedure for identification, prioritization and tracking.

MR. SPEIS: We have revised that procedure.

CHAIRMAN SIESS: We are not on it.

MR. SPEIS: You are not on distribution?

CHAIRMAN SIESS: We are not on the list of steps.

MR. SPEIS: Oh.

CHAIRMAN SIESS: And Sam and I looked back at the MOU.

MR SPEIS: You are, okay. That must be --

MR. MINNERS: You shouldn't be on the list of steps because--

MR. SPEIS: We send them every issue we prioritize.

MR. MINNERS: We send everybody every issue we prioritize. Your view, your review--

CHAIRMAN SIESS: We give you a comment.

MR. MINNERS. After the issue is prioritized; you shouldn't be on the process. The last step in the process is prioritize the issue and send it out to everybody, including the ACRS.

CHAIRMAN SIESS: This starts with information requested from division, ends in Federal Register notice of the SRP. Somewhere we ought to be on that list.

MR. SPEIS: You should have been here. Let me stress again, I don't think there is any issue that with we prioritized in the last seven years that we haven't sent to you.

CHAIRMAN SIESS: And you have, you also now have us on the list for the resolution of generic issues.

MR. SPEIS: We send you six copies every quarter, send them the GMICS --

MR. DURAISWAMY: I have got copies of those.

CHAIRMAN SIESS: MOU was ACRS participation in the development of NRC rules, policy matters, and safety-related guidance and rules and policy, were clear copies. That's one category, and the other category was called safety-related guidance. For example, regulatory guides extended the review plans, including branch technical positions.

Now we really think that USIs and GIs ought to be included in that category of safety-related guidance, more

important than reg guides and less important than rules, but at the time this MOU was entered into in '85, we weren't doing anything formally on either one of them.

MR. SPEIS: On generic issues, we normally look upon you to tell us which ones you want to get involved, but at the same time, we know that many times because of our knowledge of your interest, we come to you on important issues, high priority, all of them. On USIs, we come, but on generic issues, we look upon you and also we take the initiative on some of them, but it is not a, all of them, period.

CHAIRMAN SIESS: The MOU which was developed at that time particularly for rules and things, was a two-pronged thing. The staff was supposed to notify us when they were getting involved in a proposed safety-related matter, but more important, we were to tell the staff when we wanted to be in the process so that you could factor that two, three months into your schedule, and if you look at this sometime--

MR. SPEIS: It is consistent with what I just said.

CHAIRMAN SIESS: I think it might be extended to--

MR. SPEIS: Let me understand what you are saying. You are suggesting we change these and you want to be involved with every generic issue from now on the same way that you are involved on every USI? Is that what you are telling me?

CHAIRMAN SIESS: We would like to have it included under the Memorandum of Understanding, which means you tell us

what you are doing and we will tell you whether we want to be involved, so you will know whether--we will make a commitment as early as we can whether we want to be involved, and if we do want to be involved, then you put us on the list.

MR. SPEIS: Last time we talked about that, I thought we decided maybe we have to formalize it by sending you the GMICS every three months, where the milestones are listed, and the time for resolution, we thought you would take the initiative placed on this to tell us.

CHAIRMAN SIESS: That's enough information, but that if we want to be involved we will tell you.

MR. SPEIS: That's fine. That's the way you told us before, but if you want to change it--

CHAIRMAN SIESS: I do think so. GMICS is notification.

MR. MICHELSON: There needs to be a little more information sometimes before one can decide whether they want to get involved or not.

MR. SPEIS: GMICS has a summary of this. It is very brief. You have to ask for it. You have to get the real task action plan, the generic issue itself, to look into more details.

CHAIRMAN SIESS: Can we get those?

MR. SPEIS: We will be very happy to send them to you.

CHAIRMAN SIESS: Anybody wants to spot something in GMICS and ask for it, Sam will have it.

MR. DURAISWAMY: What we said last meeting, we would like to get the resolution package for all generic issues.

CHAIRMAN SIESS: That's resolution.

MR. DURAISWAMY: The prioritization, automatically get those things, but we told them we would like to get the resolution for all the generic issues.

MR. SPEIS: Before we send them to GRCR or when?

CHAIRMAN SIESS: That's the easiest time. That's when you have got a package.

MR. MINNERS: I don't--Let me get a clarification. Okay. My understanding is that if there is a new requirement or guidance being proposed, we come to ACRS with it. But--

MR. SPEIS: We insist we come to you at that time on that issue.

MR. MINNERS: But if we are resolving an issue in which we say no additional actions are required, we don't come to the ACRS before we resolve it, but once again, you get a copy of that, and if you don't like our no action, I mean--

CHAIRMAN SIESS: That's resolution.

MR. MINNERS: You get it after we resolve it, not before.

CHAIRMAN SIESS: We just said we would like to see the resolutions of all the issues.

MR. MINNERS: After resolution or before resolution?

CHAIRMAN SIESS: About the time they to go CRGR; that's resolution as far as you are concerned.

MR. MINNERS: These don't go to CRGR.

CHAIRMAN SIESS: After resolution; we would just like to have a chance to comment on the resolution.

MR. MICHELSON: Possible to get something fixed if there is a real flaw in it; don't cast it in concrete before you send it to us because then there is, it is a problem.

CHAIRMAN SIESS: Those don't get out that far, most of them, for action to be required. No. I forget what the instance was, but it turned out there were a couple we didn't know about and somebody wasn't too happy about one of them I think. We realized that we weren't seeing resolution of generic issues. We were seeing resolution of USIs and there is not that much difference between the USI and a generic issue, the ones that get resolved, right?

MR. SPEIS: Yes.

CHAIRMAN SIESS: Very uneven; just because it had a name that was different. We didn't think that was right.

MR. MINNERS: Generic issues are better.

CHAIRMAN SIESS: Well, I think they are. But you know, I look at this batch of things up there, that one is aglomerated over the A-17 and A-47 wasn't all that clear-cut and then there is something else, and maybe it is too late to

do anything about it, but there ought to be some better way of defining these things and attacking them and, you know, if A-47 had been clearly divided up, whatever this box looked like, all the pieces were in there, and one by one they could be addressed, this turns out to be not important, this requires this and so forth, when you got through, you know, you had done everything, or even if you take this one out and put it over in this box, gee, I will put this one over here in A-17, put this one over in seismic or something.

MR. SPEIS: We are doing more of that now, okay.

CHAIRMAN SIESS: It ends up being a lot--I don't care whether they are numbered. Maybe they can be A, B and C or something, but you really need to resolve these things. Did you, if you had twelve contractorcontract reports, each one of those was a separate type of thing, right?

MR. SPEIS: They were different plants, different architect-engineers.

CHAIRMAN SIESS: But again, there were packages taken out, and just because it got touched as one big issue is no reason it has to be resolved as one big issue.

MR. EBERSOLE: I can't help but--I am thinking of the simplicity of the GDUPPS system in the absence of all this funny stuff in it.

MR. MICHELSON: It only works on boiling water reactors.

MR. MINNERS: I think you are talking about the general subject of integrating generic issues, okay?

MR. WYLIE: It works on paper too, Jesse.

MR. MINNERS: I think that's what we tried to do in our division is to lay that responsibility on the generic issue task manager. It is his job to be sure that his issue is integrated with every other issue that might be remotely related to it.

MR. BAER: Or the interrelationship is known as opposed to closing while, opposed to combining them of them. I don't know what you mean by integration. Sometimes integration means combine them, and that's one of the problems with A-17 and A-47, that everybody had their own concept of what interaction is.

MR. MINNERS: I think it ought to be the responsibility of those two task managers to decide who is going to do what in the two issues.

MR. BAER: Yes.

CHAIRMAN SIESS: If you solve an issue piece by piece, I don't know where, why it is necessary to put it all back together in one big lump at the end.

MR. MINNERS: It isn't, but somehow somebody has to decide somebody else is working on the problem somewhere else.

MR. MICHELSON: Let me point out other procedural problem that I have related to this discussion, and that is

that there have been some issues in the past that have been resolved outside of the USI, GI issue spectrum. A good example is pipe break outside of containment. It was handled with letters that were written by the agency back in 1973, GE and so on, another letter by--and those, those two, those two letters set up a requirement on the part of the licensee to do certain kind of studies, so forth, and then when those studies came, that they were packaged up and they came into the agency and were reviewed and accepted, and whatever, and they became the basis then for saying that pipe breaks outside of containment are not a problem, and in the spectrum of 1975, '76, that wasn't a bad answer for what we knew then, but that finished the issue.

Now when we come up with new studies and so forth, they say pipe breaks already have been covered. By the study we have covered the pipe break problem. That's how you eliminate the flooding question, for instance, in the in A-47. You say that was taken care of way back, and your fire protection is the same problem. It came up through an amendment, an Appendix R requirement and that sort of thing, and now I think some of these issue resolutions have to be integrated with not other issues, but integrated with certain regulatory requirements that have been prescribed. Specifically pipe break, fire, is two good examples of the kind of problem I have.

MR. ANDERSON: I don't believe that we really take those issues totally out of our scope, forget about them, just on that basis, but we certainly look to see what has previously been done, but--in licensing reviews and previous programs, but we go further and don't go as far as you would like. What did they accomplish? What was their scope and what did they do? Is there any residual? Is there still a problem that we should include?

MR. MICHELSON: I would have expected to read in this report by your contractor a discussion of the residual left from the old pipe break studies that in essence did not then take care of the flooding problem, but I learned today that unfortunately flooding wasn't even a consideration. It was specifically excluded. And so I, most of my, I would say almost--

MR. MINNERS: I think you are asking for too much. I don't know if there is a statement or not in the report that says flooding was taken care of by issue whatever it was.

MR. MICHELSON: It didn't even tell me how flooding was taken care of. It just said flooding is excluded.

CHAIRMAN SIESS: Let me ask something here. USIs, USIs are a very special category. They were developed for the Congress. Congress monitored them for a while.

MR. ANDERSON: We still have that obligation.

CHAIRMAN SIESS: I don't think they pay it much

attention.

MR. SPEIS: They pay attention.

CHAIRMAN SIESS: So USIs are very special, and the resolution of a USI is a formal statement essentially to the Congress. It is the same--same is not true of a generic issue.

MR. ANDERSON: That is correct.

CHAIRMAN SIESS: So you are sort of under pressure to clean up a defined, numbered USI.

MR. MINNERS: I don't agree with your statement there is that much difference. The annual report which is now the mechanism we use to notify the Congress of resolution of USIs, rather than an individual set of reports like we used to, now also contains the resolution of all the generic issues.

CHAIRMAN SIESS: Let me get on and I will give you why I am asking it.

What would be your problem if this document, the NUREG on the USI-47, simply said we have resolved this part of it, this part of it, this part of it, and this part of it, and the remaining parts are unresolved? Now does this give you--can you publish a document with a partial resolution?

MR. MINNERS: We are going to do that in A-44. That is called truth in advertising, and I think we were fairly criticized. We drew up the paper. We said here is A-44, and

what it implied for other people is that it resolved the whole issue, okay? But it was pointed out that we still had B-56, still had A-30, which is batteries. We still had 23, which was pump seals, and in fact we even still had severe accidents, okay, so the Commission paper now makes that statement that here are some other things which are related to A-47, which are going to be carried on in the future. And I agree for good bookkeeping and truth in advertising we should try to do that, and we are not always as good at it as maybe we ought to be.

CHAIRMAN SIESS: Nobody is going to be, but --

MR. ANDERSON: I have a little different perspective on it. If we have a, if we have an approved task action plan which is our license to pursue this task, then when we come up with a resolution, we should address everything that we guaranteed we would do in that task action plan.

Now in a lot of cases we go afield from it, but if there is any reason to change our approach in any way or pick up any other issue not in the task action plan, what we are supposed to do is to get an approved revision of that task action plan. Then we are working a little different problem, but when we come to the, come down to you with a resolution, maybe we haven't been as rigorous as we should in addressing specifically the tasks we guaranteed were in that, within that issue, but--and a lot of types that we work we do work

peripheral issues, we get beyond it, but that's where we get in trouble. I think we say well, we didn't cover this or we have excluded it. Sure, we included--it is not in the task action plan, but--

CHAIRMAN SIESS: I think on A-47, there is a couple of problems of communication. I'm not sure that we knew completely what was in the task action plan, and as we read this thing, it looked like that the scope was narrowed as a part of the resolution, and it may turn out that is not true. It is just that you didn't make the case for those limitations you have got, and that you could still convince us that the task action plan except for some of the scenarios that Jesse and Carl might think up, in which case I don't know what you do--

MR. SPEIS: We take care of those.

CHAIRMAN SIESS: We address those.

MR. SPEIS: Try to see what the--prioritize them.

MR. EBERSOLE: We are not supposed to invent those things. We are supposed to confirm them.

CHAIRMAN SIESS: And be more generic, but --

MR. BAER: To get a little bit out of abstract and maybe to try and keep it on one that I don't think is emotional, but--

MR. EBERSOLE: Who is emotional?

MR. BAER: As emotionally maybe, try and describe

what what we did on A-47, and let me take something--overpressurization.

Our contractor attempted, can't guarantee anyone a hundred percent perfect, attempted to look at all the systems that could cause an overpressurization. Then they said how could these fail due to control system failure? Now they didn't look at all the perhaps common mode things, but looked at if on a boiler, reactor coolant pump speed-up could give you a reactivity transient, overpressure, they said we will assume is goes to full flow, if that wasn't a problem, we didn't go back and say let me count the ways that this pump could go to full flow in the control system failure, so we tried to systematically bound the problems.

Now if we came up with no requirement, now maybe we didn't report that too well, but if we came up with no requirement, or with no requirement that we could justify in the cost/benefit analysis, we don't think we reduced the scope. We think we resolved the A-47 in that sense.

MR. EBERSOLE: The fire and earthquake and everything?

CHAIRMAN SIESS: What you said brings up a very interesting point. I don't know whether it is top down or bottom up, but would we be better off if we defined the generic issue as overpressure and worked back to that, whether system interaction, common cause, protection system or

whatever?

MR. BAER: Retrospective. I can't argue with that.

CHAIRMAN SIESS: The consequence we are trying to avoid and working back; now the trouble with that is that the ultimate consequence is core damage, and that takes in everything, you know. Could have one issue.

MR. EBERSOLE: Chet, you worked into what I was trying to say 30 minutes ago. Every system has some parameter of interest. It has got the source of it. It has got control device that you expand with. It has got some limited function. I am talking about any of them. You just talked about one, pressure capability of the feed pump and its ultimate speed with the valves closed. You say it has all been solved. Just a few months ago there was the case of the header being overpressured, diaphragm controller.

MR. BAER: I said reactor coolant pump as example of overpressurization.

MR. EBERSOLE: You opened up a class.

CHAIRMAN SIESS: If we start with the consequence, you get core damage, go up the tree, there are various things that could lead to that. You keep going up the tree there, you are not going to end up in that tree. One might be systems interaction. One of them might be control systems or whatever, but I guess if you start at one level or two levels above and work up, rather than have it, this thing working

down, I don't know.

MR. MINNERS: We have done it both ways. In the old days of the GDC, basically your way of looking at the systems and certain design requirements on the system, so they fix it and then we switched around and looked at the other value and looked at the PRA way, which is looking at parameters, pressure, temperature, and then looking down, see how that affected components, so I think you have to do it both ways.

CHAIRMAN SIESS: I have got a feeling you are coming top down. One path is down through the system interaction, another path is down Station Blackout, and somewhere you are combining the paths and going, one contractor starting here and ending up there because they are meeting in the middle there and going over the same ground.

MR. BAER: I think there is problems either way. When we define the scope narrowly, then there is the problem of integration, and the interrelationship. If you define it too broadly, reactor safety or core not melting, then no one can ever get their arms around the problem, and I don't know where you cut it.

CHAIRMAN SIESS: Define it broader, then subdivide it into managable packages. As an example, maybe not a good example, the protection system is a subdivision of system interaction. It also has subdivisions, and but to the extent you think you have pretty well solved that aspect of system

interaction, protection systems and the rest of it; a-17 is never going to go away.

MR. ANDERSON: Systems interaction as a subject or topic will never go away, that's true.

MR. SPEIS: Requires frontal attack where you address everything.

MR. MINNERS: Like water hammer is not going away, either.

MR. EBERSOLE: Chet, may I ask, I would ask for consideration of the very, of the basic model, that you all will well remember when the reactor business started, you found level trips could be overrun by fast periods, so you put in the rate trips or whatever to cope with them. I remember this happened in the GDGR where the operator could change the range of the level trip where when he saw he was on a fast period, thus he could avoid a trip. He would avoid a real hazard. His trip would be bypassed. Now I only recently learned, and I hope you will say it is generally covered, the operator can't go in, shunt out the level trips on our reactors and permit a fast period to overrun, in essence just completely short out the level trips as it goes through and you don't get a level trip.

I recently heard one way that is done, perhaps you can tell me it is common, is when you shift from one range to another, you have an underpoured trip. You are not at

appropriate level at that time, reactor trip on underpower because it is disproportionate to the new level trip ring you are in.

Am I correct? Is that done all the time?

MR. MINNERS: I don't know.

MR. EBERSOLE: You have got to tell me you do that. You always pick up these control system defects on safety systems.

CHAIRMAN SIESS: These guys over here haven't been talking. They have been listening. Will somebody that is sitting over there tell me where they think we are?

DR. REMICK: I think we are all right. At 4:30 it says Subcommittee remarks.

CHAIRMAN SIESS: It has been 4:30 for the last half hour, so that doesn't help very much.

MR. WARD: We haven't started yet!

MR. SPEIS: I think we covered most of it.

MR. EBERSOLE: The order is not necessarily paramount!

CHAIRMAN SIESS: I want somebody to make a formal presentation which they may or may not think is still necessary, but let's stop at this point and ask Mr. Speis if he has got anything in his presentation that he would like to go through at this time.

MR. SPEIS: I think we talked about the process of

USIs and GSIs how we prepare the information and who reviews it and so on and so forth. As we already said, you participate more formally with USIs than GSIs, and make some changes to the GSI. Again, our perception is that we don't think we changed the scope of A-47. We talked about it.

Again, there is some misunderstanding, some different views on it. On A-17, we did change the scope, and we came down to you, and we told you, you know, what it is and what it isn't, and you never told us whether you liked it or not. That's past history.

Is there anything else that is worthwhile, you know, pursuing farther here on this presentation?

MR. ANDERSON: I don't, I don't think so. The points that we wanted to make, we were going to walk you through the procedures and the task action plans when they were changed. I don't know that is so necessary. I think the real point is, is that we see the scope of the issue as a, being what it is defined in the task action plan, and maybe we don't put enough emphasis on that.

CHAIRMAN SIESS: Let's assume there is an issue that we are quite interested in and that we have looked at the task action plan, and you make the change in it. You have got procedures now. We see that change?

MR. SPEIS: Only on USIs; only on USIs.

CHAIRMAN SIESS: Only on USIs?

MR. SPEIS: Yes, that's right.

CHAIRMAN SIESS: I just have difficulty making any distinction between USIs and GIs now. They seem to be equally important in my mind, and we were told that you work it on high priority GIs at about the same rate as USIs, and the mediums are getting attention, so I think it is an artificial distinction.

Do you see any real safety significance difference between the USIs?

MR. SPEIS: Personally, I don't.

CHAIRMAN SIESS: There are some criteria I know, and I have forgotten what they are.

MR. SPEIS: We know so much more now, that if we had to go back and look at the 15 or so issues that were USIs and try to apply the present criteria to them, maybe 70 percent of them wouldn't be USIs. They might still remain high priority GSIs. I don't see any distinction.

MR. ANDERSON: Not from a safety standpoint.

CHAIRMAN SIESS: How many USIs are still outstanding?

MR. SPEIS: There aren't too many left. I think there are about three or four that we haven't come to you, but the rest of them are along the way somehow; A-45.

MR. ANDERSON: Six or seven I think.

MR. SPEIS: And four, there is no more than three

that haven't come to you. All the rest of them are in the system somewhere.

CHAIRMAN SIESS: Short-term program that took ten years to resolve.

MR. MICHELSON: Are we informed when they make changes?

CHAIRMAN SIESS: That's what I just asked them.

MR. SPEIS: Yes.

CHAIRMAN SIESS: You said on USIs.

MR. MICHELSON: Wouldn't be any big deal.

MR. SPEIS: It is up to you.

MR. MICHELSON: This book of scopes anywhere.

MR. SPEIS: No problem.

CHAIRMAN SIESS: Generic issue, generic issues, then they are USIs.

MR. MICHELSON: Sam files it in his book when he gets the changes.

CHAIRMAN SIESS: I am not sure we are going to be following all of those in quite as much detail, but I do think that some we want to pick out, so I think if we just treat GSIs and USIs the same, which is sent to us--

MR. SPEIS: That's fine, but you will decide which ones you want to pursue farther. You let us know.

MR. MICHELSON: No. I think we want to see all the changes, I mean the changes to all the issues, and we decide

at the end what we want to look at.

MR. SPEIS: That is exactly--you decide, yes. By some previously established law, you have to participate whether you like it or not.

CHAIRMAN SIESS: Sam is reminding me of something now in the earlier minutes, that we are concerned about things you decide not to do anything about as much as we are the things that you do intend to do something about, and if you decided to no, never mind, and nothing is required, then that is, it is just as important a decision as that you are going to backfit something on different plans.

MR. SPEIS: Again, the perfect place where all these things are summarized every quarter, again you really spend the time to go through it and decide I want to pursue some of this further because of whatever is written there, then you know, let us know, and we will start interaction.

MR. MICHELSON: It is up to us; if you will send us the information and let us decide.

MR. SPEIS: We send you the --

CHAIRMAN SIESS: That was May 27; the staff submit all the information associated with generic issues from ACRS irrespective of staff's position whether to pursue or not, and we will decide which ones you want to review. Just dump it, you know, and we will see that somebody looks at it, talks to the Subcommittee, and decide whether it is something they want

to follow and we decide no, you know, no issue, then because some of those generic issues were ours. You remember? We combined our list with yours, and we sort of expected that we would be able to follow.

MR. SPEIS: In fact, we are going through a very detailed process to scrutinize every generic issue in books and see whether all of them are indeed truly generic issues or some of them are resources as far as some of them deal with a look at future control system or certain system or something like that. It is not really something now, and--

CHAIRMAN SIESS: Those ought to have a different category.

MR. SPEIS: Somehow some of them are called generic issues right now.

MR. EBERSOLE: What is the active status of the air system?

MR. SPEIS: We are working very hard on that one.

MR. EBERSOLE: I feel like that's the next one on the horizon in trouble.

MR. SPEIS: As far as the ACRS?

MR. EBERSOLE: As far as having a TMI 2.

CHAIRMAN SIESS: I don't think the ACRS is going to end up looking at GSIs at the same level that they look at USIs. Might be some of them in there that are just important.

MR. SPEIS: In fact, it is a fact already, or a fact

the diplomats call it, there are two or three that are important and you are looking at--

CHAIRMAN SIESS: Yes, there are.

MR. SPEIS: Like the reactor coolant pump seal as an example.

CHAIRMAN SIESS: I think that the staff has been probably close to 99 percent effective in calling our attention to those things they thought we ought to know about, and I don't think that things are going to change a whole lot when we get more paper to look at. I think you have sensed pretty well those things that you think we ought to look at and maybe you wanted help. I don't know, but--

MR. SPEIS: If we don't bring it to your attention, you will tell us after we did something wrong. It is both really. We try to, you know --

CHAIRMAN SIESS: We would rather get it--we don't like surprises.

MR. SPEIS: We are sensitive. We will work with you.

MR. EBERSOLE: Tell me, is the old GE design of reactivity control we are using now, is it put to rest and we will go on as long as the GE plants live or will it ever be improved?

MR. MINNERS: Weren't you the one who was telling me they changed design?

MR. EBERSOLE: In the new ones.

MR. MINNERS: Backfit something?

MR. EBERSOLE: Yes.

MR. MINNERS: We don't have any issues to backfit it, no.

MR. EBERSOLE: Just as GE refused to do for many years; they wouldn't improve it.

MR. SPEIS: Bring us a good issue. We will prioritize it.

MR. EBERSOLE: I can't get it off, I can't even get off my mind the fact that's a lousy system that we have today.

MR. SPEIS: I guess the other thing we had here was this--

MR. ANDERSON: I think we covered most of the material. The last slide or next to the last slide, we were going to tell you about our handy dandy program where we get all the pieces that are under the shells that we turn over down here.

MR. SPEIS: Put the slide up.

CHAIRMAN SIESS: Let's do something that way.

MR. ANDERSON: We have got to normalize this procedure somewhere!

MR. SPEIS: You asked for me to come here personally. I don't know why. You have such competent people here on the staff.

(A discussion was held off the record.)

MR. ANDERSON: Okay.

(Slide)

MR. ANDERSON: I think I can talk loud enough that I don't need that thing. You will accuse me of yelling if I use it.

CHAIRMAN SIESS: Put it on. I'm hard of hearing.

MR. ANDERSON: Okay. The, over the last couple of years, as we come down here with some of these complex programs, systems interaction, A-47 and A-46, we have had a lot of discussions about what was in the scope and what wasn't in the scope. There are a lot of specific items and a few general subject areas that we steadfastly maintained were not within the scope of the, of that issue, so we had agreed that we would, somehow we are going to take care of these safety concerns.

Now it was not practical to include them in an issue that we had almost completed. We thought that they ought to be addressed some way, so we did initiate a program, we have a contract at Oak Ridge Laboratory to do do this. We called that program multiple system responses. Now that is not a very descriptive title.

CHAIRMAN SIESS: I have heard it but I never knew what it meant. You are going to explain it to me?

MR. ANDERSON: I am going to explain it. What that

means is that if you don't try to read it literally it is a collection of all the safety concerns that are peripheral to the issues that we have worked that are not in our scope but are still safety concerns in that area, so our attempt, our objective on this program is to take all of these concerns, and we went through a LER certificate, looked at fire protection, the environmental qualification rule, the staff's concerns, even some of the AEOD reports. A good portion of it is ACRS concerns that have been stated when we got into the scope questions. Then we are going to develop some programs or develop some issues, really define the issues, to the best that we can, and then once we have these programs defined or these issues defined, then we are going to send them through the prioritization process.

MR. EBERSOLE: Ask you a question--it somehow characterizes the industry that you don't have up there vender concerns, A-E concerns, and utility concerns. I think that's a sad state of affairs.

MR. ANDERSON: We left--there is no intention to leave that out. As a matter of fact, there should be another bullet here other concerns.

MR. EBERSOLE: Whatever.

MR. ANDERSON: There is no intention to limit it to these. These are some of the principal places where we looked to get these concerns, and if they are not handled by current

generic issues, then there is some, some stated concerns that other people have or something we have been able to glean, and we have put them in here.

MR. EBERSOLE: Don't you get really good flow of other concerns, or do you not? I don't know; not much.

MR. MINNERS: There is a legal process, Jesse. If the venders have concern, they have got to report it under Part 21.

MR. EBERSOLE: So it is still there.

MR. MINNERS: It comes under LERs.

MR. BAER: Well, these are things that are, that should be to some degree either beyond existing requirements or raised concerns that existing requirements are fully implemented. You know most Part 21s, for example, says hey, I discovered I built these valves with the wrong key material and the limit torque operator. That is not a generic issue.

MR. ANDERSON: I don't mean to imply in every instance that at plant is going to end up being defined as an issue.

MR. SPEIS: Could you give an example?

CHAIRMAN SIESS: You are going to come up here with a list of narrowly defined issues?

MR. ANDERSON: They may or may not be that narrow, which defined, there is one of them, for instance, that was brought up by the ACRS and it is a problem.

CHAIRMAN SIESS: It will never be narrowly defined.

MR. ANDERSON: I didn't bring that one up for that reason, but it is a concern that Mr. Michelson brought up of seismic-induced fires. Now we are not taking care of it in A-46, much to his consternation, not taking care of it any place else, so one of the issues that we are going to attempt to define and determine the safety significance of is a topic called seismically-induced fires.

CHAIRMAN SIESS: That seems narrow.

MR. ANDERSON: It is a very difficult issue to approach.

MR. WARD: Does that include seismically-induced false alarms?

MR. MICHELSON: That's another issue. I think this one is more narrow. This is where you actually have a fire resulting. We have read earthquake history and there are fires associated with earthquakes.

CHAIRMAN SIESS: That's what burned out San Francisco.

MR. ANDERSON: So--

MR. MICHELSON: That's what he is going to look at.

MR. ANDERSON: We are going to attempt to define issues out of this collection of concerns that various people have had, and then go through the priortization process with them.

MR. SPEIS: This is really still part of the process, except people raise the issues and we want to make sure that they indeed have, they are worthwhile pursuing, okay.

MR. MICHELSON: Just don't want them to fall in the cracks.

MR. SPEIS: This is no different than the process we have.

CHAIRMAN SIESS: My point was I hope you don't try to conglomerate too much in here.

MR. ANDERSON: No. We are attempting to define them maybe not really narrowly, but at least in a workable manner. We want some workable entities. We don't want any more systems interactions.

CHAIRMAN SIESS: Now, let me--this is a deviation, but you can't do much about subdividing the USIs.

MR. ANDERSON: That is correct.

CHAIRMAN SIESS: Have you got any generic issues that are defined too broadly that you could subdivide or that you have subdivided in your evolution process or are subdividing or do you think they are generally more narrowly defined?

MR. SPEIS: The one mentioned earlier, the issue like electrical reliability consist of a number of issues, and we are resolving the larger issue and there are some elements

which are very important to the A-44 which will be, will be done separately, you know, how do you assure that you have a good program, for example, to ensure diesel generator reliability? Separate issue which is part and parcel of the bigger history of the bigger issue.

CHAIRMAN SIESS: It is a generic issue. But have you got any generic issues that are very broad?

MR. SPEIS: Well, I think most of them are the ones we have been talking about; the ones that we have in the book right now, no.

MR. ANDERSON: I can't think of any.

MR. SPEIS: In fact, I think they are very narrow, most of the remaining issues, if I can have the list with me.

CHAIRMAN SIESS: Are they finding the gaps that Mr. Ward mentioned on narrowly-defined issues?

MR. MINNERS: We have an issue on 2C something, on reliability programs. That's kind of a vague--I don't know if it is broad, you know.

MR. BAER: The problem isn't breadth. It is vagueness I think, or a common understanding, you know. Part of what we discussed today, there is sometimes a lack of a common understanding of what the issue involves, you know. Example of A-17 and ten different opinions meeting the same scope much.

CHAIRMAN SIESS: It seems to me if you have

narrowly-defined issues that Mr. Ward mentioned, sometimes you can get gaps between them, and I have seen a tendency sometimes in the past well, I will fill the gap by combining two issues which will encompass the gap. Alternative is to make the gap another issue.

MR. ANDERSON: Well, this is an attempt to fill the gap between the broad issues really because we have got fire protection, environmental qualification, systems interaction, a control systems, and there is concerns that have been stated tnat there are issues which are not within the scope, weren't handled by these, and this is an attempt to pick those up.

Now we are not, we are not looking, just going out and looking for issues other than just a, just a quick look. What we are really doing is looking at concerns that have been raised, come up in, you know, in the various programs, and in our discussions with you and with other people. There still may be things fall through the cracks. I don't know.

DR. SIESS: If you peel something off from a broad USI, would it have to be a USI or could you reclassify it as a generic issue? Or would Congress get on you?

MR. SPEIS: If we think it could be more effectively done separately, I guess we can classify those as a generic issue. I think--didn't we have a part of A-17 that will go into this program here?

MR. ANDERSON: Something that is peripheral to A-17,

yes, but not really within its scope, but I believe that we could, we could probably do that, but what it would entail I think is revising the task action plan to specifically delete part of it. You know, and if we get a reapproval of the task action plan, I think that would be valid. But I don't think that we could arbitrarily do it.

CHAIRMAN SIESS: No, but --

MR. SPEIS: I want to say something else, that in the past, you know, every question that came up, you know, people dumped them into the generic issue, and that's part of this process that we are going through. We find out some issues are compliance issues. Stronger or smarter to say to those guys we know what--you have to do something, you know, you haven't been complying.

Let me give you an example. After the Davis-Besse event, we found that the operator was hesitant in initiating feed and bleed, okay, and the criteria were there, and for some reason, I don't know what, I don't recall, you know, it found its way into the generic issue, but it is really a compliance issue. Criteria were there.

MR. EBERSOLE: Was he supposed to have done that and he didn't?

MR. SPEIS: Yes. In fact, they have procedures I guess after that they told us.

CHAIRMAN SIESS: Human factors issue.

MR. SPEIS: It is still an issue. Whether human factors improvement or train the operator, or you, you, you know, psyche him up to make sure that he initiates these, not being afraid to do it because he is going to flood the--yes, but in essence, you know, since there was a procedure there and they were supposed to follow it, it is a compliance issue.

MR. EBERSOLE: I think th. is significant. It came up in the thermohydraulic meeting.

MR. SPEIS: That is not a generic issue.

MR. EBERSOLE: Generic issue, before you take a risk maneuver, you ought to have adequate body of information to take it, like release of radiation is the classic one.

MR. SPEIS: That's right.

CHAIRMAN SIESS: You raised a question. The Commission, you talked to the Commission, you had a briefing a while back. They were concerned about the rate at which things were being resolved, and did they express any concern about the rate at which things, issues were being identified? What is your efficiency rating on the issues that are identified? How many end up being issues that get high medium?

MR. MINNERS: We used to have slides. Have you got those with you?

CHAIRMAN SIESS: I think you gave them to us.

MR. MINNERS: All I can remember is 73 percent of

the issues we touched we resolved.

CHAIRMAN SIESS: The trouble is once an issue is identified, you have to carry it through to priortization period. If you do initial screening and put it to one side, eventually you have to go through the prioritization, and that involves a cost/benefit, a regulatory analysis, and simply the identification of issues takes a certain load off you, and I don't know any way to eliminate them. The process is an open process.

MR. WARD: Is that what you are doing here? We haven't given you a chance, Newt. I haven't figured out what this program is yet. Is this place the Part 3 issues before you identify?

MR. ANDERSON: This is independent of that process.

MR. SPEIS: This is it, is part of the definition, identification here, okay.

CHAIRMAN SIESS: They tried to identify new issues.

MR. SPEIS: Want to make sure. We say we have resolved A-47. All of a sudden you have bright guys on the committee that raise some issues that either they thought we left it out of this scope or they just came up at that time. We will take that and see if that is legitimate, you know, scrutinize, define and prioritize it, and that's what he is talking about.

MR. EBERSOLE: I would like to ask you, I am going

to lift a rock, okay. Twenty-five years back--those are spot issues Diablo Canyon. If they have big earthquakes, the turbines always unload and then always be tripped, must work with the turbine over-speed trip mechanism fail to function. Because of the, because of the upset, was that picked up and cleared as a generic or just a spot matter, they have poor orientation?

MR. ANDERSON: I am not familiar with that. I don't know.

MR. MINNERS: Seismic trip was looked at.

MR. EBERSOLE: And it would clear?

MR. MINNERS: And nobody liked it, but we looked at it twice.

MR. WARD: I still don't understand what this progress is.

MR. ANDERSON: Let me answer your question.

CHAIRMAN SIESS: He is looking for gaps.

MR. ANDERSON: The normal procedure for identification of generic issues says that anyone can initiate one. They can bring up an issue. They can, there is a procedure for where they send it and how it gets processed. We just ask that they provide enough definition so that it can be properly prioritized. That system is in place and it it is the works.

Now--but we foresaw that there was a gap in that

process and that gap being that as we talked to you and other people about the resolution of certain issues, there is some confusion or difference of opinion with regard to what we did and what we should have done. There are a lot of concerns that are brought up that we say no, we didn't work that part of it. So what are you going to do about it?

Well, we didn't have any really process to do it, so what we agreed to do was to initiate a program where we would look at all the major programs that we had, in the resolution stages right now, not only unrated safety issues, environmental qualification rule, other things, and to determine whether some of the concerns that we had heard about could be defined as separate issues and prioritized. So this process is one of going through all of the other issues we have sent down, talked to all of the task managers, talked to the appropriate people who run the research programs, and then we have looked at what the boundaries of these issues are and what they cover and what they don't cover.

The areas that they don't cover, if there is some concern or some potential safety significance, we intend to define that as a separate issue, and define it as well so that it could be prioritized and then we will put it in the other system, so basically what it is is a mechanism to try to, a catchall of these outside of scope type issues, and other, and other concerns that have been raised.

Rather than sitting back and waiting for an individual to come up and say hey, I have got a safety problem, and here it is, we are taking the initiative to try to get all of these concerns into the system.

MR. WARD: And these concerns, you have got an active program to identify them?

MR. ANDERSON: Yes.

MR. WARD: It is primarily to look at concerns that may have been left over when you put the boxes around USIs or GIs before?

MR. ANDERSON: Yes.

MR. EBERSOLE: Warren --

CHAIRMAN SIESS: Or ACRS type boundaries.

MR. EBERSOLE: Illustrating the value of that program system, there is a record so when a question comes up, he instantly says it has been fixed, he can run off and say it has been fixed.

MR. ANDERSON: No.

CHAIRMAN SIESS: Fixing comes down years down the line.

MR. ANDERSON: That's one of the benefits of it. That is certainly not the intent.

MR. EBERSOLE: It sure is a valuable thing to know.

MR. ANDERSON: When you raise those questions, say we are taking care of that, it is very valuable for us, but

seriously, I think it is a mechanism that can catch a lot of these, the questions that the ACRS raises, that we are not going to lie to you, say our program handles that, but--and we don't want to forget it because it may have some potentially safety significant issue, so this is the mechanism that we can get it into the system.

DR. SIESS: There is nothing in the rules that says you can't identify it.

MR. ANDERSON: That's right.

MR. EBERSOLE: He certified there is no risk in that area.

MR. MINNERS: I said it has been looked at.

MR. EBERSOLE: Wait a minute. You are hedging.

MR. MINNERS: No. On that particular issue, it is a good illustration. You just can't accept that. You have, you can go back to the record and look and see if it is done. That may not satisfy you. Okay. I can at least tell you that the staff has decided we looked at it and we thought we did a good enough job, not who have to do a good job.

CHAIRMAN SIESS: It was looked at from the point of view of anticipatory trip that might have some benefits in preventing LOCA or something else.

MR. EBERSOLE: I am talking about a turbine run-away to knock the house down.

CHAIRMAN SIESS: Don't remember anybody ever talking

about turbin run-away.

MR. EBERSOLE: It hasn't been looked at.

CHAIRMAN SIESS: Anticipatory reactor trip due to seismic trip was reactor trip. Jesse is talking about a turbine that doesn't trip.

MR. EBERSOLE: And it is laterally located to all the critical equipment and it was waved off by the staff.

CHAIRMAN SIESS: Since we designed the plant already assuming a turbine run-away --

MR. EBERSOLE: No, no. No more; maybe Diablo is. I'm not sure.

CHAIRMAN SIESS: Diablo isn't because they didn't have room. That is San Onofre doesn't have room to turn the turbine.

MR. MINNERS: The point I am trying to make, Dr. Seiss, is that I gave him my answer, okay, which I think may answer his question, but I don't really understand his question. There has got to be obligation that people who raised these questions go back and look at the documentation. That's what I mean.

MR. EBERSOLE: It is the simplest question in the world.

CHAIRMAN SIESS: It is to you, Jesse, but our own rules within the ACRS is that if it is ACRS proposed generic issues, it has to be defined in the same terms you have.

MR. EBERSOLE: For God sake, I propose we fix this.

MR. SPEIS: You said out of the ones--

CHAIRMAN SIESS: Survival rate of--

MR. SPEIS: We have 52 issues to be prioritized, but we just have gone through a screening process because I think one of the things we will do even though it takes some time, you know, we go through a screening process, we will find someone--out of the screening process from the 52, we came up with one high, 11 medium. The rest are--

CHAIRMAN SIESS: Okay. Let me ask you something else. Are you through?

MR. ANDERSON: I was just going to make two more points. I guess I am through.

MR. MINNERS: Can I put a caveat? Is that--

CHAIRMAN SIESS: Let Walt finish up and then we will come back over here.

MR. ANDERSON: One of the documents that we went through to try to find these issues is the ACRS transcript, so, so now that's a tough one to decide whether you are really serious about some of the problems or not, but we do look at all of them.

DR. REMICK: Who is going to look through today's transcript?

MR. ANDERSON: That's a different issue. The only other thing I was going to say is we have, now have a draft of

their report under review, and we are going to be ready to talk to you about it very shortly.

CHAIRMAN SIESS: We have five categories of issues--the USI, high, low, medium, and dropped.

MR. SPEIS: You mean GSI. You meant GSI.

CHAIRMAN SIESS: USI, high, low, medium and dropped GSIs; from what I think you have told us, USIs and high GSIs are getting about the same attention, and mediums are moving into that category, and lowest and drops aren't getting any attention.

We have also been told that even drop means that it doesn't disappear from the face of the earth. It would still be around to be looked at for new designs. For example, EPRI included drops in their list and so forth.

MR. SPEIS: They were asked to look at whether or not it means something to their design.

CHAIRMAN SIESS: In effect, you have only got two categories. You do them or you don't do them.

MR. SPEIS: Yes.

CHAIRMAN SIESS: Is there any point in having all of this five-level hierarchy when they end up in two groups?

MR. WARD: Sure--in case the budget gets cut.

CHAIRMAN SIESS: Well, I guess, okay, you have got a point, but--

MR. SPEIS: We want to have, you know, want to leave

a record behind. I think --

CHAIRMAN SIESS: But is the priortization process worthwhile?

MR. SPEIS: We think it is very worthwhile.

CHAIRMAN SIESS: Could you accomplish the same thing by extending your screening a little bit farther?

MR. MINNERS: We have the prioritization process.

MR. SPEIS: We have the prioritization process which as you know is a bipolar--is that the right word? It includes the risk perspective and also it includes the deterministic perspective, and the--

CHAIRMAN SIESS: The reason I am asking is the Commission expressed concern over the rate at which these things were being done.

MR. MINNERS: That's a good illustration of what he just talked about is that I think 12 out of 57--the reason he could tell you that is because the technical analysis of those issues is complete, okay? But you and I think of a prioritization is all done. The write-up is all done. What isn't done on those issues is pushing the paper through the review approval process. The prioritization process, a lot of time is the review and approval process.

MR. SPEIS: When an issue in our system is dropped, nobody does something, it is kind of residual for a few weeks.

DR. SIESS: What I was getting at is that once an

issue is identified, and there is no limit on identification, that's completely uncontrolled, anybody can walk in with an unidentified issue if he wants to spend a half hour writing it down. Now it must go through the prioritization process. You have got no control over your load.

MR. MINNERS: Legal control, but I think there is, there has been a control over it. As I say, I think it is 12 out of 50 with this snapshot.

CHAIRMAN SIESS: Had to go through the prioritization process to get it down to 12.

MR. MINNERS: They are finding that the number of issues that eventually get the, dropped is going down, that the staff and the people who identify issues are looking and say wait a minute, I have got to write this down. Maybe this doesn't sound so smart after I write it down, so there is fewer and fewer of the less significant issues being submitted, so there is some control.

The process used to say you had to go through the branch chief at least to get some kind of blessing. There was attempt to put a mild amount of control, but you don't want to put too much control. The whole idea is a safety paper.

MR. SPEIS: We have to be very careful.

DR. SIESS: You have no control. I am not complaining about it.

MR. SPEIS: We want to have some type of control.

We want to force the guy with the issue to write it down, to tell us something about the relationship, why he thinks it is important or not important, okay?

CHAIRMAN SIESS: What correlation is there between your pre-screening and your prioritization? How many things do you screen low that end up in the high and vice-versa?

MR. BAER: The ones that I looked at--

MR. MINNERS: Let's take issue 43.

MR. SPEIS: It is biased and very conservative way, and if we go into the other direction, downward again--

CHAIRMAN SIESS: You will have some screened them out as possibly important but dropped out.

MR. SPEIS: Exactly. We are biased to start with.

CHAIRMAN SIESS: You couldn't substitute the screening process for the prioritization. That would increase your resolution load. You would have to be conservative.

MR. SPEIS: Some other things that we are doing, I guess when we briefed the Commission we did tell them we sent them a letter formalizing some of the other things we are doing. I want to make sure if you people haven't got gotten the letter you get it.

CHAIRMAN SIESS: Is that the letter I read from, that I showed you? They have all got it. Research Office letter?

MR. SPEIS: No, no. Specifically with the issues,

you know, steps that we are doing to improve the process, you know.

MR. MICHELSON: We need to see that.

MR. SPEIS: We will send you a copy. One of the things that we are having, which is really--that is the concurrence, is the period you process, you know, between--

CHAIRMAN SIESS: That's not in this letter? This letter does talk about a response--

MR. SPEIS: It talks about the process, but there we talk about some real steps.

CHAIRMAN SIESS: Okay.

MR. MICHELSON: Do you have a copy of that letter with you? Maybe we can just get a copy?

MR. SPEIS: Let's see.

MR. MICHELSON: Is it a big document or is it just a short letter?

CHAIRMAN SIESS: Not something short. If it is a short letter, it has got an attachment. That's realism!

MR. MICHELSON: Chet, I think sometime, sometime I think before we have to leave this afternoon, we should go once around the table get final comments from the Subcommittee.

MR. SPEIS: This is 90 percent of it right here. You can have this. I will make a copy.

CHAIRMAN SIESS: We will get it out. You can give

it to Carl to look at.

MR. MICHELSON: I don't have to see it now, but I would like a copy.

CHAIRMAN SIESS: How do you feel about the part of the discussion that deals with the overall process now? We talked about one aspect is our review process of generic issues and they are going to get us on the same level there as the other things, and we will have to make a selection of what we want to look at, which is a straightforward matter for us and I think for them.

Does anybody have any feelings or comments about the scoping issue?

DR. REMICK: I think in the future we have to look carefully at scope, more carefully than perhaps we have in the past based on our knowledge now.

MR. MICHELSON: Yep, sure do.

CHAIRMAN SIESS: The thing is the USIs, haven't been a new USI in how long now?

MR. ANDERSON: Since--

MR. SPEIS: Four years.

CHAIRMAN SIESS: So--

MR. SPEIS: Maybe even longer.

CHAIRMAN SIESS: Mainly on generic issues.

MR. SPEIS: No; '81 was the last issue. That was A-49, PTS. Last time we went to the mission Commission was in

1983 on reactor coolant pumps. They told us no--high priority generator issue.

CHAIRMAN SIESS: I believe it was said that the scopes are somewhat narrower on the generic issues. You might want to get some of those and look at them and see if we agree that narrow is narrow, whether they are likely to give us a problem. That is easy enough to do.

MR. WARD: Why don't we as a committee pay attention to that as they come through for prioritization?

CHAIRMAN SIESS: We will for future ones. The ones we have already got in, anybody wants to take a look at those, just let Sam know. He will collect them up, send you the package. That is about 30 issues now?

MR. BAER: No.

MR. MINNERS: Being worked?

MR. SPEIS: No.

MR. MINNERS: That are being worked?

CHAIRMAN SIESS: Yes.

MR. SPEIS: No, no. There are still nine USIs.

CHAIRMAN SIESS: Yes.

MR. SPEIS: As I say, only two of them or three that, the rest of them are maybe 90 percent, 95. There are about four generic issues high, and there are about 15 medium.

CHAIRMAN SIESS: I just tried to visualize this one. We have got the scope statement task item plans for all of

those?

MR. MINNERS: I doubt it.

CHAIRMAN SIESS: Are you going to get them to us?

MR. SPEIS: Most of them; some of them are in NRR. When we split up, some of them were almost close to resolution and they stayed behind. I cannot speak for them. We will try to get you all of them.

CHAIRMAN SIESS: Okay. And then Sam will have those and people can tell him what they want to look at.

Any other thing we want to look at there? Now A-47, I think that can only be handled by subcommittee meeting or alternatively Jesse can sit down with the staff sometime and look at some of these reports, and we can discuss residual concerns with Carl.

MR. MICHELSON: I would like to make a little statement on the A-47.

MR. WYLIE: I think you have to have a subcommittee meeting on that.

CHAIRMAN SIESS: The thing is I think there is more, well, it is up to the chairman of the subcommittee how he wants to do that. You are obviously not going to get through twelve contractor reports in one subcommittee meeting.

MR. WYLIE: Let me ask about that a minute. You say the investigation into the control systems were under that category of all other control systems done by the contractors.

Is that one of the NUREGs or something that is listed in the 1217 or--

MR. ANDERSON: It is listed as a reference.

MR. WYLIE: I didn't see it. Unless it is--

MR. BAER: I think we had in the package, a separate enclosure, if my memory serves me.

MR. WYLIE: There is a reference. I think they basically, unless it is, I just missed it. It says controls for different plants or something we looked at. Is that it?

MR. BAER: I don't have the entire package that we sent down to you, but I thought a separate enclosure, if my memory is correct, there was a separate enclosure that listed a whole series.

MR. WYLIE: There is a whole bunch of NUREGs listed.

MR. MICHELSON: Separate from the document I assume he meant.

MR. WYLIE: In the document there is a whole bunch of them.

MR. MICHELSON: In the document there was a number of references.

MR. BAER: I guess I am thinking of different package. In Section 6 it looks like those are the references.

MR. MICHELSON: Which ones of those do we look at?

CHAIRMAN SIESS: All of them.

MR. WYLIE: Well, there may be a problem with

semantics here because the scenario Jesse talks about are protective features on turbine generators such as the, it is the governor, it is the over-speed, the electric over-speed protector. It is the mechanical over-speed protector.

MR. EBERSOLE: It is the voltage control.

MR. WYLIE: The voltage regulator, the voltage limitor, all of those things would have to fail to do the things he is talking about. I don't think you looked at that.

MR. ANDERSON: I don't think--we probably didn't.

MR. WARD: If all those things have to fail, why is Jesse concerned?

MR. EBERSOLE: Why did you say all of them when I can tell you if the voltage regulator fails, that's the only one.

MR. WYLIE: That is not quite correct. In the voltage regulator you have got a voltage regulator that regulates voltage within a certain range.

MR. EBERSOLE: Yep, and that--

MR. WYLIE: You have got voltage limitor on top of that. That's two.

MR. EBERSOLE: And may be the trip set and you eliminate them; what about the over-speed?

MR. WYLIE: Same thing; you have got, on over-speed you have got a governor that holds.

MR. EBERSOLE: Backed-up protector.

MR. WYLIE: Governor that holds you within one or two percent, and then you have got an electric trip that's above that a percent, and then you have got a mechanical trip on top of that.

MR. EBERSOLE: Right.

CHAIRMAN SIESS: None of those are seismically qualified.

MR. WYLIE: That's right.

MR. EBERSOLE: And also there is elaborate--

MR. WYLIE: Utility has a hundred million dollar turbine generator.

MR. EBERSOLE: It is more than that, Charlie. On the low probability--remember, Charlie, the NRC accepted the thesis of 180 percent turbine failure in the context of turbine missiles and then Westinghouse conned them into bypassing that by inspections and so forth.

MR. WYLIE: You understand--

MR. EBERSOLE: Wait a minute. That put aside the impact of missiles. It didn't put aside--

CHAIRMAN SIESS: I'm sorry, Jesse, it did not. The missile problem involved several probabilities. One was the over-speed probability. One was missile. Then it had to hit the containment, then it had to go through the containment.

MR. EBERSOLE: Hundred 80 percent fraction of those is gone. The present designs--

CHAIRMAN SIESS: But the thing is they had so many conservatisms in the other parts of it.

MR. EBERSOLE: I understand that's why they did it, but now when you pick up over-speed, where they still connected, generator, even if the voltage regulator worked perfectly, the utility carries away the equipment still connected to the turbine, unless you can tell me otherwise.

CHAIRMAN SIESS: The staff, all the staff did on turbine missiles was they said instead of looking at all those probabilities of the missile forming and going through the roof, going through the containment, hitting something, we would rather deal with the probability that it won't happen. They can do one and it still wouldn't do anything.

MR. EBERSOLE: I just extended the damage potential.

MR. WYLIE: Yes, but to do that your over-frequency of protective relay has got to fail.

MR. EBERSOLE: Yes, but I think you told me that you weren't sure over-frequency relays were in?

MR. WYLIE: Well, I don't know what other people are doing. I know what Duke does.

MR. EBERSOLE: I did learn there is no regulatory requirement for it.

CHAIRMAN SIESS: Charlie is suggesting the subcommittee meeting, and I think that would be a more appropriate time for you guys to debate it with the staff.

MR. EBERSOLE: Let me put it to the staff as to this--when do you want to see us again?

CHAIRMAN SIESS: When do you want to see them?

MR. EBERSOLE: I will give them that privilege if they will make it within about a month and a half.

MR. BAER: How about giving us a proposed agenda? I guess we have tried to get back to you on these issues. One of the things that I think might be fruitful, on the references I guess it would take us a little bit of time, but we could try and summarize those references that we think are pertinent if that's what you want.

MR. EBERSOLE: Basically just a road map, where have you been and what did you do?

MR. SPEIS: He wants more detail of what we did.

CHAIRMAN SIESS: Gentlemen, the object of a subcommittee meeting is to provide the subcommittee with enough information that they can tell the Full Committee that they can tell the Commission that we think USI-47 has been resolved, or tell them that we don't think it has been resolved.

MR. SPEIS: At least you can say part of the scope has been resolved. We think some residual part needs additional look.

MR. MICHELSON: Let me give you a key question. You can put it on your agenda then--the question of external

events. I think today you gave us a very wishy-washy uncertain picture as to how you handle external events. At the subcommittee meeting you will come back with a very solid story, either you did or you didn't or here, here, here is what you did do, here is what you didn't do. Today we didn't get that picture. I didn't get it at least. Maybe I missed it.

MR. ANDERSON: What I would propose that we do is look at each item in the scope and try to explain to you.

MR. MICHELSON: Is it in the scope or not, out of the scope, first of all? I don't think you told me one way or the other for sure. The report said it is out of the scope, but then you said oh, well, it was really in it. We really looked at this and this.

Come back with the story. Is it in the scope or not? If it is not in the scope, fine. And we will, that will be one of the potential complaints that we might make to the Commission. We don't know for sure.

MR. ANDERSON: You have to understand the scope.

CHAIRMAN SIESS: And where the various items were addressed and if possible how, and what you are going to do about the ones that aren't, dispose of them in some satisfactory way.

MR. SPEIS: The ones that you have a concern.

CHAIRMAN SIESS: The ones in the scope and what is

done if they are in it, if you can't convince them they were done. Now you succeed in all of that, you still have the residual scenarios Jesse and Carl can think of. They may end up somewhere else. I don't know.

MR. MICHELSON: I never raised issues except on external events. I am not going to get into the internal. I am going to assume they did that all right. That's as far as I go.

CHAIRMAN SIESS: The object of the game is to give us enough information --

MR. SPEIS: That's fair.

CHAIRMAN SIESS: Or enough confidence.

MR. MICHELSON: The key thrust is going to ultimately be if we are not handling external events, particularly in this example, what is the agency doing about it? We know they are being handled poorly in PRAs, if at all. And I think it opens up a whole, yes, a generic issue of how the agency is considering external events, clearly required by the GDC.

MR. SPEIS: I have a question. Are you talking about the design basis earthquakes?

MR. MICHELSON: Talking about external events, you know, fire, flood.

MR. SPEIS: Are you talking about design basis or beyond design basis?

MR. MICHELSON: Design basis only; design basis, fires, the whole bit. And pipe break, and don't forget some of these like pipe break were handled by very old study. I would like to know how that was considered when you did control system interaction. Fire is the same way.

MR. BAER: What you are really dealing with, Carl, I think is the degree we looked at common mode failures, because in most cases, when we look at control system failures, they were non-mechanistic. Tried to explain before, so I think what you are really saying is to what degree did we look at common, multiple common, multiple control system failures from a common source?

CHAIRMAN SIESS: Just a minute. Before you go on to that, I thought you or Jesse had raised a question that it wasn't simply that they failed but how they failed.

MR. MICHELSON: Common mode gets that.

CHAIRMAN SIESS: The common mode gets that?

MR. MICHELSON: It is multiple common mode happenings that you want to get at.

CHAIRMAN SIESS: I thought somebody raised questions about partial failures.

MR. MICHELSON: Just to make sure you understand, what things have multiple things happen, from a common cause? It may be the same time.

CHAIRMAN SIESS: Jesse has concerns about partial

failures.

MR. EBERSOLE: Visualize it like this.

CHAIRMAN SIESS: Spurious.

MR. EBERSOLE: You have to look at control system in the, the reverse, the right and the left and up and down directions and then in the oscillatory mode which is somewhere in all of those.

MR. BAER: I am back to what I said before, that maybe we have to talk some more about scenarios so that we understand them well enough to try and show that what we did was bounding them because if we said this was the, for example, the part about BWR pumps, if this was the worst highest speed it could get to, we didn't try to investigate all or partial ways or all the ways it could get there or anything partial.

MR. EBERSOLE: That's all right.

MR. MICHELSON: Then at the same time you have to look at what else is happening while the pump is over-speeding, if there is some common cause back somewhere leading to this, and that's where I think your study pretty well falls down.

CHAIRMAN SIESS: When he says multiple common mode, he doesn't mean two identical pumps go out; if this pump goes out and that valve goes out over there that--

MR. MICHELSON: From a common cause.

MR. EBERSOLE: Give you an interesting version of it, Carl, it was at a laboratory--

CHAIRMAN SIESS: Safe it for the subcommittee meeting. It is getting late and I want to let these guys go home and talk about what to report to the Commission.

MR. EBERSOLE: Okay.

CHAIRMAN SIESS: Otherwise you are not going to have anything to do with the subcommittee meeting. Now we will propose through some process that the Memorandum of Understanding be revised or interpreted to include USIs or GIs as regulatory actions.

MR. SPEIS: Except on GIs you will take the initiative, provide you with the information.

CHAIRMAN SIESS: Memorandum of Understanding that you notify us, that you work on it by whatever process, and we have the obligation to tell you whether or not we want to look at it and when. That was the important part of it. Pinned us down and say yes, we want to look at it, be in there, we want two months at a certain time to look at it.

MR. SPEIS: The ones that you--

MR. DURAISWAMY: It doesn't say that.

MR. SPEIS: This is the kind of vugraph--

MR. WARD: Do you want a record of this? I think she is having a hard time.

MR. WARD: Stop the record.

CHAIRMAN SIESS: We can go off the record.

(Whereupon, at 3:20 p.m., the recorded portion of the meeting was concluded.)

REPORTER'S CERTIFICATE

DOCKET NUMBER:

CASE TITLE: ACRS--Subcommittee on the Generic Issues

HEARING DATE: January 29, 1988

LOCATION: Washington, D.C.

I hereby certify that the proceedings and evidence are contained fully and accurately on the tapes and notes reported by me at the hearing in the above case before the

Date: January 29, 1988

Official Reporter

HERITAGE REPORTING CORPORATION
1220 L Street, N.W.
Washington, D.C. 20005

INTRODUCTION AND SUMMARY

- USI & GI PROCEDURES FROM START TO FINISH
- TAP PROCEDURES
- USI A-17 CHRONOLOGY
- USI A-17 TASK ACCOMPLISHMENT
- USI A-47 CHRONOLOGY
- USI A-47 TASK ACCOMPLISHMENT
- THE MULTIPLE SYSTEM RESPONSE PROGRAM - ADDRESSING THE SCOPE QUESTIONS

USIs

START TO FINISH

- IDENTIFICATION OF PROPOSED USIs
  - SCREENING OF HIGH PRIOPITY GIs
  - SCREENING OF OTHER SAFETY CONCERNS
- PREPARE COMMISSION PAPER PROPOSING SELECTED ISSUES AS USIs
- DISCUSS WITH ACRS
- ACRS RECOMMENDATION TO COMMISSION
- COMMISSION DESIGNATES ISSUE AS USI
- TASK ACTION PLAN DEVELOPED
- REVIEW OF TAP
  - STAFF
  - ACRS
- TECHNICAL RESOLUTION OF ISSUE
  - TAP REVISED ANNUALLY
    - REVIEWERS
    - SCHEDULES
    - RESOURCES
    - TECHNICAL CONTENT
  - DISCUSSIONS WITH ACRS PERIODICALLY
  - PROGRESS REPORTED TO CONGRESS AND COMMISION ANNUALLY (NRC ANNUAL REPORT)

USIs

START TO FINISH (CONT)

- REVIEW OF PROPOSED RESOLUTION
  - STAFF
  - CRGR
  - ACRS
- ISSUE FOR PUBLIC COMMENT
  - COMMISSION PAPER
  - LETTERS TO CONGRESS
  - FEDERAL REGISTER NOTICE
- PREPARE FINAL RESOLUTION
- REVIEW FINAL RESOLUTION
  - STAFF
  - CRGR
  - ACRS
- ISSUE FINAL RESOLUTION
  - COMMISSION PAPER
  - LETTERS TO CONGRESS
  - FEDERAL REGISTER NOTICE
- IMPLEMENTATION
- VERIFICATION

G.I.s

START TO FINISH

- IDENTIFICATION OF SAFETY CONCERN
- DEFINITION BY INITIATOR
- PRIORITIZATION BY RES
- PEER REVIEW OF PRIORITIZATION
- ACRS REVIEW OF PRIORITIZATION
- DEVELOPMENT AND STAFF APPROVAL OF TAP
- COMPLETE PROPOSED TECHNICAL RESOLUTION
- REVIEW PROPOSED TECHNICAL RESOLUTION
  - STAFF
  - CRGR
  - ACRS
  - PUBLIC
- DEVELOPMENT OF FINAL RESOLUTION
- IMPLEMENTATION
- VERIFICATION

TAP PROCEDURES

	GI	USI
o DURING PROGRAM DEVELOPMENT		
o DEVELOP PRELIMINARY TAP	X	X
o STAFF REVIEW	X	X
o ACRS REVIEW		X
o ISSUE APPROVED TAP	X	X
o DURING TECHNICAL RESOLUTION		
o ANNUAL REVISION		
o TECHNICAL REVIEW		X
o RESOURCE REVIEW		X
o SCHEDULE REVIEW		X
o SPECIAL REVISION DUE TO PROGRAM CHANGE	X	X
o IN GIMCs REPORT	X	X
o DURING REVIEW AND APPROVAL PROCESS	X	X
o TAP NOT REVISED	X	X
o SCHEDULES REPORTED IN GIMCs	X	X

USI A-17 CHRONOLOGY

1974	-	ACRS RAISED CONCERN IN CONTEXT OF STANDARD PLANTS
1978	-	DESIGNATED AS USI
1978 - 1983	-	PROGRAM EXPANDED, DIFFICULTY WITH DEFINITION AND SCOPE
1983	-	ACRS EXPRESSED CONCERN WITH TAP AND LACK OF PROGRESS (LETTER JULY 14, 1983)
1983	-	MAJOR REVISION OF TAP
	-	MET WITH ACRS
1984	-	TAP APPROVED BY DIRECTOR NRR
	-	PUBLISHED IN NUREG 0649
	-	PRELIMINARY TECHNICAL FINDING PRESENTED TO ACRS
1985	-	DRAFT RESOLUTION PRESENTED TO ACRS
1986	-	REVISED DRAFT RESOLUTION PRESENTED TO ACRS AND CRGR
	-	ACRS LETTER CRITICAL OF A-17 (MAY 13, 1986)
	-	STAFF RESPONDED
1987	-	REVISED PROPOSED RESOLUTION PRESENTED TO CRGR AND ACRS

USI A-17

TASK ACCOMPLISHMENT

TASK ACTION PLAN TASKS	WORK ACCOMPLISHED
1. SEARCH FOR COMMON CAUSE EVENTS	SAME AS TAP
2. TRENDS AND PATTERNS OF CC EVENTS	SAME AS TAP
3. INDIAN POINT 3 METHODS COMPARISON	SAME AS TAP
4. SCREEN FOR SAFETY SIGNIFICANCE	SAME AS TAP
5. REVIEW OF SEARCH METHODS	SAME AS TAP
6. EVALUATION OF SEARCH METHODS	SAME AS TAP
7. TECHNICAL RESOLUTION	SAME AS TAP

USI A-47 CHRONOLOGY

o	MAY 1981	-	DISCUSSION OF PRELIMINARY TAP
		-	ACRS LETTER ON PRELIMINARY TAP (MAY 12, 1981)
o		-	DRAFT TAP SENT TO ACRS
	JULY 1982	-	STATUS REPORT (D. BASDEKAS)
o	OCT 1982	-	TAP APPROVED BY DIRECTOR NRR AND SENT TO ACRS
o	DEC 1982	-	STATUS REPORT TO ACRS
o	JAN 1983	-	TAP REVISED (NO CHANGE IN TASK DESCRIPTIONS)
o	MARCH 1984	-	TAP REVISED (NO CHANGE IN TASK DESCRIPTIONS)
o	JUNE 1984	-	STATUS REPORT
o	SEPT 1984	-	TAP PUBLISHED IN NUREG 0649
o	NOV 1984	-	STATUS REPORT (OVERVIEW OF S.G. OVERFILL PROGRAM)
o	OCT 1987	-	STATUS REPORT

USI A-47 TASK ACCOMPLISHMENT

TASK NO.	EFFORT DESCRIBED IN NUREG-0649, REV 1 (MARCH 1984)	WORK ACCOMPLISHED
1	IDENTIFY CONTROL SYSTEMS WHOSE FAILURE CAN LEAD TO SIGNIFICANT PRIMARY SYSTEM TRANSIENTS	SAME AS TAP
	(1) IDENTIFY CANDIDATE SYSTEMS USING TOOLS SUCH AS FEMA, USE NON-MECHANISTIC "WORST-CASE" FAILURES.	SAME AS TAP SAME AS TAP
	(2) REVIEW LERs, IE BULLETINS, ETC.	SAME AS TAP
2	DEVELOP AND CONDUCT COMPUTER SIMULATION STUDIES	SAME AS TAP
	(1) WESTINGHOUSE PLANT	H.B. ROBINSON WAS USED AS A TYPICAL WEST. PLANT
	(2) G.E. PLANT	BROWNS FERRY WAS USED AS TYPICAL G.E. PLANT

TASK NO.	EFFORT DESCRIBED IN NUREG-0649, REV 1 (MARCH 1984)	WORK ACCOMPLISHED
	(3) CALVERT CLIFFS (TYPICAL CE PLANT)	SAME AS TAP
	(4) B&W PLANT	OCONEE WAS USED AS TYPICAL B&W PLANT
3	IDENTIFY FAILURE MODES OF SIGNIFICANT CONTROL SYSTEMS.	SAME AS TAP
4	EVALUATE EFFECTS OF LOSS OF POWER SUPPLY TO CONTROL SYSTEMS.	SAME AS TAP
	(1) COORDINATE WITH USI A-44	
	(2) CONSIDER LICENSEE'S RESPONSES TO IER 79-27.	PASED ON REVIEW OF 4 PLANTS ASSUMED EXISTING REQUIREMENTS IMPLEMENTED ON ALL PLANTS (BEING CONFIRMED FOR B&W PLANTS BY BWOG EFFORTS)
	(3) IDENTIFY CONTROL SYSTEMS HAVING A SIGNIFICANT SAFETY IMPACT DUE TO POWER SUPPLY FAILURE.	SAME AS TAP

TASK NO.	EFFORT DESCRIBED IN NUREG-0649, REV 1 (MARCH 1984)	WORK ACCOMPLISHED
	(4) DEVELOP CRITERIA TO IMPROVE RELIABILITY OF CONTROL SYSTEMS (IF NECESSARY).	CONCLUDED NOT TO BE NECESSARY
5	DETERMINE THE NEED FOR CONTROL OR PROTECTION SYSTEMS.	ONLY LIMITED IMPROVEMENTS JUSTIFIED BY COST/BENEFIT
6	PROVIDE CRITERIA FOR EVALUATION OF CONTROL SYSTEMS (IF NECESSARY)	CONCLUDED NOT TO BE NECESSARY
7	IDENTIFY CONTROL SYSTEMS THAT COULD LEAD OVERFILL OR OVERCOMING TRANSIENTS.	
	(1) OVERFILL EVENTS	SAME AS TAP + OVERPRESSURE, OVERHEAT & REACTIVITY TRANSIENTS
	(2) REACTOR OVERCOOLING EVENTS	
	(3) IDENTIFY LESSONS LEARNED FROM PAST CONTROL SYSTEM FAILURES	

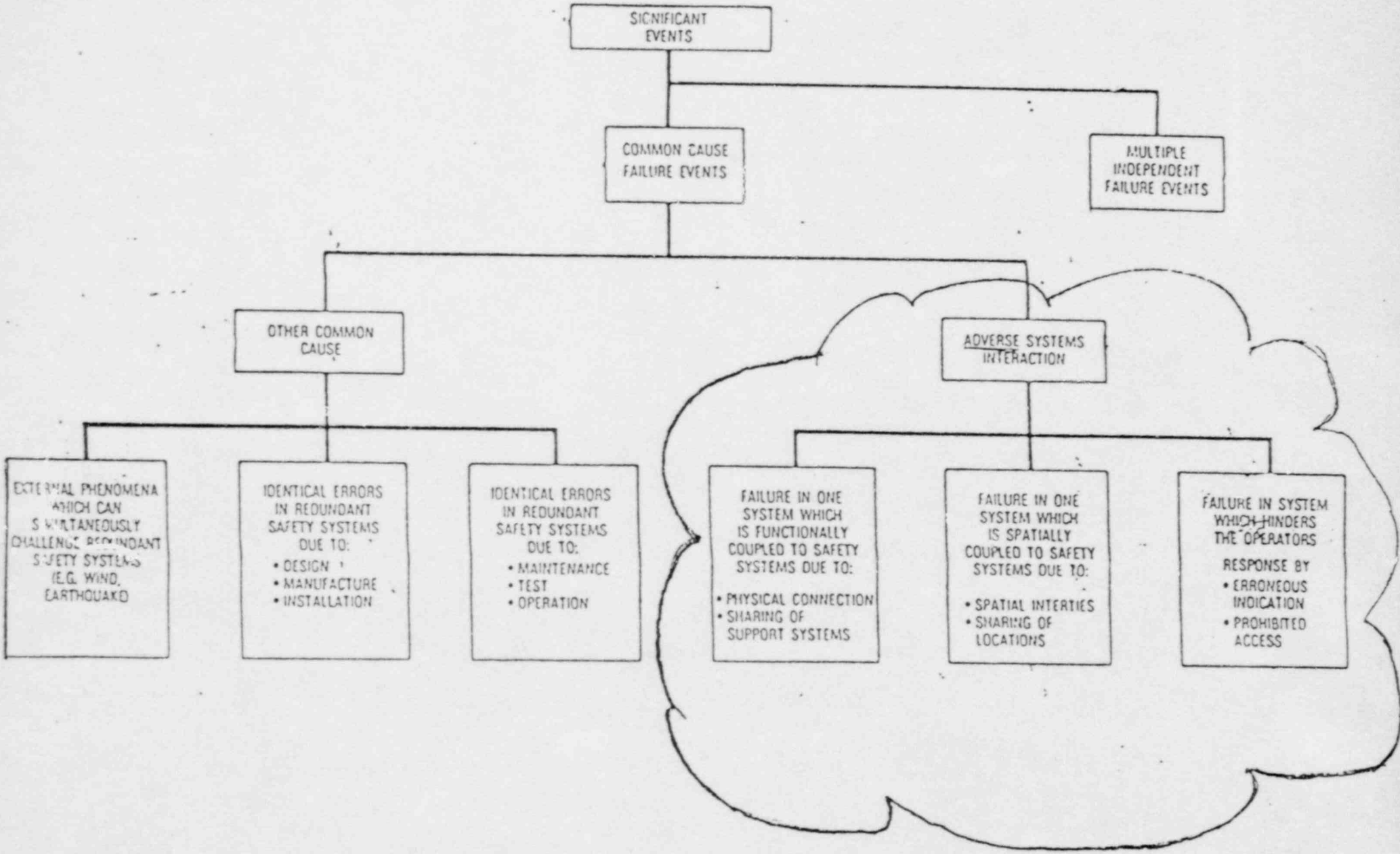
MULTIPLE SYSTEM RESPONSE PROGRAM

- PROGRAM DEVELOPED TO CONSIDER SAFETY CONCERNS RAISED THAT ARE NOT EXPLICITLY COVERED IN EXISTING PROGRAMS

- ISSUES BEING CONSIDERED COME FROM
  - ACRS CONCERNS
  - LERs
  - AEOD REPORTS
  - STAFF CONCERNS
- SPECIFICALLY REVIEWED SCOPE OF A-47, A-17, A-46, FIRE PROTECTION, ENV. QUAL.

- DRAFT CONTAINING PRELIMINARY ISSUE DEFINITIONS UNDER STAFF REVIEW

- WILL REQUEST ACRS REVIEW


SIGNIFICANT EVENTS
COMMON CAUSE FAILURE EVENTS
MULTIPLE INDEPENDENT FAILURE EVENTS
OTHER COMMON CAUSE
ADVERSE SYSTEMS INTERACTION
EXTERNAL PHENOMENA WHICH CAN SIMULTANEOUSLY CHALLENGE REDUNDANT SAFETY SYSTEMS (E.G. WIND, EARTHQUAKE)
IDENTICAL ERRORS IN REDUNDANT SAFETY SYSTEMS DUE TO:
• DESIGN
• MANUFACTURE
• INSTALLATION
IDENTICAL ERRORS IN REDUNDANT SAFETY SYSTEMS DUE TO:
• MAINTENANCE
• TEST
• OPERATION
FAILURE IN ONE SYSTEM WHICH IS FUNCTIONALLY COUPLED TO SAFETY SYSTEMS DUE TO:
• PHYSICAL CONNECTION
• SHARING OF SUPPORT SYSTEMS
FAILURE IN ONE SYSTEM WHICH IS SPATIALLY COUPLED TO SAFETY SYSTEMS DUE TO:
• SPATIAL INTERTIES
• SHARING OF LOCATIONS
FAILURE IN SYSTEM WHICH HINDERS THE OPERATORS RESPONSE BY
• ERRONEOUS INDICATION
• PROHIBITED ACCESS