UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD HEARING

In the Matter of

U.S. Department of Energy

High-Level Waste Repository

Docket No. 63-001-HLW

ASLBP No. 09-892-HLW-CAB04

January 27, 2010

9:00 a.m. PST

TRANSCRIPT OF PROCEEDINGS

Pre-Hearing Conference

Before the Administrative Judges

CAB04

Judge Thomas Moore, Chairman

Judge Paul S. Ryerson

Judge Richard E. Wardwell

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P R O C E E D I N G S

Please be seated. We will resume with the oral arguments and we're on Issue No. 10. Mr. Malsch.

>> MR. MALSCH: Thank you very much, Judge Moore. Marty Malsch for the State of Nevada. Before I begin on Issue 10, I wonder if I could beg the Board's indulgence to call their attention to a technical fact bearing on issue 8. That's the defense's FEPs issue, which was called to my attention after the argument yesterday, so if I could only take a few seconds.

>> JUDGE MOORE: Go ahead.

>> MR. MALSCH: There was a discussion with regard to issue 8 regarding the possible equivalency between a neutralization analysis and a FEPs analysis. The additional fact was called to my attention is this and that is that in a neutralization analysis, you were doing a basically a conditional analysis in which the drip shield effect of it is felt in an unmitigated fashion on the ultimate dose calculation. In a FEPs calculation, though, if you were examining a FEP, which leads to, let's say, the total failure of all drip shields, the effect of that failure, the ultimate calculation is mitigated by the probable FEP in the first place.

So, for example, imagine an igneious scenario which leads to the total failure of all waste packages, that would be felt in the ultimate calculation, but it would be discount by something on the order of a tenth of a minus 8 because you take into account the probability of the FEP in the first place. That was called to my attention after the argument, I thought it was important to tell the Board about this.

>> JUDGE MOORE: Thank you. Proceed.

>> MR. MALSCH: Issue 10 deals with DOE's drip shield installation schedule and what we believe is a -- a very visual and unique issue which it poses. DOE will not install its drip shields until the end of the 100 year --

>> JUDGE WALDWELL: Can I interrupt you right off the bat?

I remember when I was in graduate school,. Campadre in my room had a sign above his desk "this is a problem I'm solving, a simple equasion." It always got him focused again. For 10, I am not sure of the problem we are trying to solve. What is your opinion of what is the legal question before us with this?

And can you enlighten me on how it became

designated as a legal question?

Because I'm confused on how it did also.

I don't see it in your previous contentions, itself, when we're dealing with 162 nor can I really ascertain where it came from.

I've read where it's alluded to the Board that, omitted the contention, but I couldn't find that either. And I just need to be steered if you can help me with that before we get into any of your other details, if we could.

>> MR. MALSCH: Sure, I'd be happy to do that.

Our condition 10, if I recall, said because of DOE's delay of installation of a drip shield until the end of the 100-year period, post -- predisclosure period. After all, the 11,000 or so waste packages containing the wastes that have been in place, that that could not possibly be justified as safe. I think that's the essence of our contention.

The legal issue here today is -- is -- what I would call a subset of that, and that is that it cannot be legally justified as safe because by virtue of the schedule, a safety finding, which the regulations require be made before a license is issued to receive and in place wastes cannot possibly be made. I think that dovetails in with the -- with

the contention as written.

>> JUDGE RYERSON: Was 161, Nevada Safety 162 admitted as a legal issue contention?

>> MR. MALSCH: No, it was not contention admitted legally as --

>> JUDGE WALDWELL: Nor did you have questions associated with it?

>> MR. MALSCH: That is true. That is true.

>> JUDGE WARDWELL: And when did this come up as a subset, this schedule? I see now what you are driving at with regards to the scheduled portion of it.

Can you enlighten us on when and who and how this rose up to the level it has?

>> MR. MALSCH: I'm trying to remember when we very first raised the issue. We certainly raised it in connection with the negotiation and discussion of the legal issues; but we had raised it earlier -- and I'm trying to recall and I don't know whether we raised it in our reply or not. I'm sorry, I don't recall.

>> JUDGE WARDWELL: And to the best of your knowledge, the Board that admitted this -- the Board that was dealing with this, there was nothing in our Board Order that admitted it as a legal contention

when we admitted contentions?

>> MR. MALSCH: You didn't designate it as a legal contention, really, one way or the other, that is correct.

>> JUDGE WARDWELL: I'm encouraged, I'm not completely --

>> MR. MALSCH: You are not.

>> JUDGE WARDWELL: I am partially eluded, but not completely.

>> MR. MALSCH: In any event, the premise for the legal question is precisely this, if DOE will not install its drip shields until after all 11,000 waste packages containing 70,000 metric tons of waste have been in place; and, thus, systems and structures necessary for disposal safety of the drip shields have been in place will not be installed until many years after the radiological hazards with which they were designed to address have already been introduced.

As I said, this is a very unusual -- very unusual proposal. Commission policy and practice has always been that a safety finding must be made before any actual radiological hazards are introduced, not afterwards. That's why case-specific licenses are required in the first place. And that where complex

facilities are involved -- and certainly this is a complex facility -- that safety finding required before the hazards are introduced always includes a finding that all of the systems and components necessary for safety have been properly fabricated and installed.

For example, you see that for faux power reactor licenses in 50, in 57 (a) (1) you see that for low power instances under Part 50, that's in 50.57 (c) and for some materials licenses, for example, plutonium processing facilities under 70.23 (a)(a).

So the issue here is whether Part 63 incorporates that same policy. If so, exactly how does it incorporate that policy; and if it does, are we required to do anything about it at all at this particular stage in the licensing proceeding?

>> JUDGE WARDWELL: The policy you are referring to in regards to the other licenses, is that -- is that merely a policy or is it truly a regulation that says, that thou shall not -- that there shall be a safety finding prior to any radiological impact means installed?

>> MR. MALSCH: Yes, in the three regulations that I cited, no license can be issued until that finding is made -- and that even applies to a low

power license, for example.

The regulations I cited, we believe that Part 63 is consistent with this longstanding policy and practice. 63.41 (a) (2) requires that before wastes may be received or replaced in a repository, the NRC must find, quote, "That the construction of any underground storage place required for initial operation is substantially complete in conformity with the act and the application in the regulations." The wording is a bit awkward, but it must mean that satisfactory completion of any underground storage space required for an initial operation must mean satisfactory completion of whatever safety features are necessary for adequate isolation of the wastes that will be in placed as a part of the initial operation. And in our case, that finding cannot be made, because all of the wastes will be in place before a single drip shield is installed.

>> JUDGE WARDWELL: When will -- when will the receive and possession license be needed in order to start receiving the wastes?

>> MR. MALSCH: It would be needed before any wastes could be received on the site.

>> JUDGE WARDWELL: What I mean is regards to construction starts, constructional license granted,

construction starts -- it takes 100 years to complete all the -- all the tunnel drifts, as I understand it, or approximately; but at that same time, wastes -- there is a plan to -- at the -- as a companion activity start putting wastes in some of those drips already completed; is that not correct?

>> MR. MALSCH: That -- that is correct.

>> JUDGE WARDWELL: And receive and possession license would be needed for that activity; would it not?

>> MR. MALSCH: That is correct.

>> JUDGE WARDWELL: And approximately about how -- do you remember how much lag time there is? How many drips have to be constructed before they're going to start the companion, the dual duplicative -- not duplicative but the parallel -- duplicative or parallel activities at the site?

>> MR. MALSCH: I don't know. I mean, I'm not sure. it's a fairly long period. I don't know exactly how long it is. All right. Now, DOE -- .

>> JUDGE MOORE: The waste will arrive on the GROA years in advance to be in place underground.

>> MR. MALSCH: Well, some years in advance. I presume they could commence construction of the underground facility as soon as they receive the

construction authorization and, in theory, they would be poised to begin in placing wastes very shortly after the above-ground infrastructure was available to allow that to be done. That would be in the very beginning, but I don't know how long the actual replacement operations would last.

Now, DOE's staff tell us that there's no problem here, because, first of all, they say, all that is required by way of a finding is a finding that -- that the construction of underground storage space has been completed. And I would submit, that's -- that's a silly meaning of the regulations. Obviously, what the Commission had in mind is not only adequate completion of the space, but also adequate completion of whatever facilities in the space are necessary for safety.

For example, this would now include not only disposal safety but in placement safety. For example, this staff would be very interested, the Comission would be very interested in the safety of tunnel support or rails for in placing wastes or waste monitoring equipment, that would all be a part of this finding. So satisfactory completion of the space must be also satisfactory completion of necessary structured systems and components in this

space.

Well, then the next response is, well, but, no, the only finding is that structured systems components necessary for initial operation are completed and we need not concern ourselves with the drip shields because they will not be in stored as a part of the initial operation. And that is true in any temporal sense; but in a more meaningful sense, I think the regulation has to be read to say that as the -- as the wastes are in place in the tunnels, one should be sure that there is completed construction of whatever safety features are necessary to assure that those wastes that are being in placed, in the initial operations will be in place with adequate disposal safety. And, in fact, the regulatory history suggests of this initial operations, suggests it was added not to avoid having to address some safety question, but purely to allow DOE to begin disposal operations without excavating the entire repository drifts. So they can begin with just one tunnel. They wouldn't have to construct all the tunnels; but that doesn't necessarily excuse them from having necessary structure systems and components for disposal safety in place.

>> JUDGE RYERSON: But if 162 was admitted as a

fact, as a factual contention and I guess I'm not quite clear how the legal issue, particularly as it's been framed here, how that necessarily advances or doesn't advance the ball. I -- this is the issue as it was agreed upon by the parties, I take it, and if we had an opportunity in our Order to modify it and we didn't avail ourselves of that opportunity; but as I look at it, I find it a little confusing. I think the issue we are arguing, and tell me if this is correct, is basically whether as a matter of law it's impossible for the Commission to make the required findings to issue a construction authorization in light of the drip shield installation plan? I mean, is that essentially the issue?

>> MR. MALSCH: That's a fair statement of the issue.

>> JUDGE RYERSON: Why is that an issue of law as opposed to an issue of fact to be adjudicated?

>> MR. MALSCH: Well, I think -- I think if you read the regulations the way we read them.

The impossibility arises as a matter of law not as a matter of fact, once you accept the factual premise, that there will be no drip shields in place until after all the wastes are in placed in the tunnels. I think that's the factual premise. I

believe that's what the application provides. I think once that's the premise, I think our argument flows from that.

>> JUDGE RYERSON: But the substantial completion section is not -- is only indirectly relevant, I take it, at the constructional authorization phase? I mean, we can't have substantial completion before a construction authorization?

So it's -- it's simply in anticipation of whether that would be possible, which strikes me as more of a fact question.

>> MR. MALSCH: Well, I don't think it's a fact question, if what you are talking about is a legal certainty that a safety finding cannot be made at the operating license stage. I mean, I agree with you, in ordinary circumstances, one would not be concerned about that as the construction at the construction authorization stage. There is no construction to address; but if you know now at the construction authorization stage, that because of the schedule, a finding required for operation cannot possibly be made, then we would say it would be irrational not to take it into account now before DOE gets its license. Because otherwise the results

would be DOE could commence construction of the repository only to be told by the NRC five years later, sorry, we can't give you a license and ha-ha, we knew that all along. I mean, that's irrational.

If this is the problem we think it is, it has to be addressed now and it can't be postponed until later. But it did occur to me, there is a factual issue that is associated with this issue and that is NEI contends that the drip shields are not necessary. So if NEI were to prevail on that contention then, then we don't need the drip shields. We wouldn't need to make any finding amount about satisfaction of the completion of the drip shields. And the issue I guess is effectively removed. So that issue would remain, no matter what one, what the Board did with this particular issue; although, if the Board decided this issue in our favor, then NEI's contention would be a very important contention.

>> JUDGE RYERSON: Yeah. Well, I guess that's my concern. You're asking us to decide, as a matter of law, what might be the fact question five years down the road. If NEI were to prevail, for example, then, as a matter of law, the finding could be made, could it not, of substantial completion if the drip shields were turned out not to be necessary,

hypothetically?

>> MR. MALSCH: Well, I agree with that, except we are dealing with the application as filed. And we filed contentions, if the application is filed. I think giums need to be made based upon the application as filed; and the application as filed has drip shields.

Now, if in response to some reconsideration, the DOE may want to undertake either after consideration of the NEI contention or otherwise, they want to either amend the drip shield installation schedule so drip shields are installed as the wastes are in placed or they want to do away with it altogether, well, then they'd have to file an application, an amendment to the license application and we would deal with it then; but for now, we're -- we're dealing with the application as it stands.

>> JUDGE MOORE: Mr. Malsch, if -- as DOE states -- the drip shield is a component part of the waste package engineered barrier, then it can't possibly be installed until the other components of the waste package engineer barrier are installed, but if it is looked at, as DOE proposes, that it is one engineered barrier, one system with subcomponents, then that initial waste package has to be in place

before you could put the drip shields in. Aren't you looking, especially with regard to your argument about what the word "space" in 63 -- I believe it's -- 41 means? It's a physical impossibility under their definitions to put the drip shield in before you put the waste in place?

>> MR. MALSCH: Well, I think the time difference is in that respect almost trivial. I mean, you -- you would be installing the waste package and the drip shield almost simultaneously. I don't see why things can't be engineered in that manner. And if that's the way it's done, then the finding would be made, there wouldn't be any problem.

>> JUDGE MOORE: Why isn't it being done that way?

>> MR. MALSCH: Because DOE is proposing to install all of the waste packages before installing any single one of the drip shields.

>> JUDGE WARDWELL: And -- and the reason for that, is it not, is to maintain ability for retrieval, exactly, if I recall?

>> MR. MALSCH: I don't know what the reason is.

>> JUDGE WARDWELL: Right now, the drip shields will not be installed. They'll be installed all at once after all the waste packages are installed, even

though waste packages will be installed sequentially while other drifts are being excavated.

>> MR. MALSCH: Right. Right.

>> JUDGE WARDWELL: Something you said may have confused me a little. Is it your position now, there are no factual issues left in 162?

>> MR. MALSCH: Not if the Commission decides this issue in our favor. I think if they decide this issue against us, I'm not sure if it would remain a factual issue other than NEI contention. But I think it would be an important policy question for the Commission to address as to whether they would want to NEI to contemplate this highly unusual situation. I mean, for example, if the Board should decide that, yes, we agree that it would be an impossibility of making this operating license finding but because of the two-stage licensing process, it isn't necessary to look at that now. I think the Commission might want to look at that even as a policy matter and decide whether that makes any sense. I mean, among other things we have discussed in our Briefs, DOE's suggestion that this matter could be handled by a license condition; that is to say, you don't have a license to receive and possess would be issued on condition that all of the 11,000 drip shields would

be installed 100 years from now. And we raised I think what is the very important question of exactly what would be the effect of such a license condition?

I mean, if the -- if the great, great, great grandson of the current NRC inspector of Yucca Mountain were to inspect the site prior to site closure and happen to notice there were no drip shields and ask the DOE official on site, you know, "What's going on here?" And was told, "We're really, really, really sorry, we had every intention of installing them. It turned out we just couldn't." What would the NRC be in a position to do now with all the waste packages in place?

I mean, in theory, we -- obviously, a civil penalty would do no good. It would simply pass treasury monies from the treasury to DOE to NRC back to the treasury. It wouldn't address a safety problem. NRC's ability to enforce license conditions is rooted upon its fundamental authority to revoke licenses and to order divestiture of the materials. In this case, that would mean orderly retrieval. But as we pointed out in our Briefs, that would be a very difficult order to issue because it would entail a balancing of the risks to workers and maybe others associated with the retrieval operations associated

with the risks to the citizens of Nevada with a repository with no drip shields and possibly in violation of the EPA standards. I don't know what the outcome would be of that; but it could be that Nevada is stuck with a repository that's in violation of the EPA -- EPA rules. So I don't think the license condition which -- which DOE has proposed is by any means a satisfactory answer to this problem. I think this is a real serious problem with DOE's proposal. I think it should be addressed now, because, otherwise, what is the purpose of a construction authorization proceeding if not to examine the possibility of real serious problems with preventing an operating license from being issued in the first place. So it is no answer to say, oh, this is just a two-stage licensing process.

>> JUDGE MOORE: What happens to NEI's contention if your position were accepted?

>> MR. MALSCH: Well, if our position were accepted, that would be the law of the case. Then we could -- if NEI presumably wishes to go forward -- litigate that issue. In which case I suppose it would be moot. If DOE then also filed an amendment to its license application which, if given, no indication it would do so. So I think we have to

deal with the application as it is currently filed and that is with the drip shield installation schedule as is currently filed. Even if DOE should prevail in its -- in its contention, that doesn't require the DOE to amend its license application. It could still go forward on the drip shields. If it amended the license application to eliminate the drip shields or to install them as the wastes were in place, then that would effectively moot this issue; but it hasn't done so or given any indication that it would.

>> JUDGE WARDWELL: It's my understanding DOE doesn't exactly agree with your legal interpret -- your definition of the legal issue in this contention; is that correct?

>> MR. MALSCH: I think we have a disagreement as to whether it's in the scope of the contention.

>> JUDGE MOORE: Okay. Well, we'll ask them as they come up for their opinions. Thank you, Mr. Malsch.

>> MR. MALSCH: Thank you.

>> MR. SILVERMAN: It's still morning. good morning, Your Honor.

Don Silverman with the Department of Energy. Before we get into our Petition and my responses to

Mr. Malsch, I want to go to the specific question that Judge Wardwell asked at the beginning and I think Judge Ryerson followed up on with, which is: What is the legal question?

What's the problem?

And where did this all come from?

And in particular, I think you were a little befuddled -- correct me if I'm wrong -- with respect to the fact that you didn't see a clear relationship to the legal issue in the contention and I would just like to make clear, we did not agree to this language in this contention. We worked very closely with Nevada and agreed on almost every single contention; but in this particular one, when we filed our joint stipulation with the Board, we specifically said Nevada and DOE disagreed with respect to the nature of this legal issue, raised in this contention and we'll file separate views. We filed separate views.

The essence of those separate views were, Nevada is arguing that the pre-operational findings that are required by 63.41 (a) need to be addressed now. And our objection was that 63.41 (a) -- and that requirement didn't appear in the contention at all. And the Boards, for whatever reason, made the judgment to admit this legal issue as a legal

issue -- admit might be -- to have us argue this legal issue as it is written today, which was the way it was proposed by the State of Nevada. So I just want to clarify, we did not believe this was an appropriate interpretation, that this did not flow logically from the contention, and particularly because this -- the very regulation that's at the essence of their argument wasn't even mentioned in the contention. I did want to point that out.

Our main response to Mr. Malsch is -- is really three-phased. The first is, we have plain language in these regulations -- our basic position is, we are not required to make this pre-operational finding that construction of the underground storage space is -- that the 63.41 (a) finding, the construction underground facility has substantially been completed at this time. These regulations, the structure and language is clear. There are -- there is a regulation which specifies findings to be made at the construction authorization stage. That is in 63.31 (a)(2). Those are the ones that we have to be focusing on.

There is a separate regulation that specifies findings to be made at the possession and use stage. That is 63.41 (a), not mentioned in the contention,

but very clear in the regulations. There are two different regulations, they're established for two different stages of the license proceeding; and if NRC had wanted us to import into this current proceeding the criteria for issuance of a license to possess and use, we believe they would have done that. So as a matter of plain language of the regulations and the structure of the regulations, we don't think that's appropriate and consistent with the regulations.

Furthermore, with respect -- secondly, with respect to the language of the regulations, if you do look at 63.41 (a), which is the pre-operational findings, it defines what that finding is. That the facility has been substantially completed in accordance with the application. And it does that -- defines, it says absolutely modifies that, defines it, says the construction is considered to be quote "substantially complete if the underground storage space required for an initial operation is substantially complete."

Our position is the space, it is -- it should be defined in an ordinary definition. The Commission could have said, construction is considered to be substantially complete if the underground storage

facility was substantially completed, if the underground facility and equipment was substantially completed, if the underground facility and engineer barriers were substantially completed. But they didn't do that; they said "space". And, furthermore, they modified the phrase further with the phrase required for initial operation; and if you look at the regulations, the conceptual regulation, 63.102 (c), it defines three periods of operation and there is an initial period of operation, which is the period of in placement. That's one of the three defined phases. The drip shields are not required for that phase, for that phase of the process. The drip shields are a protection measure. They are a part of the post-closure safety case.

So, for that reason as well, we think the plain language does not support Nevada's position.

Mr. Malsch suggests there is a safety issue here. And he suggests -- doesn't suggest -- states that there is a definitive safety finding to be made at this particular time, and I want to respond to those points.

First of all, with respect to the -- whether there is is a safety issue, we don't believe there is one for several reasons.

First of all, the application makes clear that there will be some drip shields, a small number, installed early in the "in placement" process for purposes of the performance confirmation program. So there will be analyses done and scientific studies -- analyses done and scientific studies done to see how well these drip shields perform.

Secondly, the NRC still has to determine based upon the license application that the drip shields can be installed in accordance with our commitments and can confirm adequate installation before closure, before the time when these drip shields are needed to perform their function, and that would be as part of a closure amendment. There is a specific proceeding for an amendment application to close the facility. That's in Section 63.51.

Third, we have the requirement to preserve the ability to retrieve the wastes through the repository design prior to permanent closure. If we meet that obligation to the satisfaction of the agency, in my view, that obviates the safety issue and, in fact, Nevada essentially acknowledges that last point on safety, on Page 862 of its actual contention.

With respect to the notion and Mr. Malsch did not address there today, a definitive disposal

finding to be made today or in connection with this construction application, it's a misreading of the regulations. There are multiple important safety findings to be made; and they are made at different stages of the process. There is the 63.21 finding to be made with respect to the construction authorization. There is the 63 -- I'm sorry, the 63.31, reasonable expectation finding. There is a finding before possession and use. It's in section 63.41. And it requires the NRC to find that our activities will be in conformance with the LA, the Atomic Energy Act, the regulations; and there will be -- there will not constitute an unreasonable risk to public health and safety, more than broad enough language to encompass the findings that need to be made at that point.

More on point is the provisions governing the permanent closure amendment, because that is when the drip shields come into play. And the regulations that govern the findings to be made there at that point in time are in Section 63.45 and Section 63.51; and the regulations say that the Commission will make the same determinations that quote "govern the issuance of the initial license and any other information bearing on permanent closure, i.e., such

as, the adequacy of the drip shields to perform their function that was not available at the time the license was issued."

We need that fits perfectly, those are all in the regulatory scheme. And as I said earlier, I think the waste retrieval provisions and the obligation to preserve the option of retrieval, largely dispose of any significant safety issue.

Just bear with me a minute. Those are my major comments, but I would like to look over the points that Mr. Malsch made. He did say this was a very unusual proposal, the notion of installing the drip shields not until after all the waste is installed and after the adequate safety finding, it would be too late to make that finding.

As I pointed out, there is a permanent closure amendment findings to be made and I think that demonstrates that that's a faulty assumption. And again, I want to remind the Board, it's not an unusual proposal. Because the drip shields are intended -- they're a part of the post-closure case. They're a part of the post-closure safety and amendment findings.

>> JUDGE WARDWELL: Can we address that for a minute?

>> MR. SILVERMAN: Sure.

>> JUDGE WARDWELL: Mr. Malsch pointed out that -- are you aware, let me strike that --

Let me ask this: Are you aware of any other license that the NRC grants where it's permissible to put in radioactive materials before any of the containment or controls or needs to protect and provide for the health and safety of the public are installed?

>> MR. SILVERMAN: Let me -- I think the premise of your question, with all due respect, is: It was not correct, for any other facility.

>> JUDGE WARDWELL: It had no premise.

>> MR. SILVERMAN: Well, the premise is -- the premise is that that you are putting waste in before you have certain controls or protections in place to insure the safety of it.

>> JUDGE WALDWELL: To meet the safety of the people. The drip shields are relied upon in order to meet safety findings; is that correct?

>> MR. SILVERMAN: Yes.

>> JUDGE WARDWELL: Are there any other licenses, that you are aware of, where a system structure component that is relied upon for safety is allowed to be installed after the radioactivity has

been entered into that?

>> MR. SILVERMAN: I'm not. But there is -- this is my point. There is a fundamental difference between this repository and any other licensed facility.

>> JUDGE WARDWELL: But that's my second question. Is there anything different that allows you to?

THE WITNESS: Yeah, there sure is. This is a permanent repository and the safety findings that have to be made are that this waste can be disposed of safely and held in the repository for a million years. In -- and so the drip shields are a component of the safety case to be made, to demonstrate that this stuff can stay there forever.

All right. That is very, very different from any other proceeding I can think of where there is, I'm -- any other facility I'm aware of where at least the initial intent is not to leave the waste in place. It's to have the waste -- it's to have the radioactive material come on the site, operate with it, and then the envisioned -- envisioned intent would be to remove it pursuant to a decommissioning plan or possibly to leave it in place pursuant to a decommissioning plan; but you wouldn't know that

until much later. It's very different.

>> JUDGE WARDWELL: But the main purpose of this is for permanent disposal? There is only an option for retrieval that must be maintained?

>> MR. SILVERMAN: That's correct.

>> JUDGE WARDWELL: Is there an operational license granted for this facility?

>> MR. SILVERMAN: Essentially, yes, sure. It's the recevie and possess license.

>> JUDGE WARDWELL: Why isn't it called an operational license?

>> MR. SILVERMAN: It's not called an operational -- operating license, because that term is only used in Part 50 and perhaps Part 52 because of -- under the Atomic Energy Act -- and it's I think it's more form over substance really, but what you have is the licensing of a facility for when you are dealing with a reactor, and you're licensing of the construction of the facility, then you get an operating license to operate the facility. There is not much difference really practically between that and almost every other licensed facility where you have -- rather than a license to operate -- a license to receive and possess. It's effectively the same thing.

>> JUDGE WARDWELL: Well, couldn't one not argue that the post-closure period is really the operational period of this facility, because this is what the facility is designated for?

It's not a -- it's not a -- a -- a decommission unit and reclamation process, but this facility is designed for long-term storage of this?

That is the operations of it; could one not argue that?

>> MR. SILVERMAN: No, I think one could argue that's part of the operations.

>> JUDGE WARDWELL: Sure.

>> MR. SILVERMAN: And there are findings to be made before the possession and receipt and above-ground operations, "in placement" period, and all that period up to permanent closure, there is a regulation that governs that. That's a part of the operations period. And then we have the other part of the operations period which is post -- which is closure and post-closure, and there are findings to be made there.

>> JUDGE WARDWELL: So, if, in fact, it could be a part of the operations, then the statement at 41 (a)(2), that talks about initial operations, one could have designated these drip shields as part of

the engineered barrier system that we're going to put in place prior to putting in place any waste material underground as a logical way to do it?

If there was not -- unless there is some other reason not to -- why aren't the drip shields placed right after the waste is put in place?

>> MR. SILVERMAN: My understanding -- and there may be other reasons, and I'll get corrected if I'm wrong -- but I think it was alluded to earlier, is at least one reason is that it will aid in the ability to retrieve the waste prior to permanent closure by not having the drip shields installed, and I need to find out if that's completely accurate.

>> JUDGE WARDWELL: It was a blank stare. That's my impression also. But could not the drip shields be redesigned so that you could still achieve retrieval without that, i.e., the drips made bigger, the drip shield's clearance is less?

>> MR. SILVERMAN: That depends. It's possible.

>> JUDGE WARDWELL: Is there any reason to believe you couldn't? Correct?

>> MR. SILVERMAN: There may be -- there may be not. There may be significant impediments to doing it, but the Department's obligation so, to propose a design that meets the regulations -- and there is a

specific recognition by the Commission that the NRC is not to evaluate alternative designs other than those proffered by the Department. If it fails the appropriate regulatory criteria, it fails and the license is an issue or there is conditions or whatever, but --there is one design to be evaluated.

>> JUDGE WARDWELL: Let me finish up with one -- the key question that I've got here or the scenario that I'm developing in my mind is that is -- it seems logical to me that you would want to have all your systems in place prior to introducing radioactivity. It just seems logical.

Would not -- even if this fails as a legal issue, some of the things we've just talked about are really factual types of discussions, not legal discussions at all.

>> MR. SILVERMAN: Mm-hmm.

>> JUDGE WARDWELL: And there's valid points that you've raised in regards to the questions I have; but they're really to the merits issues, as I see them. Do you see any reason why 162 doesn't survive as a factual contention regardless of the outcome of the legal aspects associated with this contention?

>> MR. SILVERMAN: I think it does potentially

survive in a somewhat constrained way. I think if you find in our favor that the pre-operational findings are not required at this stage and obviously that particular regulation -- which isn't mentioned in the contention at all -- can't be a basis for the factual arguments that are made by the State of Nevada.

However, the contention, as written, did identify a number of other regulations and argues that our plan violates those regulations; and I think that would be a potential factual issue that would survive.

>> JUDGE WARDWELL: Thank you.

>> JUDGE MOORE: Thank you, Mr. Silverman.

>> MR. SILVERMAN: Thank you.

>> JUDGE MOORE: NRC staff.

>> MR. GENDELMAN: Good morning, Your Honor, Adam Gendelman for the NRC staff. The Board should not impute Section 63.41 --

>> JUDGE WARDWELL: May I interrupt? I already have.

>> MR. GENDELMAN: You may.

>> JUDGE WARDWELL: So I want to get my focus on here. Would you mind if I need your interpretation of what the legal question we had before us is?

>> MR. GENDELMAN: Yes, Your Honor. The staff understanding is that because Nevada believes that the license application as submitted cannot satisfy Section 63.41, the license receive and possess requirement, that it, therefore, would not be logical to issue a construction authorization even if an application was otherwise reg -- satisfactory sort of by bringing 63.41 before the Board now through Section 63.31 (a)(2), requiring a finding of reasonable expectation that the wastes can be disposed of without unreasonable risk to public health and safety. And that the staff understanding --

>> JUDGE WARDWELL: Isn't Nevada's position stronger that, as a matter of law, that those findings can't be made?

>> MR. GENDELMAN: Right. In publication of the 2001 final rule, the competition described the purpose of 63.31 quote "This section states the basis on which the Commission may authorize construction of a geologic repository operations area at the Yucca Mountain site" at 66.CFR.6781.

The Commission described Section 23.41. This section states the basis on which the Commission may issue a license to receive and posess special nuclear

or biproduct material at a geologic repository area at the Yucca Mountain site. There is no discussion there or elsewhere about imputing Section 63.41 into this construction authorization proceeding.

The Commission recently held that quote, "Courts construe regulations in the same manner they do statutes, by ascertaining the regulation, a basic tenet applicable to regulatory construction is that a statute should be construed so that effect it is given to all of its prediction, it's hydroresources 63.NRC.483, 491 in 2006. Nevada's reading does not give effect to the plain meaning of 63.41 (a)(2); and, further, it would render that section meaningless with respect to license and receive and possess proceeding as they would already be findings as to that requirement.

The staff now is making safety findings about -- in it's evaluation, it is evaluating the drip shields for compliance with several safety requirements, including 63.21, .31, 112, and 113. That is, the staff is evaluating the Department's drip shield and installation plan to determine whether there is a reasonable expectation that the wastes can be disposed of without unreasonable risk to health and safety. These aren't being delayed. These aren't

delayed findings. But the imputation of the Section 63.41 requirement is beyond the scope of this proceeding and just to follow on what was discussed before, the staff followed a comment on the proposed language of this con -- this legal issue -- and felt that it was beyond the scope of the contention.

>> JUDGE RYERSON: Do you agree that, as written, Nevada Safety 162 continues to pose a fact question report?

>> MR. GENDELMAN: I think that's right. The staff's comment was whether or not the claim that 63.41 requirements should be imputed was out of the scope of the contention, but as to whether or not the contention makes a factual claim, I -- I think that's fairly clear from the language of the contention.

Thus, the Commission makes findings pursuant to 63.31 now concerning, among many other things, the DOE's drip shield, fabrication and installation plants.

To that end, in fact, the staff issued a request for additional information about those fabrication and installation plans -- and I can give you a citation and, I believe, the ML number and the LSN number in a moment. It's ML09-182-0629, Chapter

2.1.1.2 cet 1, where the staff in its review now during the construction authorization proceeding asked questions about the drip shield fabrication and installation. So, in summary, the staff is making safety findings as to the drip shields now, but the imputation is inappropriate under our rules; and unless the Board has anything further --

>> JUDGE MOORE: Thank you.

>> JUDGE WARDWELL: I have one question on Page Page 46 of your Brief where you talk about -- the Brief for the legal issue, the top of the paragraph, this is in your discussion of 63.41. You mentioned something that you've alluded to in your oral presentation here today that where a law includes particular language in one section but omits it in another, it is presumed the exclusion was intentional and purposeful.

Doesn't that contradict with your position in issue 2 that you -- when you said there was no significant change intended by the removal of language in that issue?

>> MR. GENDELMAN: Well, in this case, I think that language is being used to note that this fairly novel construction by Nevada reading one requirement for a clearly segmented consideration license to

receive and possess requirements into the construction authorization requirements, it is not supported by a -- by a position like that.

I think with respect to that change, as I believe was noted before, and I can get you a cite for this again, if you like -- that the purpose with that change was to comply with the EPA's stated standard and that it was not an intentional substantive change, but certainly I would speak with my co-counsel and give you more on that, if you like.

>> JUDGE MOORE: No need.

>> JUDGE MOORE: Thank you, counsel.

MR. GENDELMAN: Thank you.

>> JUDGE MOORE: We'll now address issue 11.

Mr. Malsch.

>> JUDGE WARDWELL: Do have you time for rebuttal?

>> JUDGE MOORE: Oh, did you want any rebuttal on that, on issue 10?

>> MR. MALSCH: If I may, for a few minutes, then I will go into issue 11. I don't think it's any secret to anybody that Nevada thinks that DOE's plan to assure safety of the repository by installing 11,000 drip shields 100 years from now is unbelievable and fantastic that when Dr. Wardwell

asked DOE the question whether there was any precedent when the NRC has ever allowed materials to be possessed on site without a finding that necessary safety equipment was in place, I think he really had no answer. I mean, other than to say, oh, but this is different; but why is this different?

I mean, obviously, the Commission would not have allowed operation of a reactor without necessary safety equipment in place and it would have made no difference whether the reactor was going to operate for a 40 years or a hundred years or a million years. The principle is still there. And the principle is still the problem there. The fact is there would be wastes received on site and in wastes in tunnel drifts, all 700 metric tons without metric systems in place. I submit, that is absolutely unprecedented in all the decades of NRC regulation.

Secondly, I agree, you could read the regulations to say that at the construction authorization stage, one need not address this issue; but I would submit that the finding required at the construction authorization stage that there was reasonable assurance of safety disposal would embrace this finding if it made sense to do so. And I think it clearly made sense to do so.

If we are right about this issue, it would be utterly irrational for the NRC to authorize construction of the repository, knowing that it can possibly operate. That is contrary to the whole idea of there being a construction authorization stage in the first place.

Finally, as to the scope question with which is raised. Whether this is in the scope of our contention, I would just mention that, in fact, we did raise this issue in our reply to DOE's Answer to that contention. That's on Page 693 to 699.

We did not actually characterise it precisely as a legal issue; but it is there. And whether -- and whether that is within the scope of the contention was addressed in the papers and arguments we've submitted in connection with the framing of this legal issue in the first place. Thank you.

Let me address now issue 11. We've agreed --

>> MR. GENDELMAN: I'm sorry, Your Honor, I apologize, in speaking with co-counsel, I wanted to slightly correct -- in response to your question about issue 2, I just wanted to note that in issue 2, the language change was from a proposed rule to the final rule, where the statement I believe you cited in our discussion concerned construing a regulation

as a whole and didn't discuss proposed language versus final language.

>> JUDGE MOORE: Thank you.

Proceed, Mr. Malsch.

>> MR. MALSCH: Yes. This is issue 11 which deals with DOE's PMA or Performance Margins Analysis, we have agreed to share time 50-50 with staff on this issue and we have agreed that we would go first, and I would like to reserve a few minutes for rebuttal.

In its opening Brief, Nevada argued that DOE's Performance Margins Analysis is of indeterminate quality and cannot be used to validate or provide confidence in the TSPA because it has not complied fully with Quality Assurance requirements in subpart (g) of Part 63. DOE appears to insist to the contrary.

First of all, it's important to recognize exactly what the Performance Margins Analysis PMA actually is -- and that's explained quite carefully in the Safety Analysis Report at Section 2.4 at Page 245 through 24 -- 246 analysis. It explains there, that the PMA is a separate set of TSPA calculations from which some conservatisms -- some supposed conservatisms have been removed.

So, clearly, the PMA is is a kind of a

Performance Assessment much like the TSPA except that certain conservatisms have been removed. It clearly fits the definition of a Performance Assessment in 63.2 and 102 (j).

Most importantly, though, DOE concedes in its Brief here that the PMA uses unqualified software and data. Now, QA requirements are found in subpart 63 and the PMA is subject to these requirements if three conditions are met -- and I would submit that all three conditions are clearly met.

The first condition is in 63.142 (a), which sets forth the terms of the applicability of subpart (g). The relevant provision here says that QA requirements apply to analyses of samples of data and scientific studies; and, clearly, the selection of data to support the Performance Margins Analysis in a conduct of the PMA, itself, including the developing and selection of models for the PMA constitute both an analysis of samples and data and a collection of scientific studies. No language suggests otherwise; and DOE points to none.

In fact, their Briefs completely ignore this particular aspect of subpart (g). In fact, if the PMA doesn't constitute a analysis of samples and data or the collection of scientific studies, nor does the

total Performance Assessment or DOE, even that is exempt from requirements in subpart (g). So this particular condition is clearly met.

Second, under 63.142 (a), subpart (g) applies to activities that are related to design of barriers that are more than to the waste isolation. Well, clearly, the PMA is so related. It applies to the same repository system as a TSPA, and it assesses the performance of the same natural barriers used in a TSPA to establish a disposal safety. So, clearly, the PMA is related to the design of barriers that are important to waste isolation. This condition is clearly met.

Third, there at 63.141, which defines the scope of subpart (g) and provides, in effect, that QA requirements in the subpart apply to all activities quote, "Necessary to provide adequate confidence that the repository would perform satisfactorily," which we take to mean will perform safely.

So from that, we see that the PMA is subject to subpart (g) and is Quality Assurance requirements if it is necessary to provide adequate confidence in safe disposal. So, if DOE is offering the PMA in evidence because it believes it is necessary to establish the adequacy of the total system

performance assessment, it's subject to QA but cannot be used for this purpose because it uses unqualified data and software.

If DOE doesn't believe the PMA is necessary to show adequacy of the Total System Performance Assessment, then TSPA is able to stand on its own without the Performance Margins Analysis and should stand on its own.

We consider the effect, the muddying effect there would be if the Board and Commission were to access the accuracy of the TSPA based on a combination of qualified and unqualified data and models. If we're going to do this, why bother to have Quality Assurance requirements in law?

>> JUDGE MOORE: Mr. Malsch, in your reply, you state that the PMA must be struck from the application. If it can't be relied upon, it can't be relied upon. Why must it be struck?

>> MR. MALSCH: I think we should not take that literally. I think I mean by that, it would not be admissible in evidence to establish post-disposal safety with the peak Performance Margins Analysis in it.

Now, DOE says that in their Briefs and in their Safety Analysis Report that the PMA was intended as a

validation tool providing confidence and they also said importantly is offered to show no risk of delusion, which I -- which means that it is offered to show that factors or models in the TSPA believe to be conservative are, in fact, conservative in terms of the ultimate dose and release calculation. These things sure sound to us like things that are necessary to establish the adequacy and safety of the Total System Performance Assessment; and, therefore, that is what DOE is offering them for.

I think it should be subject to QA and they -- as DOE has admitted -- are not fully compliant with QA requirements.

On the other hand, if DOE is only offering the PMA as corroborative evidence to show extra assurance, and it's not clear at all that's all that they are offering it for -- because as I indicated, the SCR talks about dissolution, adequate validation and the like, but if that is what they are offering it for, I suppose in theory it's not subject to QA because it is not necessary to establish the adequacy of the Total System Performance Assessment; but I do think that would lead to a highly prejudicial situation for the other parties who are opposing the license application.

By analogy, would we admit the results of a illegal search and seizure in a criminal case not to provide evidence of proof beyond a reasonable doubt, but evidence of proof way beyond a reasonable doubt?

Once the evidence is received, it's impossible to make distinctions of these sorts. So if DOE is offering it as corroborative evidence, that's all very interesting; but to admit it as such would hopelessly muddle up the safety case and would greatly prejudice the other parties.

So, in conclusion, either the term PMA is necessary to show the adequacy of the TSPA; in which case, it can't be allowed to do so, because it relates DOE requirements or it's not necessary in which case it's both irrelevant and its admission as a part of DOE safety case would be highly prejudicial.

>> JUDGE MOORE: Thank you, Mr. Malsch.

Staff.

>> MS. SILVIA: Andrea Silvia on behalf of the NRC staff.

If the PMA is being relied upon to meet the regulatory standard of adequate confidence, then it must meet the Part 63, subpart (g) Quality Assurance requirements. Section 63.142 (a) requires a Quality

Assurance Program to be applied to all structured systems and components important to safety to design and characterization of barriers important to the lake isolation and to related activities. The related activities includes analyses of data and scientific studies. The PMA, a set of calculations that analyzes post-closure performance over a set of modeling cases falls into the category of related activities under 63.142; therefore, if the PMA is needed to provide adequate confidence under 63.141, that the repository will perform satisfactorily, it must be subject to a Quality Assurance Program.

However, nothing prevents DOE from providing additional information in its license application to offer additional confidence in the performance assessment. Information that is not needed to demonstrate adequate confidence does not need to be qualified under DOE's Quality Assurance Program.

>> JUDGE MOORE: Counsel, I'm just curious, how do you respond to Mr. Malsch's comment that it can't be relied upon, but here it is and the -- here it is, is only for the staff to rely upon.

>> MS. SILVIA: Not -- the staff does not need to rely upon everything included in the license application to make its safety findings. There is

nothing in the regulations that prevents DOE from providing additional information.

>> JUDGE MOORE: You said that if it is used to -- for add-in confidence, why would the staff ever accept something as added confidence that was not QA-qualified, almost definitionally is it something that's not QA-qualified, something in which one cannot establish a confidence level?

>> MS. SILVIA: Well, the staff will not rely on anything for its safety findings that is not credible, but as of now, the staff has not completed its safety findings, so it's -- unclear how the staff will or will not use the PMA; but if it is necessary to the staff safety findings, the staff will insure that it is subject to the subpart (g) Quality Assurance Requirement.

>> JUDGE MOORE: Thank you, counsel.

DOE.

>> MR. SILVERMAN: Thank you, Your Honor.

Don Silverman for DOE.

I think there's two ways that the Board can deal with this particular legal issue and there is a very simple way. I'm going to address that first; and if we want to get into the details of perhaps the more complicated way of dealing with them, we can do that.

A significant part of Mr. Malsch's argument, was -- he's stated three reasons for why the PMA is the kind of analysis that should be governed and conducted pursuant to a -- the department's Quality Assurance Program. We agree with that.

And that takes me back to the actual statement of a legal issue. And if we read that statement as precisely as written, it says, "Whether under certain regulations" -- which are basically among others, the QA regulations -- "the PMA can be used to validate or provide confidence in the TSPA, if its data and models are not qualified under DOE's Quality Issuance Program, the Department's position is if those data and models are not qualified under a QA program, then the answer is, no, we can't rely on them. That would resolve the legal issue. We're in agreement with the part with both the staff and Nevada on that.

Where we depart -- and that could resolve the matter as a legal matter. Where we depart is whether, in fact, that PMA has been conducted in accordance with DOE's Quality Assurance Program and our position is that it has been. There was some language in the SAR and in some of the supporting documents that refer to the use of unqualified data. And that's where I think we got a little confused

that perhaps DOE's language could have been written a little more clearly. But the operative phrase that I think the State of Nevada is relying on is a statement in a document that supports DOE. It's the TSPA model analysis report. And they're referring to an Appendix to the TSPA model analysis report. The basic TSPA model analysis report sets forth the basic findings, how we went about the TSPA, and the conclusions to the TSPA. This Appendix that we're referring to deals with the PMA as a tool to test the conservatisms in, as an ancillary analysis, if you will, to test the TSPA. And in that section of the Appendix, which deals with PMA, we say that PMA contains both qualified and unqualified data.

What we meant by that was in context, when we refer to unqualified data, was that the data was not qualified for direct use in the TSPA. That is not an after the fact rationalization, if you read the sentences around that particular sentence, I think it is reasonable to draw that conclusion -- and I have consulted with our people and they assure me this is what they intended. They merely meant to say that this data was not suitable for use -- direct use -- in the TSPA; but they did not mean to imply it was conducted or evaluated in accordance with a QA

program or that it was unsuitable for use in a cooperative analysis.

This particular section of this attachment, Appendix to the TSPA model report says -- and I'm just citing this operative sentences. The PMA utilizes the TSPA-LA model with changes to certain inputs in models. I'll give -- this is Page C-8 of the Appendix to the TSPA model report.

This PMA utilizes the TSPA-LA model with changes to certain inputs in models. This section presents those inputs that have been changed from those used in the TSPA-LA model and additional inputs necessary to support the PMA. Table C-4-1 lists the input parameters to the TSPA-LA model that have been changed or deleted for the PMA; and then it says, the PMA contains both qualified and unqualified data, what we really meant there, in this context was -- we couldn't use some of this data for the TSPA, but we did not suggest it wasn't perfectly suitable for a corroborative analysis.

>> JUDGE WARDWELL: So, all of this discussion is really -- as you, the latter discussion is really a factual issue, not a legal issue, isn't that correct, on whether or not your PMA actually does meet the QA is a factual discussion?

>> MR. SILVERMAN: I agree with that, if the Board simply agrees that we cannot use data in the PMA that isn't appropriately qualified under our Quality Assurance Program, assuming that Quality Assurance Program complies with the regulations, then there would be a factual issue as to whether it does or not.

>> JUDGE WARDWELL: So the way the legal issue was framed from the suggestions of the parties was whether or not under a 10.CFR.63, 113, 114, Part 63, subpart (g), the PMA can be used to validate or provide confidence in the TSPA if its datas and models are not qualified under DOE's Quality Assurance Program, you agree that on that legal issue is correct?

>> MR. SILVERMAN: The answer is no -- and our further position is, however, it was the -- data was -- the data was qualified in accordance -- for the purpose it was used.

>> JUDGE WARDWELL: Right, and that gets back to Nevada Safety 171 where it basically -- it -- Nevada designated it as a legal issue. They've provided in their first sentence, the first half of a sentence pretty much the same thing as you agreed upon wording here for the legal issue of 11, but then it goes on

to say, but it cannot lawfully be used for these purposes because it relies on datas and models that are not qualified pursuant to DOE's Quality Assurance Program. That is a factual issue, is it not, similar to what you just tried to provide some defense why you felt it was qualified?

>> MR. SILVERMAN: I agree it is; and, in fact, that statement of the legal issue and statement contention is identical to the legal issue, yes, I agree.

>> JUDGE WARDWELL: The first half is identical, after the "but" isn't.

>> MR. SILVERMAN: You are right.

>> JUDGE WARDWELL: Because nothing in your wording of 11 says whether or not your data and models are or are not qualified. This is more specific -- and it seems to me, part of 171 even though it's designated as a legal issue might survive as a factual issue. Would you have any objections to that?

If we can recast 171, the residual last half of it as a remaining factual issue to be --

>> MR. SILVERMAN: Right, as to whether the data and models are qualified pursuant to the QA program, I would have no objection to that whatsoever; and I

think unless you have further questions, that was all we have for us.

>> JUDGE MOORE: Thank you, Mr. Silverman.

Mr. Malsch, do you wish brief rebuttal?

There seems to be complete agreement that the answer to the legal question that as posed in issue 11 is no; and do you agree that the remaining part of your contention 171 is a factual matter?

>> MR. MALSCH: I think the remaining part of the contention could be a factual matter, but I still think the contention can be resolved as a pure legal matter for the following reasons...what you have here is a concession by DOE that its PMA used models and software that were not qualified as direct inputs to the TSPA and that was explained to me that it could not be used to support the TSPA directly but could only be used to provide corroborative evidence of the adequacy to TSPA. And we've agreed here that if that is the only purpose for which the TSPA is being offered -- that is to say to provide corroborative evidence -- then it need not be subject to subpart (g), even though it may be subject to other DOE Quality Assurance requirements.

The problem I have is -- is a problem that I raise in connection with the illusion of a criminal

case. I think it would be highly prejudicial and contrary to the overall intent to subpart (g) to admit into evidence unqualified information and models and data to provide added confidence on top of adequate confidence. I think that muddies the issue up completely and is highly prejudicial.

>> JUDGE MOORE: But your premise is that DOE's statement from Appendix C noted in footnote 12 of DOE's Brief and then again in their reply Brief of -- I guess it's the TSPA, Appendix C, is black and white to be read literally that they used unqualified data to support the PMA.

I believe -- and I'm sure Mr. Silverman will correct me if I am wrong -- that he just explained to us that that, although poorly worded, is not meant -- was not meant literally, and that there were elements of the Sandia (phonetic) work that were unqualified or would be unqualified under DOE's QA program. I do not believe Mr. Silverman said that that statement was to be read literally and meant that they did, in fact, use that material and that would still remain as a factual question.

>> MR. MALSCH: I -- I think the -- this is the TSPA model report is actually quite clear about this, and let me read exactly what DOE said in its model

report. It said, "Table C-4-2 lists input parameters that have been added to the TSPA-LA model for the PMA, Performance Margins Analysis. The PMA contains both qualified and unqualified data."

Then it goes on to say, "The data traceability described in Section C-4-1 and C-4-2 providing mapping from the PA-parameters to the data source." So --

>> JUDGE WARDWELL: Well, regardless -- are you still quoting, I'm sorry?

>> MR. MALSCH: Yes. This goes on in the final section, Section C-5, I'll read that to you also. "It is important to reiterate that while these additional submodels and data" -- the ones we're talking about here -- "were developed in accordance with apple Quality Assurance Requirements. Now, these must be other than DOE's Quality Assurance Plan for direct inputs in the TSPA. In some cases, they represent models with limited technical foundation, verification and validation consistent with the requirements of SY-PRO-O66 (phonetic) models." This is the program relied upon for developing the data. "PA models, submodels may use software that is controlled but not qualified."

So what the DOE is telling you is that they, the

PMA was not qualified as a direct input to the TSPA and what they mean by that, clearly is, it is only qualified and it was only intended to be used for a corroborative evidence purposes.

>> JUDGE WARDWELL: Whether or not DOE's data models are qualified under DOE's QA program is a factual discussion, not a legal one; isn't it?

I mean, all you're saying is, yeah, you've got a position and they've got a position and let's sort it out whether or not their data or models do match and are in compliance with their QA program?

>> MR. MALSCH: Well, but there is only one Quality Assurance Program. That's the one that's associated with the license application. I believe the DOE is telling us that the PMA uses data and models, it does not qualify in accordance with that program. Perhaps --

>> JUDGE WARDWELL: That isn't what I just heard him say; but, regardless, that debate is a factual issue.

>> MR. MALSCH: If there is a debate about that, I would agree, it's a factual issue, that is correct.

>> JUDGE WARDWELL: Okay. Whether or not the PMA can be used to validate or provide confidence in the TSPA, if it's -- if it's data or models are not

qualified under DOE's Quality Assurance Program is the legal question. And both parties agree that, yes, it can't be, if it doesn't meet it.

>> MR. MALSCH: That is correct.

>> JUDGE WARDWELL: So it seems to me the legal issue is resolved. What's remaining is the last half of what you said under 171, your position is it cannot lawfully be used for these purposes because it relies on datas and models -- data and models that are not qualified under the QA program. That's a factual discussion.

>> MR. MALSCH: I think it is, but there is another piece of the legal question that would need to be addressed. And that is -- let's assume for purposes of argument the resolution of the factual question is that the PMA relies upon data and models that are not, in fact, qualified under subpart (g). The question then remains whether it may be offered as corroborative evidence.

>> JUDGE WARDWELL: Where is that stated in legal issue 11?

>> MR. MALSCH: The issue is in terms of whether the team may be offered to provide -- to validate or provide confidence, provide confidence can mean both adequate confidence and extra confidence. I think

it's within the scope of the legal question. And it's important to know that because then we would know what uses could be made of the PMA in the event it does turn out to be factually correct. That it does use data and software that are not qualified under subpart (g).

>> JUDGE MOORE: But if it can't be relied upon for the TSPA, then we're all in agreement that unqualified data cannot be. It's a factual matter pure and simple, whether or not DOE crossed the line or didn't cross the line and if in its review the staff errs because the SCR will be out by the time -- will be out by the time there is discovery and go to hearing, that will all be known whether or not the staff has complied with the regulations -- in enforcing the regulations.

>> MR. MALSCH: Let me put it this way...if the PMA, if it is agreed, that the PMA cannot be offered to either provide adequate confidence or any confidence at all in the TSPA, without it being fully compliant and I agree, there is no other issue remaining except a factual issue whether or not it is fully compliant.

>> JUDGE MOORE: But I ask you what initially that in the context of your supply Brief, you said it

should be struck from the application, why it needed to be struck and I believe your answer was that that was for perhaps an overstatement or something in that regard, and you then explained that it, in effect, that it did not have to be physically removed. Doesn't that not contradict what are you now telling me?

>> MR. MALSCH: No, I'm saying that in terms of the ultimate DOE safety case, post-disposal safety case, when it comes to establishing the post-disposal safety case, if it is -- if it is agreed that a PMA which uses unqualified software and models, cannot be offered as any evidence of confidence or any support at all for the TSPA, I agree, the only issue is whether, in fact, the TSPA is compliant or not compliant with subpart (g).

My only issue is, this whole question about corroborative evidence. And I think it should be made clear that we believe that the use of the PMA to provide corroborative evidence, you know, added confidence, extra confidence, would be highly prejudicial and contrary to subpart (g).

>> JUDGE RYERSON: Okay. But one interpretation of the question, the legal question that imposed was would cover that, I mean, it says, it can, you know,

cannot be used to validate or provide confidence in the TSPA. And your concern is that providing confidence should be interpreted as also extending to some other type of corroboration?

>> MR. MALSCH: Well, yeah, we were construing confidence in a broad sense as support for any support to the TSPA.

>> JUDGE RYERSON: That's a rational reading of this -- of this issue, and there seems to be no disagreement on the issue as a legal issue.

>> MR. MALSCH: Thank you.

>> JUDGE MOORE: Thank you.

>> MR. SILVERMAN: May I add a brief word, Your Honor?

>> JUDGE MOORE: Whoa.

>> JUDGE MOORE: Perhaps not.

>> MR. SILVERMAN: I don't know my own strength.

One very quick comment, Mr. Malsch is, has repeatedly said it was entirely prejudicial to admit its evidence into this case. Data or information that's not qualified pursuant to a QA program. I don't believe that's the evidentiary standard at all. If it was the evidentiary standard, I don't believe the state of Nevada could beat it, because I don't believe -- I suspect much of the information they

will submit in this case is not prepared pursuant to the a qualified -- pursuant to a QA program, that meets the requirements, I think that's completely wrong.

>> MR. MALSCH: Your Honor, in fact, we do have a compliant program data gathering analysis supplied with this.

>> JUDGE MOORE: I think we've heard all we want to hear on issue 11. I would like to thank all counsel, parties for your Briefing and presentations.

Mr. Silverman, do you wish to be acknowledged?

>> MR. SILVERMAN: I do.

>> JUDGE MOORE: If it's for the last word, the answer is no; if it's for another purpose --

>> MR. SILVERMAN: It's for another purpose, it's to respond to something yesterday and to come back to you and also to make one clarification on something I made yesterday.

>> JUDGE MOORE: Go ahead.

>> MR. SILVERMAN: I would never seek to try to get the last word in.

Two points I wanted to bring up, one was a clarification and I -- frankly, I have not gone back to look at the transcript to see exactly what I said, but it's been called to my attention that in

connection with the Nevada 161, which is the absence or failure of the drip shields, that the record might not have been clear as it could have been on one matter. And in the context of that discussion yesterday, I wanted to point out that there was some discussion of the igneious scenarios. And the record might not have been clear with respect to that discussion.

What I would like to make clear to DOE -- I'm sorry, what I'd like to make clear to the Board is that in DOE's analysis of the igneious scenarios, we not only -- what I'll say took out or pursued away, assumed the failure of the drip shields, all of the drip shields, in the event of an igneious intrusion, but we also simultaneously assumed away the waste packages. In other words, assumed failure of all the waste packages. And the results of that were included in our ultimate dose estimate and they were documented in the TSPA analysis report. I have to go back and find exactly the place in the transcript where that subject came. I must admit to you I don't remember exactly what I said. Hopefully, that will clarify matter if and when you go back and look at that part of the transcript.

>> JUDGE RYERSON: Mr. Silverman, just to

clarify, those phenomenon are discounted in the TSPA by vvirtue of the probability that they will occur; is that correct?

>> MR. SILVERMAN: That is effectually -- discounted, I'm not sure I used that word. I understand what you are saying. >> JUDGE RYERSON in other words, the effect of the overall calculation is diminished by the likelihood that it will, in fact, occur?

>> MR. SILVERMAN: Absolutely. Because the legal standard is a mean dose based upon many many scenarios, weighted by the probability of occurrence of those scenarios. And that's set forth in the regulations, so you are correct.

>> JUDGE RYERSON: So it's very different from simply saying there are no drip shields there, there are no drip shields modified by the likelihood there will be an effect?

>> MR. SILVERMAN: I believe that's correct.

Then I would like to respond, do the best I can to respond to Judge Wardwell's question, bear in mind, you are talking to a political science major here, so I can only go so far. But your question to us on the same contention was: Why would DOE not want to know if 99% of the protection of the REMI

(phonetic) is provided by one component or one barrier. And I'd like to take a shot at that and basically would like to point out to you that we think we have quantitatively demonstrated the relative importance of the individual barriers and we did that in almost 200 pages of the SAR in Section 2.1.

The function of a barrier is to isolate waste. That is, to reduce or prevent the movement of water into the repository, into the waste, or the movement of radionucleides to the system. Those the the processes, excuse me, those are the purposes of the barrier.

>> JUDGE WARDWELL: What barrier ever prevents the movement of water?

>> MR. SILVERMAN: Completely prevents the movement of water?

I suspect the technical people would tell me that no barrier completely prevents it.

>> JUDGE WARDWELL: So really, those two words should be just reduced rather than reduce or prevent? You were reading off a phrase that said, we had multi-- we got barriers and they reduce or prevent, but, in fact, none of them prevent; is that correct?

>> MR. SILVERMAN: I suspect that's correct, so

I think it would be fair to say reduce.

>> JUDGE WARDWELL: Thank you.

>> MR. SILVERMAN: The movement again of water or radionucleides. To remove the water and radionucleides. So our barrier is confirmed -- it's in those terms not in those of the contribution to the actual ultimate dose. The analysis was to the intended nor is it required to quuantify the performance of each of the individual barriers in terms of the fraction of dose to the REMI (phonetic) that that barrier contributes.

So we demonstrate the performance of each individual barrier again in terms of its contribution of the isolation of waste. Our view is that's all that's required and that's sufficient to provide a sound basis for assessing barrier capability and the basis for that, the legal basis for that is reflected in the regulations in Section 63.115 (c), which I will very briefly read from and, again, those two pages of Federal Registry Notice that I continue to refer back to that we spentt so much time on yesterday, but I'll refresh your memory 66 Federal Reg 55758 and 59. I'm not going to re-read from that. But I will read to you in 63.115 (c), 63.115 is requirements for multiple barriers.

"Demonstration of compliance with 63.113 (a)," which is the multiple barrier requirement, "must (c) provide, the technical basis for the description of the capability of barriers identified as important to waste isolation to isolate waste. The technical basis" -- this is the key phrase.

"The technical basis for each barrier's capability shall be based on and consistent with the technical basis to the performance assessments used to demonstrate compliance with 63.113 (b) and (c)," which are the performance standards and the overall barrier system.

In other words, what it's done to meet the multiple barrier standard should be the same performance assessment used to determine compliance with the ultimate dose standards. I hope that that is clear and helps.

>> JUDGE MOORE: Thank you.

>> MR. SILVERMAN: Thank you.

>> JUDGE MOORE: All right. Once again -- oh, staff.

>> MS. SILVIA: The staff has a brief housekeeping question. With depositions starting in a few weeks, we were just wanted to check and make sure that the comments from the parties regarding

DOE's statements for its LSN collection, if you had any idea of when those would be due from the other parties?

>> JUDGE MOORE: At this point I can't give you a date, but if the material that Mr. Shebelskie is going to provide the Board next Thursday, I would imagine and it will have to be determined and we will issue an Order the 1st of next week, that it will be a reasonably short time for comment on anything that DOE tells us.

>> MS. SILVIA: Thank you, Your Honor.

>> JUDGE MOORE: Mr. Malsch.

>> MR. MALSCH: I would just like to briefly observe what you just heard from Mr. Silverman is a re-argument of issue No. 8, dealing with defense in depth. I don't think I need to respond in detail to what he said other than to observe that we think the record is clear from the argument yesterday.

>> JUDGE MOORE: I -- I believe it can be characterized, as can all oral arguments, there are three: The one you prepare to give, the one you give, and the one you wish you gave; and I put this into category 3.

>> MR. MALSCH: Thank you.

>> JUDGE MOORE: Again, I would like to thank

counsel and we will stand adjourned. The Board will now wrestle with issues 1 through 11.

(Whereupon the proceedings were concluded)