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1250 I Street, NW, Suite 300
Washington, D.C. 20005
(202) 842-0034

UNITED STATES NUCLEAR REGULATORY COMMISSION

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NIAGARA MOHAWK POWER CORPORATION

PUBLIC MEETING WITH NRR OFFICE DIRECTOR

REGARDING ENFORCEMENT DECISION ON

NINE MILE POINT UNIT 1 BLOWDOWN PANELS

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DOCKET NO. 50-220

U.S. Nuclear Regulatory Commimssion

One White Flint North

11555 Rockville Pike, Room 012-D1

Wednesday, January 28, 1998

The above-entitled public meeting commenced pursuant to notice at 1:36 p.m.

PARTICIPANTS:

DARL HOOD, NRR/PDI-1

SINGH BAJWA, NRR/PDI-1

LAWRENCE CHANDLER, NRC/OEC

N. CHAPMAN, SERCH/Bechtel

D. STELLFOX, McGraw-Hill Companies

JIM LIEBERMAN, NRC/OE Director

SAM COLLINS, NRR

ANN RILEY & ASSOCIATES, LTD.
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1250 I Street, N.W., Suite 300
Washington, D.C. 20005
(202) 842-0034

PARTICIPANTS: [Continued]

JOHN MUELLER, NMPC

RALPH SYLVIA, NMPC

CARL TERRY, NMPC

D. WOLNIAK, NMPC

E. MCKENNA, NRC/PGEB

P. SANTIAGO, NRC/OEDO

TIM MARTIN, AEOD Director

P R O C E E D I N G S

[1:36 p.m.]

MR. HOOD: Good afternoon. I am Darl Hood, and I am the NRC's Project Manager for Nine Mile Point Nuclear Station.

Before we get to introductions, I would like to address a few administrative matters for the record.

This is a meeting between Niagara Mohawk Power Corporation, the licensee of the Nine Mile Point Nuclear Station located in Oswego County, New York, and the Director of the Office of Nuclear Reactor Regulation.

This meeting has been requested by Niagara Mohawk Power Corporation in a letter to the EDO dated October 27, 1997, asking that the NRC Staff reconsider its position taken in a letter from Mr. Ashok Thadani dated September 12, 1997, concerning a reporting requirement.

The NRC Staff is here to hear the reasons for the licensee's belief that the NRC position taken in Mr. Thadani's letter is not appropriate.

The NRC Staff will provide a written response to the licensee's letter of October 27, 1997 after considering the information to be presented today.

I expect this response will be issued within 45 days.

If Niagara Mohawk is not satisfied with the NRC's

written response, it's my understanding that they may request further meetings with higher levels of NRC.

This meeting is being transcribed to establish an appropriate written record. Copies of the transcript will be publicly available.

This meeting is open to the public for observation only. There is a time constraint of one hour available for this meeting and priority must be given to the licensee to present its discussions.

We ask, therefore, that the public refrain from direct participation during the meeting.

Members of the Staff or the licensee will be available immediately after the meeting to answer any questions.

Finally, I would ask anyone present to sign the Attendee Sheet that is being circulated and identify yourself by name, affiliation, and position for the record.

Once the introductions are completed, I would ask that you indicate if you would prefer that any questions by the Staff be asked during the course of the discussion or if you would prefer that we withhold questions until the end of each presentation.

Let me begin the introductions by introducing myself again. I am Darl Hood. I am the NRC's Project Manager for the Nine Mile Point Nuclear Station.

MR. BAJWA: I am Singh Bajwa. I am the Project Director for the Nine Mile Point.

MR. CHANDLER: Lawrence Chandler, Associate General Counsel.

MR. LIEBERMAN: Jim Lieberman, Director of the Office of Enforcement.

MR. COLLINS: Sam Collins, Director, NRR.

MR. MARTIN: Tim Martin, Director, AEOD.

MR. MUELLER: John Mueller, Chief Nuclear Officer, Niagara Mohawk.

MR. SYLVIA: Ralph Sylvia, Executive Vice President.

MR. TERRY: Carl Terry, Vice President, Niagara Mohawk.

MR. COLLINS: Thank you. I think at this time we can turn the meeting over to Niagara Mohawk.

MR. HOOD: Did you not want to introduce the other people that are present?

MR. COLLINS: I think if we have other speakers that go on the record, we will ask them to identify themselves as far as Staff. We'll keep it right now with the principals.

MR. SYLVIA: First of all, let me thank you for giving us the opportunity again to meet with you on this subject, and let me reiterate that we are not here to try to

argue about whether or not we've got a Level 4 violation.

I think Darl talked about your position a couple of times, and that's what we don't understand, and the concern that or the problem that it gives us is that we have direction to our staff based on the guidance that you have issued, and we think we followed that and you think we didn't, and if we didn't we need to understand it so we know what guidance to give the staff, so that is our main purpose for asking for another meeting to have a further discussion on this, and we appreciate that.

With that, I'll turn it over to Carl Terry, who will lead us through this, and we would prefer -- I think it's in the best interest of really understanding the issue -- questions as we go along.

MR. COLLINS: Okay.

MR. TERRY: Thank you, Ralph.

What we want to do really is jump quickly into the issue.

Everybody here I think is familiar with the background as to how we got here and that kind of thing, so by way of introduction to the issue, fundamentally it comes down to what is the proper interpretation of design bases at the plant as used in 10 CFR 50.72 and 50.73?

We certainly understand that once you are -- you have a condition that is outside of the design basis of the

plant there is a requirement for reportability, so that is not in dispute as far as that, so the focus of my discussion through here will be primarily how we interpret design basis.

Along with that though, it's important and at the end of this discussion we will be explaining why an overly conservative interpretation of design basis of the plant has impacts that are important to consider -- sometimes it does not matter if you are overly conservative. In this case it does have a direct impact, we believe, on safe operation.

So with that, going into the issue, first off, let's describe the problem that was identified back in the 1993 timeframe.

What I put up here are some sections out of the then-current FSAR for review, just to quickly go to the issue.

In this case, on Slide 1 you'll see that in Section 1.2 it describes the pressure relief design function of the turbine building and it indicates that as a design feature it has a pressure relief panel of 1800 square feet that will fail due to internal pressure of approximately 45 pounds per square foot and also that the building failure would occur at an internal pressure in excess of 80 pounds per square foot.

Similarly, on Slide 2, we've got a couple pages in

this case because one of -- this has to do with the reactor building.

The reactor building has, first off, a Section 1.0, which is not in the turbine building, which really describes the overall safety function of the reactor building, which is a secondary containment, fundamentally, and it talks about the primary functions that are to be performed and the principal criteria associated with that function.

Below that is a similar section, 1.2 -- 1.1, 1.2 and so on, similar to the turbine building, that describes the design features of the plant. In this case, in Section 1.2, if you go on to the third slide, which is the second page, it talks about again a similar function relating to a relief panel, similar statements as far as square footage on that, again an approximate relief pressure of 45 pounds per square foot and a building that would fail at an internal pressure in excess of 80 pounds per square foot.

At the time, going on to Slide 4, that's what the FSAR indicated.

Where we were at the time, from the standpoint of evaluation of reportability, was we had a condition where we found there were bolts installed for these relief panels in both buildings that were larger than required.

Normally that wouldn't be a problem except in this

case they needed to relief themselves or break in order to perform their design function, so oversized bolts were recognized as an issue that needed further evaluation from the design end.

At that time they did a calculation to determine where the relief panel would in fact perform its function. They found -- and there are a couple different numbers because in fact the panels vary a little bit on size -- but one of the panels failed at 53 psf and the other at 60 psf based upon the calculations at that time.

The other thing I should mention as part of that, it wasn't simply a matter at the time of looking at the calculated blowout point, if you will -- in other words when the bolts would start breaking but also they took a look at what would happen in terms of internal pressures in the building and the pressures did in fact go up somewhat above the 53 and 60 psf, but they also determined that they would stay below the 80 psf value as far as the building.

The way we looked at it, and we think -- still believe that was appropriate, but I think it's important in terms of understanding how we looked at is as far as the feedback that Ralph discussed, we looked at this as saying we have a building design, a design value for the building of 80 psf.

In fact, we have subsequently determined, and that

is the upper number on this chart, that the actual building failure is substantially above that. That was not an analysis that we had done at the time. At the time, and it is documented as part of the evaluation, engineering judgment was applied in terms of understanding that the 80 psf was in fact a design value, that the failure point of the building was higher than that.

We subsequently calculated that number and indeed it is substantially higher than 80 psf that the building failure actually occurs.

I think this is important as well, because in some of the correspondence from the NRC the building, the 80 psf is referred to as a failure point. It is not a failure point. We have never considered it to be a failure point and have never treated it that way in terms of our evaluation.

Again, I think that is an important point to understand in terms of how we should look at things of this nature going forward.

MR. SYLVIA: And in the FSAR itself it says that the failure is in excess of --

MR. TERRY: In excess. Correct. But I think because the words were used in some of the correspondence, I wanted to make clear that our interpretation of this was that's a design value, not a failure point. The failure

point is substantially -- and it's analogous to allowable values and things of that nature as used in the --

MR. SYLVIA: Right, so the relief values was to keep it below 80 so that it wouldn't fail at some level in excess of 80, which it did not say what it was and we subsequently calculated to be, those numbers.

MR. LIEBERMAN: But the words say that would occur in excess of whether it is 81, 82, 90 or 110 --

MR. SYLVIA: That's right, but it does say in excess of 80 and the number when calculated is those numbers.

MR. TERRY: And it certainly was clear to me at the time and continues to be clear that that was a design point, not a failure point, but there may be -- that may be part of how the NRC is interpreting it and that is why I wanted to spend some point pointing out that that is not the way we treated it.

We did not treat it as a failure point and don't believe it was appropriate to treat it as a failure point.

MR. SYLVIA: We don't believe that's what the FSAR says.

MR. TERRY: Correct. That's right.

Now what I want to do, because I think -- and most of the rest of the presentation on how we evaluated this goes back to what were the -- what is the basis behind both

our FSAR on Unit 1 as well as the basis of defining design bases as used in 10 CFR 50.2 and as used as part of the reporting criteria that followed from 50.2, or at least the specific design bases considerations.

So in doing that, first off, before 50.2 came out but around that same time, there was an AEC Guide that talked about two things -- first off, principal design criteria, and second, design bases.

These we think are very relevant in terms of examining issues that relate to whether or not you are within the design bases.

In particular, looking at the words used to define design bases, we have information here that is consistent with 50.2, which says the design basis is that information which identifies the specific functions to be performed by a major component or system in terms of performance objectives -- not any element of the system or any component in the system but major components, which really together with the specific range or range of values chosen for controlling parameters as reference bounds for -- of limits of -- for design, so they are in our mind very broader issues.

This guide, by the way, was issued as part of guidelines that were established for development of our FSAR at the time of Nine Mile Point licensing.

MR. CHANDLER: So words seem to be missing in the first -- in the principal design. Do you know what they were?

MR. WOLNIAK: This is right out of the 1966 --

MR. CHANDLER: So the flaw's in all language -- it means those fundamental architectural --

MR. TERRY: Okay -- I took this out for the correct one -- now going on further, what we have taken are some extractions out of the more detailed guidance provided relating to preparation of the FSAR and in particular again our purpose in going into this is to explain what guidance was available as far as describing what design bases are.

First off, I didn't intend to read all of this, but going to the middle of the page on Slide 6, it indicates in this case for the containment system that the FSAR is the report of course that they are talking about, that it's expected to provide to the Commission with information that shows the containment system has been evaluated for assurance, and they talk about a couple of principal functions that it needs to perform.

That's intended objectives as well as those objectives that are consistent with protection of the public health and safety.

Then down below it gets into more specific safety roles that the containment is to perform and what

evaluations are supposed to be provided to demonstrate that.

In particular, looking at items 1 below, 1 and 2 below, the basis upon which the containment system requirements were established and in particular the identification and explanation for the choice of values of the principal design parameter, i.e., the design pressure and the allowable leakage.

Now bear in mind in this case we are not talking about the reactor building, we are talking about the containment, which is a little different, but we picked something that had to do with something similar to the reactor and turbine buildings.

The point is that they are overall values and principal parameters, not the specific values as far as certain variations among them.

Also, the major components and associated systems provided to fulfill the required containment function and the extent of the assurance that the proposed designs will perform their intended functions reliably -- again the context in our mind of these statements are to provide an overall assurance and an overall basis for why the protective functions will be performed.

MR. LIEBERMAN: Carl, but isn't -- going back to the first line, just looking at Number 2 here, which is, as you say, it's containment not the building here, but if you

said the system was the building, what is the extent of the assurance that the proposed design will perform their intended function reliable and that is having these bolts that will fail at a lower amount?

MR. TERRY: We agree that the relief function itself is a function that should be evaluated in the context of the design bases with the only caveat on that coincidentally in our case high energy line break outside of containment is not in our design basis of the plant, but we really aren't arguing that point.

So, yes, the function of relief, we agree that that is a function that needs to be considered as far as whether or not it's capable of performing its function.

Our only disagreement is in doing that we don't believe it is just a matter of focusing on 45 psf and that any number above 45 psf is outside of the design bases.

MR. LIEBERMAN: What was the specific values or range of values chosen for controlling the parameters as reference bounds or limits for design?

MR. TERRY: Okay. What we indicated was that the building could take 80 psf and we needed to keep the pressure in the building below 80 psf and that was the purpose of the relief function.

We did identify the fact that our relief panels were identified at 45 psf, but the key function was

protecting the super-structure by maintaining pressure below 80 psf and that is the design bases of the plant in our opinion.

MR. HOOD: If that's what you said in the FSAR, I don't think any of us would be here today. Unfortunately, that is not what you said.

MR. TERRY: Well, let's get on, because I think if I go on to the next section, the more specific outline of what kinds of things then were intended to included and what this does for you, I think, the next page, Slide 7, helps distinguish between those kinds of things that are part of the design bases versus other things that are part of describing design features.

I think it is a very important concept, because that is exactly -- what we are concerned about, Darl, is that every described design feature inside of our FSARs are not design bases. There's further evaluation that we believe is appropriate and proper to perform to get to that, and this is where we get into Slide 7, which outlines the kinds of things that below in each of those categories.

First off, you can see in Section A-1, again sticking with the containment system structure, the kinds of things that incorporate the design bases -- postulated actions, of course, sources and amounts of energy -- those things are in there, as well as the contribution of any

engineered safeguards system in limiting the maximum value of energy released in the containment structure in the event of an accident.

So clearly, as far as the capability of a design feature, we are agreeing that the blowout panel capability is something that needs to be considered in the design bases.

You'll also notice though, as part of the standard format, you also describe and you can see our FSAR really lines up well with this outline. There are other containment system structural design features that then are included, including things such as design internal pressure, temperature volume, and things of that nature.

These are aspects of the design, features in the design, that can be considered.

MR. LIEBERMAN: Carl, can I ask another question?

MR. TERRY: Sure.

MR. LIEBERMAN: If instead of it being 53 or whatever the number was, if the as-found was 79.9, one iota below 80, would you position still be the same?

I am trying to hypothesize a situation where you haven't reached 80 yet but your margin with the blowout bolts is almost not there.

MR. SYLVIA: You'd have to calculate it above 80 --

MR. TERRY: Fundamentally if when we looked at the pressure profile, Jim, we determined that it stayed below 80, we would still consider it to be within the design bases of the plan, okay, from a reportability standpoint.

By the way, this isn't to say that there isn't something that needed to be done in terms of correcting the FSAR and all of that. This is the context of does the Commission need to know about this as something where we have crossed over the line as far as that, but generally speaking, just like I use the term "allowable value" as the analogy to 80, generally speaking we consider if we have exceeded an allowable value as far as a function, then, yes, we have gone -- we have crossed the line and generally speaking that would be reportable and certainly that is something we can give people clear guidance on and don't have a problem giving people clear guidance that this is where we generally need to report.

I say "generally" because obviously we want people to look at the situation, but I can't think of an instance sitting here, and I would tell you in this case had we gone to 80.1, yes, we would have reported it or even 80.

MR. LIEBERMAN: By your previous submittals, if you were 80 or above I think you would have.

MR. TERRY: Right. We did, if you recall, when we got to 90 -- we did report it.

MR. LIEBERMAN: And we agree that this issue is not over whether you are taking corrective action, and it's really a discussion of what requirements --

MR. TERRY: Exactly. That's exactly right -- and it isn't even the blowout panels at this point because we fixed those and there's been a thorough review of it.

MR. SYLVIA: Last time we used the piping system example from your own guidance.

MR. TERRY: And we want to go back to that again, in fact, the analogy.

MR. LIEBERMAN: And here you are making the point with a similar, more similar -- with structure rather than a piping system.

MR. TERRY: Again I think in the interest of time, Slide 8 is just a continuation of some of the other aspects that go into design features, and you can see there is an extensive list of these things.

Again, it is our belief that you take all of these design features which on this page are included in (f) through (l) subitems, and take a look at -- if you find something that's different in those features than described in the FSAR, you evaluate that against the principal functions identified in the design bases, going back to the original section.

Again, this is the guidance that was applicable at

the time we wrote the Unit 1 FSAR, but also I think of perhaps even greater importance, because I know there is an industry issue here as well, really these served as the foundation for 50.2, so it's very relevant as far as other plants and current regulation as well.

Going on to Slide 9, and again this is just a matter of putting things into context, the language associated with 50.72 in our mind again talks about and gives us clarification as far as the kinds of things that need to be considered.

We have highlighted a few things here.

Again, we need to report any event or condition -- this is 72 so it has to do with during operation -- that results in a condition of the nuclear power plant including its principal safety barriers being seriously degraded or results in the nuclear power plant being in an unanalyzed condition, which is (a) and (b) which is the focus, a condition that is outside of the design bases of the plant.

So again, it's seriously degraded outside of the design bases of the plant. The importance to us --

MR. CHANDLER: Excuse me. I couldn't understand your wording there. What happened to the "or" -- "seriously degraded or" its alternative, right?

MR. TERRY: Right. Any one of these three could result in being report -- the reason I focused -- what's

that?

MR. CHANDLER: It's actually more, isn't it?

MR. TERRY: No.

MR. CHANDLER: The first part I would read would say "any event or condition during operation that results in the condition of the nuclear power plant including its principal safety barriers being seriously degraded" -- that's one.

MR. TERRY: Oh, I follow -- I focused on wrong order. Thank you.

MR. CHANDLER: "-- or results in the power plant being" (a), (b), or (c).

MR. TERRY: Correct. The point is it's a serious condition. We believe there's the context.

I agree with the "or" but when you look at design basis, it's of the plant.

Going on, and I think as far as clarifying again where the rule is coming from, on the next slide, Slide 10, in looking at the statements of consideration that were issued associated with this regulation, what do we mean as far as serious events that are covered under this? It's serious events that could result in an impact on the public health and safety. That is part of the original statements of consideration.

Again, going on in terms of statements made in 83,

it's the context of where immediate Commission action to prevent or to protect rather the public health and safety may be required.

Furthermore, in the wording of the criteria and guidance in the preamble, this is from 93, to the final rule imply that the impact on safety should be at a fairly high level. Therefore, failures. specifications problems, and loss of safety margins that apply to individual components, pieces and parts, are not reportable unless they affect the ability to satisfy plant safety functions.

Again, that is where, you know, we understand that we needed to keep the pressure below 80 -- that is the principal function of the component, which is the blowout panel, and I know some people have looked at the blowout panel as a major system. We simply don't agree with that and it is not, it is a protective component within the design of the reactor building and the turbine building.

MR. LIEBERMAN: And that is why we disagree with the pipe-hanger analogy. We saw one bolt as a pipe-hanger and the panels themselves, overall panels, as a system.

That is one of our disagreements.

MR. TERRY: Right. One of the things, I think, as you consider this -- first off, we still don't agree with that, but beyond that perhaps the analogy that -- we used the pipe-hanger and I want to go back to that just to draw

that parallel, but to respond, Jim, in terms of that, to me it is very analogous to a situation where you have a relief valve on a piping system.

I really feel that the blowout panel is much more like a relief valve on a piping system as a component than it is like the whole piping system.

I really don't agree at all with that analogy and I think that it is directly analogous to a situation where if we were to go out there, we found a relief valve that for some reason, either by manufacturer or installation didn't relieve at the proper pressure, I firmly believe that if we did an evaluation and determined that that pressure relief valve, albeit relieving at a higher pressure that was, say, referred to in the FSAR, if that relief pressure still allowed the protective function to be maintained, then I would analyze this based upon the allowable values for the piping system, the design pressure of the piping system and/or the code allowables that may go into the stress evaluation of the piping system, either one of those, if I still maintain that I would say that yes, I need to fix it, yes, I need to do something as far as adjusting the pressure point, but from the evaluation of reportability I would like at whether or not that relief valve still performed its overall function of keeping the pressure in the piping below its design value.

MR. LIEBERMAN: Do you know if the FSAR defines relief pressure on the valves?

MR. TERRY: Where we have it, it is my recollection, it is tabularized.

MR. LIEBERMAN: Is it in a section that says Design Bases? Part of this issue in this particular case is the wording of the FSAR. So --

MR. TERRY: I can't answer that.

Denise, do you know?

MS. WOLNIAK: No.

MR. SYLVIA: In fact, the 45 pounds is in the place called Design Bases.

MR. TERRY: Right. You have mentioned that before, Jim and, to me, I see nothing in the rules that say that.

MR. SYLVIA: Well, when --

MR. TERRY: And I think it is inappropriate to -- to take that position, especially if you look at the context of how this is organized. And if you go back and look at the guidelines that were there in terms of how the FSAR was laid out.

Design bases, as applied here, in my mind, is a much broader concept. And I think if you go back to the 50.2 definition, I know you did in the letter, too, and I guess essentially, we interpreted it different, but I really

read that as broad parameters and functional capabilities.

MR. SYLVIA: You know, when that -- when FSAR was formatted, it could have been formatted just about any way. You could put anything under something called Design Bases, a lot of things under there. Or you could have put almost nothing under there. I don't think that means anything.

MR. LIEBERMAN: When was the FSAR first submitted?

MR. SYLVIA: Probably in '67.

MR. TERRY: It did use the guidance that --

MR. SYLVIA: I remember when we did Surry along about the same time. The guidance on the format of a FSAR didn't come out until we did North Anna sometime in the '70s.

MS. WOLNIAK: The documents we have provided you, the pages are the 1966 AEC Guideline for Writing SARs. That Nine Mile 1 was adopted and it was -- what we have provided you with the pages for was to show what the expectation was, what the Design Basis section should contain. You will see that it is very -- it is very broad, a very big picture.

Under Section 2, where it talks about design, is where you get into the wind and the loading requirements and the pressure relief requirements. When we wrote it, we had stuck it up above it as Section 1.1 instead. 1.0 was Design Basis and then there as a 1.1 which began to discuss the design criteria. We are providing you those sheets to give

you some comfort level, that even under the '66 guidance document, we believed that it didn't belong under Design Basis. So, hopefully, they will be helpful to you.

MR. HOOD: I would like to make the observation that from my own review of the FSAR, I find the section entitled Design Basis to be very finely tuned to express just Design Basis and nothing else.

MR. COLLINS: Carl, let me ask a related question on your November '97 change to that specific portion of the FSAR.

MR. TERRY: Yes.

MR. COLLINS: I don't know if you have that available to you. I do, if you would like to look at it, but it is not --

MR. TERRY: I am generally familiar with it.

MR. COLLINS: It is not detail related. In Section 1.2, your revisions actually references three criteria now, the blowout panel. There's intermediate internal pressure of 80, and then there's a failure load of 135. Which of those do you consider the design basis now?

MR. TERRY: Eighty.

MR. COLLINS: Eighty still?

MR. TERRY: Yes.

MR. COLLINS: And the 135 is for information?

MR. SYLVIA: That is the --

MR. TERRY: No, the 135 is not -- well, I guess you could say, for instance, it is based upon an analysis that we happen to have a calculation, have done a calculation that, you know, had been even reviewed by the NRC as well. And we did feel that there was value in putting that information into the FSAR as a point of reference.

But that would be analogous to the failure point. And we certainly are not proposing that you can go all the way up to the failure point and still be within the design bases of the plant. Okay. That you can use it in operability space, I believe, to some degree, but as far as evaluating a degraded condition and things of that nature. But as far as the design bases, no. And as far as looking at design margins. The design margins are some point below the failure point, generally what we consider to be the allowable value, in this case it is 80 psf.

MR. SYLVIA: That is the value in excess of 80 referred to. They don't have a value but --

MR. LIEBERMAN: Even the 135 would be, at least 135, so that's in excess of 135, too, some number.

MR. TERRY: Actually, no, we calculate -- I mean I suppose there could be some error in the calculations, but, Jim, we actually calculate that we would start to have building collapse at that point. We would start to have

yielding on some of the long columns in the building, and you would actually get to the point of failure of the superstructure, based on our calculation.

So it is truly a failure point, not a design point at all.

MR. CHANDLER: But you didn't know that, did you, until you got to this analytical process?

MR. TERRY: We didn't know --

MR. CHANDLER: All you basically knew was 80?

MR. TERRY: We didn't know what the ultimate number was. We were confident that 80 psf was not a failure point, it was rather a design point.

MR. CHANDLER: But beyond it -- yeah, both, we were talking about it a little earlier on, it said in excess of. But nobody knew until you did the analysis what that really meant. The only value you knew and had confidence in was 80, I would assume.

MR. TERRY: That is true, and it is really analogous to code allowables. We don't calculate in a system what the failure point is for a piece of piping. We know it is higher that the code allowable, and that is as far as we go on that.

That is not to say that in subsequent evaluations, we don't get into looking at where will we start to get the yield and things of that nature as far as evaluating

failure. That is -- this is exactly -- I got to tell you, and I have been through hundreds of these probably in my design experience, you always do this. This is a major discrepancy or change as far as how we do business, if you start from the fact that, okay, I have to assume the failure point from the get-go is the allowable value.

We know from the design standpoint that it is some point higher than that. We also treat that additional space higher than that generally as our design margin. That's where our design margin is, is in the space above the allowables, not in the space between where we may -- the system design point may be at that point in time.

That's why when we go back and reanalyze piping or look at new loads on piping and things of that nature, yes, the stresses are increased. Yes, some of the loads on some of the supports or within the piping are higher, but our consideration as far as whether or not we are continuing to maintain margins and stay within the design basis, generally speaking, goes back to code allowables. Those are the key parameters that we are looking at in doing that evaluation. And I can tell you that that is how it is done in engineering space, and not just at Nine Mile Point.

MR. COLLINS: Carl, under the 1966 AEC Guidance --

MR. TERRY: Yes.

MR. COLLINS: The three numbers that are currently

in your November '97 FSAR -- and, here, you can use --

MR. TERRY: Oh. Uh-huh.

MR. COLLINS: Which of those would you consider to be -- or how would you get to the design basis by reading that specific portion of the FSAR?

MR. TERRY: In doing an evaluation as far as whether we were outside of it?

MR. COLLINS: Yes.

MR. TERRY: Well, I guess because we have got so much experience in this, I know we would use 80 psf.

MR. COLLINS: Right.

MR. TERRY: Normally, we don't get into this discussion. You know, you are right in terms -- this is an anomalous write-up. We don't normally calculate what the failure point is. But I would -- I know I would use 80.

MR. COLLINS: Well, I know you would, too.

MR. TERRY: Right.

[Laughter.]

MR. TERRY: And it isn't because that is what we used back in November, because that was the original --

MR. COLLINS: Right.

MR. TERRY: -- design of the building.

See, I feel comfortable that the people that reviewed it -- I mean, obviously, none of us can go back and get into their heads, even if they are still around, as far

as what they may have considered, but I feel comfortable that they, too, understood that as a design point for the building, not as a point of failure for the building.

MR. COLLINS: So, under the conditions -- and let's try to link the availability of information to reportability.

MR. TERRY: Right.

MR. COLLINS: In that -- in that process. Under the conditions that your system would provide for evaluation of this finding, you would expect an individual to go to the FSAR?

MR. TERRY: Yes.

MR. COLLINS: Right. And look and try to determine from that section in the FSAR, whether they are still in compliance with design or not?

MR. TERRY: Right.

MR. COLLINS: And that -- and then that determination will drive you to different processes, whether it be 91.18, 50.59 or tech specs or wherever -- wherever you are. And sometimes that is done by operators, I would presume, right, back-shifts?

MR. TERRY: Yes.

MR. COLLINS: How would your operators know which figure to use? Or how would your process provide for 80 to be the right answer in this specific case?

MR. TERRY: Well, first off, as far as the immediate call at that moment by the operator, obviously, the most important thing is are they operable? In many ways, frankly, this helps the operator as far as making the operability determination, because normally that information is not available. And, normally, what they would have is an allowable value and some point that they were, all right.

As far as the process itself, what we do is first off, if the operator doesn't know, we give them clear direction on operability, make the call that it is not operable. If he doesn't have sufficient information and can't -- typically, they would get a hold of someone from Design or somebody familiar with the issue. If they can't do that, and the clock is ticking in terms of reportability, if he comes up against that, if it is a one-hour or a four-hour or whatever it might be, we would expect them to go ahead and make the reportability, if that call is something that is indeterminate. That is really the way that we would have them go.

And then we may retract it later on based upon further evaluation. And we have done that numerous times as far as looking at that.

MR. COLLINS: Sure, that is not uncommon.

MR. TERRY: Right. But that is how I would expect them to use it. You know, they make the call based upon,

you know, the language that is there. Like I say, it is helpful on operability. This happens to be maybe a little less clear. You can say, well, what exactly is the design bases point? I suspect they would call Engineering and ask for their input. And they're available, they're are on-call and beeper available and things of that nature, if they need to do that.

MR. COLLINS: Okay.

MR. TERRY: John or Ralph, I don't know if you wanted to add anything to that. But that's -- that's the way I would expect it to be done.

MR. MUELLER: I think that is consistent probably at most plants. They should go to those numbers and they need to be as clear as they can be.

MR. SYLVIA: Well, I believe we went through that for Surry with the design basis --

MR. COLLINS: Okay.

MR. TERRY: In that section?

MR. SYLVIA: Yeah.

MR. TERRY: Yeah. I think that --

MR. SYLVIA: But we can do that if --

MR. TERRY: Yeah. If that -- you know, one of the things about the letter, while Jim Lieberman did indicate to me in our phone call that that was one of his primary concerns, was we are talking about numbers that are right in

the Design Bases section, if that is the regulatory position, and that's where you are, I think it might be helpful to state that formally.

One of our major issues is that that isn't really clear. We read it as it is a number that was in the FSAR that was used as consideration in staff's evaluation of your plant. Now, you have got a different number, therefore, it is something that we need to know about.

That is essentially what is there. It does not -- the letter does not refer to the fact that it was in the Design Bases section. We still don't agree with that, I can tell you that. But at least we would be narrowing the focus of what we are looking at. The Design Bases sections, though, have a lot of numbers in them, and I think you would be making a mistake going against what we consider to be fairly clear looking at the bases behind both the reportability regulations as well as and, in particular, 10 CFR 50.2.

Now, the next one we would like to go through, if you could up that next slide on the --

MR. HOOD: Terry, before you leave that point, if you failed it, there are -- adopting a position such as you have suggested would cause us undue burdens. Perhaps if you could illustrate that, it might be --

MR. TERRY: We are going to, yeah, we are going to

--

MR. HOOD: Be very helpful to us.

MR. TERRY: Right. We will get into that. In fact, I can, I can do that right -- well, why don't we go through this last slide, it's the last one on there, just to make sure if there are any questions on what our thought process is, and then we will get into why it is a problem for us as far as dealing with this.

This is a slide that we had gone through back when we met with Jim Lieberman about at year ago, and at that time we explained, again, our rationale, and our rationale against NUREG 1022. By the way, this table is not out of 1022. What 1022 actually refers to is you got a condition where a pipe restraint is broken or missing, and what it -- what it says is you can evaluate that situation.

You may immediately report it, Sam, to your point, where the operator really doesn't know what that means if that support is missing, so they report it on a two-hour, or a one-hour, four-hour call, whatever it might be. But then as far as 50.73 and a 30 day report, you retract it because you did a calculation and you determined that, indeed, even though that support was not fully functional or missing, still you are within the overall design bases.

So it is clear that the fact that a support, a component not performing its function is something that can

be evaluated, not something that automatically requires you to be -- to make a report.

This illustration is to show you how we would handle that pipe support based upon the way we do things and, we believe, the way, frankly, everyone in the industry does things. We would take a look at the fact that, first off, you know that the original condition, which is the bottom, a pipe system has all of its supports, they are all intact, that has a certain pipe stress associated with it. That is -- the analogy in our mind is the blowout panel, again, --

MR. MARTIN: Wait a second, Carl.

MR. TERRY: Yes.

MR. MARTIN: Again, going back to the 1022, 1022 doesn't say it is not reportable when you find the missing hanger. It says you may subsequently retract if you subsequently conclude that the allowable stresses have not been exceeded.

MR. TERRY: Correct.

MR. MARTIN: But it never said the original 50.72 report would be wrong thing to do without that information.

MR. TERRY: Right.

MR. MARTIN: Now, if you happen to have gone around, and for every one of your hangers, you have got a little tag hanging on it, and it says if this one guys, this

one is not reportable, but the one that you don't do the analysis for, it is reportable until you determine otherwise.

MR. TERRY: It also says in NUREG 1022 guidance that judgment can be applied in terms of making that determination as to whether or not you are in the design basis.

MR. MARTIN: Valid.

MR. TERRY: All right. You're right. You know, and if that is part of that argument that, well, we don't think you had an adequate basis for judgment that it was not reportable at the time, you know, we can talk about that, too. But, really, this issue came up well after the 30 day reporting period and the problem was we never reported it under either 72 or 73.

So, again, if we can get this down to what the issue is, that's fine. But I can tell you at the time, and it is documented in the evaluations that were done, it indicates that Engineering judgment is used in terms of making that determination. All right.

The other thing, by the way, that came into play in this case, as far as that overall judgment, is they knew they were dealing with an event that was not even a design basis event. All right. And that -- that factor was in there.

Regardless, though, I understand your comment and I think it is valid. If there is no reasonable basis to say that it is okay, I agree with you, you got to make the call. No debate. But we kind of use judgment in terms of making that determination is what -- we don't necessarily have to run a stress calculation.

MR. SYLVIA: And you lean toward reporting if it is --

MR. TERRY: Yeah, if there any question, as I indicated earlier, if you don't know --

MR. MARTIN: And to be quite frank, I got to tell you guys, you know, from the time that you send in your submittal, you know, your are countered here and you use this argument, the staff hunted long and hard in 1022, where we had said that if you found a hanger that was, you know, invalid, that you wouldn't have to report, but they saw it was reportable and the only reference they could find was the one that talked about withdrawing the report.

Now, if you happen to have the information ahead of time, that's fine, or you have got a basis for making a decision, I understand what you are saying.

MR. SYLVIA: A piping expert would have feel for it.

MR. MARTIN: But the declaration that it is not reportable, until you know that information or have a basis

for reaching that conclusion, you can not say it is not reportable.

MR. TERRY: And we agree with that. And if that is the point, I think we can do some things in terms of perhaps clarifying that internally, whatever. But there was judgment applied in terms of -- at the time, as far as, you know, why we didn't need to make a report.

Again, it talks about the case where you have got a restraint missing, and it says, all right, and that's the second level that we are. What we believe, when they talk about you subsequently analyze, you are absolutely right, Tim, the initial thing is you may need to report that because you don't know. That is really where they are coming from, and we agree with that.

On the other hand, you go, you do a further evaluation, you can retract the report, in other words, not make the 30 day report. And we believe -- in fact, I am sure that that is done by doing an evaluation, a further evaluation and analysis of the piping system and determining that you stay within, in this case, the overall design bases, which is you are still within stress allowables. The analogy in the blowout panel case is we have a pressure that still keeps the building internal pressure below 80 psf.

MR. SYLVIA: But tell me if I am wrong, Tim and Carl both, but in this thing we didn't report what we were

cited for, was we had -- we did the calculations.

MR. TERRY: Right.

MR. SYLVIA: And proved that they were okay, and above 40, and then you cited us for not reporting that. And we -- and at that point in time, we knew that it wasn't -- wouldn't take us above 80. So the point that you are making doesn't apply to why we were cited.

MR. MARTIN: You are assuming that we were focusing on 80. We were not. We went right to the --

MR. SYLVIA: You weren't, but we were.

MR. MARTIN: Well, I am telling you. You wanted to know what we based ours on. The FSAR said Design Basis. You go on down to 1.2, it says "the design of the blowout panels," ta, ta, ta, 45 pounds, approximately 45 psf. I don't know how your operators would have determined that that wasn't a design basis.

MR. SYLVIA: The operators didn't find this problem and weren't working on it, it was Engineering folk.

MR. TERRY: Right. See, it was picked up as part of the Engineering walkdown, and they -- they wrote a DER and they provided this information as part of the process. So it didn't come to the -- it wasn't an operator going out there and saying, My God, this thing is going to blow at 140.

MR. SYLVIA: And the other part -- and the other

part of this, I don't understand your point either, but thinking that the bolt is a -- the component level or whatever, instead of the panel. If a bolt is not there, or if it is missing, the pressure is not going to be 45 pounds. It fixes the same place. That was how we found the problem.

MR. LIEBERMAN: But one bolt, I mean --

MR. SYLVIA: One bolt missing will change 45 pounds. You got all these bolts that have to sheer off to make this thing work. So if a bolt is a component and one is missing, or one is not the right size, it is not going to work like it was designed to do if the bolts were right for 45 pounds.

MR. TERRY: Yeah, that's true.

MR. SYLVIA: So you -- even if you did that, you would still have the same situation.

MR. MARTIN: No, again, your FSAR says approximately 45. Now, the question comes in, what is approximate?

MR. SYLVIA: Well, we are not arguing that, or could we argue it for 62 is -- because it is system is below 80.

MR. MARTIN: Yeah, to be quite frank, had it been one or two bolts, given the number of bolts you had, we would not be here today.

MR. TERRY: Yeah, but, Tim, recognizing that it is

an approximate number, and recognizing that then you really need to go to the functional capability, I don't know how else you can draw a conclusion whether it is close enough or not. You have to look at the functional capability and that is what we have focused on. It's the only way you can make these calls.

If we start saying, well, the FSAR has 40 -- you know, they didn't happen to go to three significant figures, we found it 40.5, is that or isn't that -- I don't -- you just can't put us in a situation where we make reportability determinations that way, it won't work. I can tell you it won't work.

We have to go and look at what are the consequences of that anomaly, and what does it do as far as the principal functions that are to be performed. That's what you have to look at. Otherwise, I can tell you, one of two things will happen, people will be lost and confused, or you will be inundated with reports, which is -- which is really what I think, particularly John and Ralph can provide you more insight.

We know right now, just for example, we have gone through and done our FSAR review, and we have got hundreds of discrepancies. We look at every one of those, all right, as far as whether they have an impact on operability, whether they are reportability, frankly, using these kind of

guidance, all right. And I can tell you, every time we have got something that is stated different than the FSAR, we don't consider that reportable. That includes numbers, that includes other aspects.

But it could be, and we need to assess that. And the way we assess that is whether or not it affects principal functions to be performed by the system.

MR. MUELLER: I think we have just got to kind of boil down the issue is -- is it the design section of your SAR or is the design, the 80 pound example, not the function to protect that. And, really, the fact that it is written in the Design section confuses the issue.

MR. MARTIN: Yeah, it does.

MR. MUELLER: It confuses the issue but it doesn't change what -- we have to be able to talk about Design Base and train people and speak, even though it is written that way, the old tech spec, we all certainly agree, if we are not sure, and we don't have a basis, we go reportable and retract. And that's not -- there's a hundred different kinds of them we do every day. It has to be that way.

MR. COLLINS: I think, John, I think we are all, in essence, arguing the same point. It is a matter of when the agency looks at the document, do we know? You know, a straight face reading, as Tim articulated, of the original FSAR page would logically lead an inspector to the fact that

that was a design number. So we trip -- let's just -- let's just assume that. And we -- that is arguable based on a lot of variables.

MR. TERRY: We agree it is a design number --

MR. COLLINS: So --

MR. TERRY: It's design bases of the plant.

MR. COLLINS: So we trip to that, and then we -- we come to a conclusion, that, well, not only that, but it is a design basis. So --

MR. TERRY: Right.

MR. COLLINS: I think what we really need to revolve the discussion around is, in this particular instances, now that we understand how your process works --

MR. TERRY: Right.

MR. COLLINS: How you use your design calcs and your margins, do we still believe that that number accurately represents what the Commission would consider to be a design basis.

MR. TERRY: Right.

MR. COLLINS: That is going to trip our decision one way or the other.

MR. SYLVIA: Right.

MR. COLLINS: Said another way, we don't want you to report at the level that you are indicating we would want you to. I think we are essentially operating on the same

plane that you are, as far as what the agency needs to know based on their criteria in 50.72.

MR. SYLVIA: Okay. Well, that --

MR. COLLINS: So the question becomes how do you know when you are there, based on what the inspector reads versus what you find out per analysis, which in some cases is separated by time and a lot of effort.

MR. SYLVIA: Well, you have told what we want to know. Can you articulate that question for me?

MR. MARTIN: Well, but no, there is more than that, too. First of all, I think you probably know because we have not made a secret of it. We are revisiting 50.72 and 73 from a risk-informed basis. And, in fact, I have proposal making package on my desk right now, that will get the Commission's permission to go forward, and I have been given every indication that that is what they will let us go.

You know, we recognize some of the dichotomies in 50.72 where it puts in juxtapositions, seriously degrades, and then doesn't use similar adjectives when it goes on and talks about design basis. And, in fact, if you look at the difference between the one-hour report and the subsequent report, design basis, you can't really make a distinction between the two in the way they articulate them.

I think we would also agree, if it was an ideal

world and we didn't have a law or a rule on the book, that the types of things we are talking about don't need a one-hour report. But we do have a rule on the book.

The rule focuses on design basis. And the part we haven't -- and the part we haven't discussed is when Nine Mile Point 1 was licensed, given the large margin between the approximate 45 pounds and what was the likely failure of the building, was that a basis for the staff saying I don't need to look any further than this on that one, and I can keep going, and, therefore, whether -- whether it was important to you at the time, that difference, it may have been important in the licensee decision. We can't go back and find those things.

So we look at the label, and the label -- and I got to tell you, the label played a very significant part in this discussion, and our discussion of what we are going to do. I can also tell you that the staff has said, if it wasn't so labeled, we wouldn't be talking about this. But it clearly says design basis. It clearly then goes down and says the design of this, and then it goes on and talks about that. That's where we came from.

MR. TERRY: I think, though, just --

MR. MARTIN: And we had no basis -- we had no basis --

MR. SYLVIA: With the emphasis on the 80,. and the

45 being a relief device --

MR. MARTIN: And we understand that, but, you know, now you are looking at how you operator is going to determine when to report and when not.

MR. TERRY: Tim, I guess the other thing, I understand on a design basis, but it is not just -- the words are not just design bases. It is design bases of the plant. We think that is very significant, that it is of the plant.

Design basis in the realm of design is every number that is in any calculation. It doesn't say design bases as described in the FSAR. It doesn't use those terms. And we think if you go back to both the statements of consideration and some of the background we provided, which was issued at the time of 10 CFR 50.2, which I think is the relevant thing to talk about as far as what do you mean by design bases, I think it becomes fairly clear that it is major functions to be performed, not selected numbers within an FSAR.

Nowhere did I find anything that said it related to specific numbers in the FSAR, and that is the design bases that we are talking about.

MR. SYLVIA: We made a lot of progress here by hearing you say that we are in the same ball park on reporting.

MR. MARTIN: We are converging and we are converging in the number of mechanisms, one of them being rule change.

MR. HOOD: I would ask you to keep in mind -- I would ask you to keep in mind the distinction to be drawn between what the existing regulation requires and what it may require in the future, and we are -- I am sure you appreciate what Jim -- the back and forth in this discussion --

MR. SYLVIA: We were more worried about the future and what to tell people and how to report and it seems like we made a lot of progress on that, wouldn't you say?

MR. COLLINS: I think our letter back to you, our letter back to you is kind of pivoted on -- maybe I can read from it -- "The NRC determined that the blowout panel pressure of 45 psf establishes the reference for the acceptability of the facility's design."

That's after the backdrop of what 50.2 defines as the design basis, one of those being reference bounds for design.

What I am hearing you say is that it is not, that 80 pounds is the reference for design.

You could read the FSAR, a straight-faced reading of the FSAR could you to believe that it is 45.

MR. SYLVIA: We don't think so, but understand you

did, but that's okay. We can have that problem --

MR. TERRY: I think the analogy to look at, because I think it's a lot of the real world kind of thing, I mean the blowout panels are behind us, so that is a separate thing.

MR. COLLINS: Right.

MR. TERRY: But we do have tables, particular in the Unit 2 FSAR, for piping systems that indicate specific numbers as far as pipe stress.

We in evaluating piping systems, in doing things like what we call snubber reduction programs, which are done for other reasons, we do things to adjust piping systems and change those tables.

We also find supports out there that are missing or broken or loose.

We evaluate that number -- I can tell you right off the top, we know the stress is different in the other pipe supports but as far as evaluating that we go to the allowable value, which are code stresses for piping system design pressures, okay? -- those are the things we use, and it is very important analogy because it really lines up for me that the building design point is 80, and a feature that is in there that is very analogous to the pipe support which provides that necessary support to control pipe stresses is a component that is analogous to the blowout panel.

I think anything you do -- again, not so much for the blowout panel, but if you could think about that parallel and the right way, what you think is the right way for us to look at that kind of thing in the future, it would be extremely helpful as far as looking at what we need to do to stay within the current guidance.

Then, obviously if you can clarify it further in new guidance, that's great, but right now we are sitting here, you know, with a violation that we really haven't done anything except corrective actions on because what we think what we are doing is right, and that is the important thing for you to take -- we explained to you how we do things, how we think as far as looking at other things outside of blowout panels.

MR. SYLVIA: I think from my personal point of view, and this is because I think this way doesn't make it absolutely right, but I have been doing this stuff for a long time, and when I first saw this or heard about this issue I asked Licensing to bring me the FSAR pages and the instant I read it, I interpreted it 80 as being the design for that building as what you need to protect against -- independently without talking to anybody.

It just was a natural for me to think that before we went through all this studying and talking to each other and talking to other plants and NEI.

You know, it is no doubt in my mind that it's 80.

MR. MARTIN: I think the reason for that may be because we all come from different training. I think it has to be recognized how people, inspectors may be trained to look at something and operators or people in the field. We really are trained differently in our background, and I think the analogy that immediately jumps to mind when you hear about this, that every relief valve that you find which is going to say that relief valve is designed to lift at this number, every operator with this thing will think that a relief valve set-point is wrong is outside its design basis with this, and that is what we are really worried about, because they would see that by their training as the exact reading of this is what we are saying -- as they look at the system was designed to do this.

You have protective features to protect you -- and it's problem. If you get close you lose margin and you've got all these things to consider, but it's the system, a major system, problem.

That is where we would have a tremendous training issue in trying to figure out how to retrain our folks for the more -- how should I say? -- the more everyday things that operators deal with.

Now you are still going to have tough ones in engineering and you are going to have these harder issues in

structures, and some of them are arcane things engineering is in, but -- and we are going to have to talk about that constantly but these kind could give a very, I believe, negative signal to how to train operators.

MR. COLLINS: Okay.

MR. MARTIN: That is a side issue, of course.

MR. COLLINS: Eileen, do you have any perspective that you want to provide on the 91.8 generic letter or the 91.18 evaluation?

MS. McKENNA: No.

MR. COLLINS: Okay. Jim, do you have anything else?

MR. LIEBERMAN: No.

MR. TERRY: I think the only other thing, just -- I presume the transcript will be issued in a week or two, is that the timing of that?

MR. COLLINS: What is the turn-around time for the transcript?

MR. HOOD: One week.

MR. TERRY: What we would propose, and I think you indicated you expected to respond somewhere a nominal 45 day timeframe initially -- something like that? -- a month and a half or so -- what we would do is review the transcripts, advise you in advance of that if there is anything we want to clarify, and similar to the past, we may just highlight

some of the things that we want to point out as part of this and we will get that to you certainly as quickly as we can once we get the transcript and certainly sufficiently in advance of your 45 day clock to have you consider that.

MR. COLLINS: Yes. I think it is important, and you, all three of you, spoke to this, that you tie this issue into the structure of your FSAR, because the FSAR is a reference guide which drives a lot of our processes, and not only do we have to have the comfort that we can use it as a tool, but that it is able to be used by yourselves in your processes to get you to the right point.

I mean ultimately that is what it is all about.

To the extent that you interpret the phrasing or the numbers there to be different than we used as a basis for our regulatory action, then you need to articulate that.

Our obligation is to go back and confirm that that is the correct approach with this additional information or not. That will be, as you so indicated, how we frame the issue, because it is not unique to this particular page in the FSAR.

MR. TERRY: Right, exactly.

MR. COLLINS: So whatever we go back with as a regulatory position is going to become the way that you now feel some comfort or lack of comfort in how you are approaching the FSAR for evaluations.

MR. TERRY: Absolutely. I think we understand that.

MR. SYLVIA: That is the meat of the issue, but I think based on your saying we were in the same ball park on what that illustration -- I hope I am walking away with the right feeling of comfort that our basic understanding is correct and aligned with yours.

MR. COLLINS: Excuse me --

MR. LIEBERMAN: I was going to say I think where we want to get is the same. The question is do the words of the requirements get there for us now.

You think we do --

MR. SYLVIA: Yes.

MR. LIEBERMAN: -- and we haven't seen it yet, up to at least this meeting, and as Tim says, we recognize there is a need to change the rule to get there.

MR. MARTIN: But you gave us some food for thought obviously and it would be inappropriate for us to give you an off-the-cuff answer.

We need to assess what we have heard.

MR. SYLVIA: Appreciate that.

MR. MUELLER: Let me try to rephrase what I think I have heard, just to kind of end the meeting.

What I think I have heard today is we all understand the difficulty of this issue and the need for

clarity.

We have an FSAR page that has a section that says design base. A simple reading says -- it says its the design base. It causes difficulty in interpreting whether that is or isn't the design base.

We say the process that put this together is clear from 1966 what is and what isn't and we understand that and we look at this paragraph, the beginning of it, that says design base and there is a clarity issue and a question arises how you feel in the regulatory arena with those two issues. How do we go forward from there? That is as simple as I think it seems to me -- and obviously we've got a lot more FSARs out there that are going to be written and a lot more parts of ours that may have under that section things that we consider really the design base.

MR. MARTIN: Right.

MR. MUELLER: And a lot more -- that is the issue, right?

MR. COLLINS: It's a little more, I see a little more than that, John, in that.

I think that is the issue, but what the issue is driving is reportability.

MR. MUELLER: Right. I understand that.

MR. COLLINS: And what does the agency need for us to make decisions based on reportability?

You know, reportability ideally is one of the performance-based exchanges that we have between the industry and the NRC and it's pretty clear in your statements of consideration indicated some of that, of why we need that type of information.

The agency collects information for a lot of reasons, and Tim is the expert on that on AEOD.

Now only do we need to be prepared for event response but we also need to be prepared for databases and those types of tracking, but clearly we do not want to encumber the system with -- not only with information, but we don't want to drive the operators away from their primary duties in the control room.

I mean the agency doesn't want that and the industry doesn't want that, so yes, we have requirements and yes, we have regulations but there is a measure of what are we trying to accomplish by all this also that I think that we need to take into consideration.

Where there is a mismatch in the requirements to get to that goal, we need to address that. Tim has articulated it, where we are not there yet but we see an example of that that we need to just take that into consideration and make an informed, mature judgment.

Your information will help us do that.

MR. MUELLER: Thank you again for a good meeting.

MR. COLLINS: That closes the meeting.

We are off the record.

[Whereupon, at 2:50 p.m., the public meeting was concluded.]

MR. COLLINS: That closes the meeting.

We are off the record.

[Whereupon, at 2:50 p.m., the meeting was concluded.]

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

NAME OF PROCEEDING: NIAGARA MOHAWK POWER CORPORATION
PUBLIC MEETING WITH NRR OFFICE
DIRECTOR REGARDING ENFORCEMENT
DECISION ON NINE MILE POINT
UNIT 1 BLOWDOWN PANELS

DOCKET NUMBER: 50-220

PLACE OF PROCEEDING: Rockville, MD

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

Jon Hundley
Official Reporter
Ann Riley & Associates, Ltd.

A. TURBINE BUILDING

1.0 Design Bases

1.1 Wind and Snow Loadings

Exterior loadings for wind, snow and ice used in the design of the turbine building meet all applicable codes as a minimum. The roof and its supporting structure are designed to withstand a loading of 40 pounds per square foot of snow or ice. The walls and building structure are designed to withstand an external loading of 40 pounds per square foot of surface area, which is approximately equivalent to a wind velocity of 125 mph at the 30-foot level.

1.2 Pressure Relief Design

To prevent failure of the superstructure due to a steam line break, a wall area of 1800 square feet has been attached with bolts that will fail due to an internal pressure of approximately 45 pounds per square foot; thus relieving internal pressure. Wall or building structure failure would occur at an internal pressure in excess of 80 pounds per square foot.

1.3 Seismic Design and Internal Loadings

The turbine building is designed as a Class II structure. Components are either Class II or Class I as outlined on pages III-1, III-2 and III-3 of the First Supplement to the PHSR.] Rev. 1

An analysis of the turbine building resulted in the use of the following earthquake design coefficients for the major components.

Component	Percent Gravity	Comment
Feedwater heaters and drain cooler support structures	16.0 - 20.5 (calculation used: 20.0 horizontal 10.0 vertical)	Based on specific dynamic analysis
Turbine-generator foundation	23.4 N-S horizontal 26.7 E-W horizontal	Based on specific dynamic analysis

C. SECONDARY CONTAINMENT - REACTOR BUILDING

1.0 Design Bases

The reactor building completely encloses the pressure suppression system. This structure provides secondary containment when the pressure suppression system is in service and primary containment when the pressure suppression system is open, as during refueling or other maintenance operations. The major safety function of the secondary containment is to minimize ground-level release of airborne radioactive materials by providing controlled, elevated release of the building atmosphere through a filter system under accident conditions.

When the pressure suppression system is in service the design basis accident for the reactor building is the same as for the pressure suppression system: the loss-of-coolant accident without core spray (Section XV). When the pressure suppression system is open the design basis accident is the most severe refueling accident, as discussed in Section XV. For either accident, an emergency ventilation system with particulate and charcoal filters is used to reduce radioactivity release to the environment.

The reactor building is designed for a maximum in-leakage rate of 100 percent of the building volume per day at 0.25 inch of water internal vacuum and neutral wind conditions. Under other than neutral wind conditions, reactor building exfiltration could occur as discussed in Section XV.

1.1 Wind and Snow Loadings

Exterior loadings for wind, snow and ice used in the design of the reactor building meet all applicable codes as a minimum. The roof and its supporting structure are designed to withstand a loading of 40 pounds per square foot of snow or ice. The walls and building structure are designed to withstand an external loading of 40 pounds per square foot of surface area, which is approximately equivalent to a wind velocity of 125 mph, 30 feet above ground level.

1.2 Pressure Relief Design

Pressure relief is provided to prevent collapse of the superstructure due to a break of an emergency cooling system, or other primary coolant system line in the reactor building. Breaks in

all primary coolant system piping have been analyzed since accidents of this type result in the highest pressure, temperature and humidity conditions in the building. A break in the emergency cooling system is the most serious since it releases the most coolant at the highest rate. After accounting for steam condensation and heat losses through the building wall, building temperatures can still be as high as 307F locally for short time periods and reach approximately 150F for the entire building for longer periods of time. Based on a maximum steam release of 10,000 pounds per second, a metal wall area of approximately 1,800 square feet has been attached with bolts that are designed to fail with an internal pressure of approximately 45 pounds per square foot of wall area. Relief of pressure through this area in case of an energy release will prevent excessive internal pressure on the superstructure walls, roof and their supports which would fail at an internal pressure in excess of 80 pounds per square foot.

1.3 Seismic Design

The reactor building and its contents are designed as Class I structures, using the maximum credible earthquake ground motion of 11 percent of gravity. As discussed in Section III, dynamic analyses determine the earthquake acceleration applicable to the various elevations of the reactor building. All equipment in the reactor building is designed to withstand these forces.

Functional load stresses (normal operation) when combined with stresses due to earthquake loading are within the established code stresses. Stresses resulting from the combination of operating loads and earthquake or wind loads are limited in accordance with applicable codes to a 33-1/3 percent increase in allowable stresses*.

1.4 Shielding

The reactor building shielding is discussed in Section XII-B and is designed to limit the radiation level in accessible areas during power operation.

2.0 Structure Design

The reactor building houses the refueling and reactor servicing equipment; fresh and spent fuel storage facilities; and other reactor auxiliary or service

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* Also see Section XVI, Subsection G.

117 RB 135 TB	Building Failure (Subsequently Calculated)	*[Analytical Limit]*
80 psf	Original Minimum Building Design Capability	*[Allowable Value]*
53 (60) psf	1993 Calculated Blowout Panel Function	
≈45 psf	UFSAR Blowout Panel Function	*[Operational/Nominal Value]*

1966 AEC Guide

Identification of the principal criteria for design of the facility and the design bases for those major systems and components significant to safety.

Principal Design Criteria means those fundamental architectural and these criteria represent the broad frame of reference within which the more detailed plant design effort is to proceed and against which the end project will be judged.

Design Bases means that information which identifies the specific functions to be performed by a major component or system in terms of performance objectives together with specific values or range of values chosen for controlling parameters as reference bounds of limits for design. Such limits may be restraints derived from generally accepted "state of the art" practices for achieving functional goals (such as "no-center melting" restriction placed upon fuel design) or requirements derived from calculating the effects of a situation representing an upper limit which a component or system could reach under credible circumstances (such as peak pressure loading of a containment).

SECTION V - CONTAINMENT SYSTEM

This section of the Safety Analysis Report should provide information concerning the facility containment system. For the purpose of this Report, the containment system may be considered as composed of the containment structure and the directly associated systems upon which the containment function depends (e.g., the system of isolation valves installed to maintain or re-establish containment system integrity when required). Engineered safeguards which may be called upon to operate in conjunction with the containment function in the event of an accident should be reserved for discussion in Section VI.

In the design of nuclear power plants, the containment system which encompasses the reactor and other portions of the plant (which vary ... depending on reactor type and plant) constitutes a design feature provided primarily for the protection of public health and safety. Being a standby safety system, it may never be called upon to function, but as a safeguard must be maintained in a state of readiness. The ability to perform its intended role, if called upon, of acting to confine the potentially hazardous consequences of a gross accident, depends upon maintaining tightness within specified bounds throughout operating lifetime.

The Report is expected to provide the Commission with information that shows the containment system has been evaluated for assurance that:

a. The containment will fulfill its intended objectives, and
b. Such objectives are consistent with protection of the public safety.

Information provided should permit a determination of the adequacy of the evaluations; that is, assurance that the evaluations included are correct and complete and all the evaluations needed have been performed. Evaluations in other sections having a bearing on the adequacy of the containment system should be referenced.

More specifically, in recognition of the safety role assigned to the containment system, it is expected that the evaluations should be directed toward:

(1) The bases upon which the containment system requirements were established and, in particular, the identification and explanation for the choice of values of the principal design parameters; i.e., the design pressure and the allowable leakage rate.

(2) The major components and associated systems provided to fulfill the required containment function and the extent of the assurance that the proposed designs will perform their intended function reliably.

(3) The extent to which the containment system's effectiveness and functional dependability will be maintained and verified by testing throughout the plant's operating lifetime.

(4) The capability of the containment system to continue to function in accordance with design specifications when subjected to environmental forces such as, winds, floods, and seismic activity associated with the site location.

(5) The designed-in margin available in the containment performance capability beyond that required to handle the accident postulated for defining upper limits on required performance.

(6) The extent to which the operation of any engineered safeguards (see Section VI) is relied upon to attenuate the postaccident conditions imposed upon the containment system.

Particular emphasis should be placed upon the evaluation of design features operational reliability, and testability on the assumption that the containment system will not normally operate. It is through a critical evaluation of its design features and testing schedule that assurance is obtained that the system will function properly if called upon.

The following are illustrative of evaluations and supporting information that should be included in this section:

A. Containment System Structure

(1) Design Bases. The bases upon which the design of the containment system structure was established, including, for example:

(a) The postulated accident conditions and the extent of simultaneous occurrences which determined the containment design requirements.

(b) The sources and amounts of energy and material which might be released into the containment structure, and the postaccident time-dependency associated with these releases.

(c) The contribution of any engineered safeguard system in limiting the maximum value of the energy released in the containment structure in the event of an accident.

(2) Containment System Structure Design. The design features of the containment system structure and the explanation* for their selections, including, for example:

(a) Design internal pressure, temperature, and volume.

(b) The design leakage rate.

(c) Design external loadings imposed by barometric pressure changes, wind, snow or ice, floods or inundations, and earthquakes.

(d) The code and vessel classification applicable to the design, fabrication, inspection, and testing of the structure.

(e) Plans and elevations showing principal dimensions.

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*Where explanation is given in other sections, only cross referencing is necessary.

(f) The estimated number and types (preferably supported by typical details) of penetrations, equipment access doors, emergency escape openings, and air locks.

(g) Missile protection features.

(h) Protection provided against combustible, explosive, or reactive materials being released inside the containment structure.

(i) The corrosion protection or material allowances provided.

(j) The extent of thermal or weather insulation provided.

(k) The extent to which shielding requirements have been incorporated.

(l) The provisions or system provided for vacuum relief.

B. Containment Isolation System. The system of isolation valves* applied to fluid lines penetrating the containment barrier to maintain or re-establish containment system integrity during normal operating periods, or emergency and postaccident periods, should be considered as part of the containment system.

(1) Design Bases. The bases established for the design of the isolation valving required for fluid lines, including, for example:

(a) The governing conditions under which containment isolation becomes mandatory.

(b) The criteria applied with respect to the number and location (inside or outside of containment) of independent isolation valves provided for each fluid system penetrating the containment and the basis thereof.

(2) System Design. The design features of the isolation valve system, including, for example:

(a) A piping and instrumentation diagram of the isolation valve system indicating the location with respect to the containment barrier of all isolation valves in fluid systems penetrating the containment wall, or systems communicating directly with the outside atmosphere, (e.g., vacuum relief valves).

(b) A summary of the types of isolation valves applied and their open or closed status under normal operating conditions, shutdown, or accident situations.

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* Isolation valves applied to systems not related to the containment function should be excluded from this section but should be included under the appropriate section of the Report relating to the respective systems.

§50.72(b)(1)(ii)

Licensees shall report: "Any event or condition during operation that results in the condition of the nuclear power plant, including its principal safety barriers, being seriously degraded; or results in the nuclear power plant being:

(A) In an unanalyzed condition that significantly compromises plant safety;

(B) In a condition that is outside the design basis of the plant; or

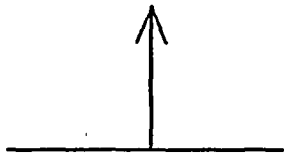
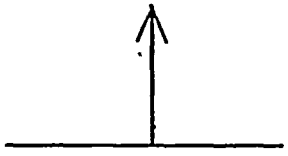
(C) In a condition not covered by the plant's operating and emergency procedures."

Statements of Considerations

"**serious events** that could result in an impact on the public health and safety" (Feb. 29, 1980)

The purpose of the rule is to assure that such events are reported immediately "where **immediate Commission action to protect the public health and safety** may be required..." (Aug. 29, 1983)

Furthermore the wording of the criteria and the guidance in the preamble to the final rule imply that the impact on plant safety should be at a fairly high level. Therefore, failures, specifications problems, and **loss of safety margins** that apply **to individual components** (pieces/parts) are not reportable unless they affect this ability to satisfy plant safety functions...(Apr. 8, 1993)

NMP1		NUREG-1022
	Reportable	
Original Min Bldg Design (FSAR) In excess of 80 PSF		Piping System Code Allowable Stress
1993 Calculated Panel Blowout Pressure 53-60 PSF	-Not Reportable-	Pipe Support Missing/Failed Stress Below Code Allowable
Blowout Panel Function (FSAR) Approximately 45 PSF (Original Design)		Piping System Stress w/All Hangers Intact

INSERT

Attendees

January 28, 1998

Name	Organization/Position	
Darl S. Hood	NRR/PDI-1	Project Manager
Singh Bajwa	NRR/PDI-1	Project Director
Lawrence Chandler	NRC/OGC	Assoc. Gen. Counsel
Nancy Chapman	SERCH/Bechtel	Manager
David Stellfox	McGraw-Hill	Editor
Jim Lieberman	NRC/OE	Director
Sam Collins	NRR	Director
John Mueller	NMPC	Chief Nuclear Officer
Ralph Sylvia	NMPC	Executive V.P.
Carl Terry	NMPC	V.P.-NSAS
Denise Wolniak	NMPC	Manager-Licensing
Eileen McKenna	NRC/PGEB	Sr. Reactor Engineer
Patricia A. Santiago	NRC/OEDO	Technical Assistant
Tim Martin	OAEOD	Director