Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

Title: Pre-Decisional Enforcement Conference (PEC) Holtec International

Docket Number: 72-1014

Location: Rockville, Maryland

Date: Thursday, October 26, 2023

Work Order No.: NRC-2574 Pages 1-119

NEAL R. GROSS AND CO., INC.
Court Reporters and Transcribers
1716 14th Street, N.W.
Washington, D.C. 20009
(202) 234-4433

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

+ + + + +

PREDECISIONAL ENFORCEMENT CONFERENCE

WITH HOLTEC INTERNATIONAL

+ + + + +

EA-23-044

+ + + + +

THURSDAY

OCTOBER 26, 2023

+ + + + +

The Conference convened in a hybrid format via Video Teleconference and in the Commissioner's Hearing Room at Nuclear Regulatory Commission headquarters, located at One White Flint North, 11555 Rockville Pike, Rockville, Maryland, at 9:00 a.m. EDT, Shana Helton, Moderator, presiding.

NRC STAFF PRESENT:

SHANA HELTON, NMSS, Moderator

MICHELE BURGESS, NMSS

EARL LOVE, NMSS

AIDA RIVERA-VARONA, NMSS

TOMEKA TERRY, NMSS

JACOB ZIMMERMAN, NMSS

ALSO PRESENT:

JEAN FLEMING, Holtec International

CHUCK BULLARD, Holtec International

KIM MANZIONE, Holtec International

PUBLIC COMMENTERS:

MICHEL LEE, Council on Intelligent Energy and Conservation Policy

SUSAN SHAPIRO, LEAF of Hudson Valley

KALENE WALKER

JACQUELYN DRECHSLER

KENN HUNTER, Constellation

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

9:01 a.m.

OPERATOR: Good morning. Welcome to today's conference call. At this time your lines have been placed on listen only for conference until the question and answer portion of our call, at which time you will be prompted to press star one on your touch tone phone. Please ensure that your line is unmuted, and please record your name when prompted so that I may introduce you to ask your question.

Conference is being recorded, and if you have any objections you may disconnect at this time. I will now turn conference over to our host, Ms. Tomeka Terry. Ma'am, you may proceed.

MS. TERRY: Thank you, Jill. Good morning, everybody. So, today we'd like to welcome you to the regulatory conference. My name is Tomeka Terry, I will be your facilitator today for the regulatory conference. Please allow me a moment to quickly go through some of the meeting logistics. Today's conference is a hybrid meeting being held at NRC headquarters office, as well as Microsoft Teams.

Attendants may also join the meeting through telecon bridge line to hear (unintelligible) from the presentation. To visitors in case of

emergency, please allow directions of the NRC staff to exit and state the precautions. All observees are not to participate in the conference, we'll be placing you on mute. I ask everyone in the room, please silence your cell phones during the conference.

For anyone on Teams or the bridge line, we ask that you please also mute your background noises, including your computer speakers, and your cell phone. The NRC is interested in feedback from the members of the public about how we conduct our meetings. Any person listening to the telecon bridge who would like to provide feedback to NRC on this meeting may obtain a feedback form by downloading the form from ADAMS.

Which is ML011160173. This form is also available at the public meeting notice in the NRC website, NRC.gov. Sorry about that, just hopefully everybody -- I can share my screen with everyone. Can everybody see the slides? Sorry about that. I got a little too excited, sorry about that. As I said, the public meeting is inviting you to observe this meeting.

We will have an opportunity for you to communicate with NRC staff after the business portion before the meeting is adjourned. When you reach that portion of the meeting, we will give you instructions

on how to mute and unmute, to ask questions on the phone and the Teams. We will also be transcribing this meeting today. So, whenever possible, please leave enclosed sensitive information to any comments or questions.

Reminding to all participants, please state your name, affiliation clearly whenever you're speaking for benefit, for recording should I say transcribe with that stated, I begin with that -- excuse me -- we'll be having a court reporter who will be transcribing the meeting. I will likely quickly go until today's agenda. Please note the copy of the agenda has been made available for members of the public as part of our slide's presentation.

Multitasking, sorry about that people. Today we'll begin with the opening remarks and introduction of NRC and Holtec. The NRC will provide a short overview of the enforcement process. NRC will provide a summary of the apparent violations. NRC would then turn the meeting over to Holtec to provide their presentation. That includes any clarification, discussion between NRC and Holtec.

NRC will then break for a short internal caucus, then return and follow up with questions and clarifications. We will turn to closing remarks for

both Holtec and NRC, then NRC will close the conference part of the meeting. At that point, NRC will open the meeting for any questions that the member of the public may have for the NRC staff.

Then we will adjourn. At this time, I will turn it over to Shana Helton, NRC director of the Division of Fuel Management for open remarks and introduction.

MS. HELTON: There we go. Let me get a confirmation that everybody can hear me now? All right, great, thank you so much for that. So, thank you, Tomeka, for the logistics and opening remarks. I am Shana Helton, director of the Division of Fuel Management here at the NRC's Office of Nuclear Material Safety and Safeguards.

First, I want to say thank you to everybody for being here today. We've got a number of people here in the room, and a very large attendance online with virtual attendees, so thank you for making the time to be here for this pre-enforcement conference today. Today's regulatory conference is being conducted between the NRC and Holtec International.

Concerning potential violations of 10 CFR 72.48, and 72.146 following an onsite inspection the

NRC conducted at Holtec Advanced Manufacturing Division in Camden, New Jersey this past December on December 12th through 15th, 2022. The NRC's inspection assessed the adequacy of Holtec's fabrication activities for spent fuel storage casks to the applicable requirements of Title 10 of the Code of Federal Regulations.

Or 10 CFR Part 72, licensing requirements for the independent storage of spent nuclear fuel, high level radioactive waste, and reactor related greater than class C waste. The NRC staff examined activities conducted under Holtec's NRC approved quality assurance program to determine whether Holtec implemented the requirements associated with the commission's rules and regulations.

And with the conditions of applicable dry cask storage system, NRC issued certificates of compliance. During today's conference we will discuss three apparent violations of NRC requirements that we are evaluating under the traditional enforcement process through an oversight process and enforcement policy. The apparent violations are described in a publicly available choice letter, and associated inspection report.

The inspection report number is 2022-201.

We issued this to Holtec through our publicly available ADAMS system, for anybody who is listening online, on September 12th, 2023. You can find this in our document system at accession number ML23145A175. This is associated with EA-23-044. The letter that transmitted the inspection report offered Holtec International the opportunity to either request a pre-decisional enforcement conference, or to request alternate dispute resolution, or ADR with the NRC to address the apparent violations discussed in our report.

Holtec requested a pre-decisional enforcement conference with the NRC, which brings us to where we are here today. So, now that I've introduced myself, I'll ask the other NRC presenters to introduce themselves, and I'll turn first to Jake.

MR. ZIMMERMAN: Good morning, I am Jake Zimmerman, I am the deputy director for the Division of Fuel Management.

MS. RIVERA: Good morning, I'm Aida Rivera, I'm the chief of the Inspection and Oversight Branch in DFM.

MR. LOVE: Good morning, my name is Earl Love, I am a Senior Transportation and Storage Safety Inspector in the Inspections and Oversight Branch.

MR. KOCH: I am Patrick Koch; I am a structural engineer in the Division of Fuel Management.

MS. BURGESS: And I'm Michelle Burgess, I'm one of the enforcement coordinators in the Program Office.

MS. HELTON: I think that covers all of the NRC staff, and next I'll ask Holtec to go ahead and introduce themselves, and as well, provide any opening remarks that you might have.

MS. FLEMING: Thank you, Shana, good morning. My name is Jean Fleming, I'm the Vice President of Licensing and Regulatory for Holtec. Kim?

MS. MANZIONE: I'm Kim Manzione, I'm the Director of licensing for Holtec.

MR. BULLARD: Hi, good morning, I'm Chuck Bullard, Director of Engineering and Mechanics at Holtec.

MS. FLEMING: I just want to say that we appreciate the opportunity to present information in this pre-decisional enforcement conference, and we look forward to a good discussion going forward today.

MS. HELTON: All right, great, thank you. So, a few things that I want to highlight, and

emphasize to make sure that the purpose of what we're doing here today is clear for everybody who is participating. This conference today, it's not a representation of a final decision by the NRC on this enforcement action.

We're here today to talk about the apparent violations, and we use the word apparent, because they are just that. They're what they appear to be to us with the information that we had at the time that we wrote the inspection report. So, this conference is an important step in our deliberative process. We're here to give you, Holtec, the opportunity to provide us with any additional information that we can use to make an informed decision on this enforcement matter.

No decisions will be reached or discussed during this conference. We're really here to gain additional information, and at the same time, I encourage you to be very candid in providing your perspectives on the apparent violations, their safety significance, the circumstances surrounding the apparent violations, any corrective actions that Holtec has taken, or plans to take, and any other information that you believe bears on the NRC's enforcement decision.

So, in accordance with our normal practices, the documents associated with the conference here today, including any materials provided by Holtec are already, or will be soon available for public inspection in our electronic records management system known as ADAMS that I mentioned earlier. So, with that, I'll ask Michelle Burgess to please go over the process in detail.

MS. BURGESS: Thanks, Shana. So, good morning, everybody. I am Michelle Burgess; I am one of the enforcement coordinators for the program office. And I just want to go through some of the process, not the content, but the process of the enforcement process. So, the regulatory conference, enforcement conferences are an important step in a well-established deliberative process that we have to assessing disposition issues.

So, the main purpose of the conference, as Shana said, is to provide you guys with an opportunity to share any information that you have, that you want us to consider as we make our final decision. But as Shana mentioned, in this conference, we won't make any final decisions, we're not going to reach any decisions, we're not going to discuss any of our decisions here.

It's for you to be able to give us the information that we need to be able to get to the right bottom line for this case. So, I'd like to briefly just explain the NRC's process. And this is as it pertains to escalated enforcement, so this information is more fully described in our NRC enforcement policy, and you can access that on our public website.

So, this is just a high-level overview just to make sure everybody's kind of in the right place on the same page for the process. So, the NRC enforcement process consists of several steps. The purpose of the process is again, to ensure that NRC has all the pertinent information to make our final decision. It also has a decision-making process that's not just a single person.

Rather, it encompasses a number of individuals to come to our final decision. So, the first step, can you go back a slide, Tomeka? You're going forward. That's good, right there, you were in the right place. Thank you. So, the first step in the process is the records review, or the inspection, the investigation, that's where we're gathering our information.

Then the next step we have is we're at the

NRC review of those issues. And then we'll identify a potential violation, the licensee, and that encompasses, you'll hear me sometimes mention licensee, but that encompasses everything, certificate holders, non-licensees, anybody that we would be taking an action against, or looking towards an action.

So, we make them aware of that potential violation via the exit meeting, so you guys have already had that step in this process. So, it's usually following the inspection where we give you that potential violation, so that you're on notice, and you have an awareness of the action that we're considering.

But this allows you to present any information at that time that you know might be additional information that could influence whether or not it's a violation, or things that you've done to correct the violation if it's already occurred. So, NRC documents that apparent violation in writing in the inspection report, and we issue, for escalated cases, we issue a choice letter to the licensee.

And that choice letter formally provides you the opportunity to provide any information to the NRC, and in that, it's with respect to the apparent

violation, why it happened, what you guys have done or plan to do to restore compliance, and to prevent it from happening again. So, two separate concepts there. One is just getting back to compliance on that immediate issue.

But then there's the second part of corrective actions, which is how are we going to keep it from happening again long term, looking forward? So, the choices in that choice letter could include a written response, or to come into a PEC, and you guys have chosen the PEC. So, that's where we are at this step here. One of the other issues that we could offer in some cases, or part of the process, is in lieu of those two choices we can also offer ADR.

In that case, this isn't on the table, we are working through the PEC process. So, the next step in the process is the licensee participating in the PEC. Again, we've said that the purpose of this step is to provide any additional information you want us to consider. And in the PEC, no decisions, just information gathering still. And again, that's the step we're on today.

So, after the PEC we're going to review all the information we have. So, that's everything we've collected through the inspection, through this

discussion today, as well as anything that you might provide post PEC, if there's any specific issues that you're going to provide us after this PEC in writing. We'll wait until we get all that information, and we're going to use the total of that information to make our final decision.

So, the final step is that we'll make our final decision, and we'll communicate that to you in writing. So, next slide please. So, possible outcomes, there's a range of possible outcomes. So, it goes all the way from no enforcement action, we could decide we heard enough information here today that there is no violation. You've provided us new additional information or clarifications that we've determined that a violation doesn't exist.

If we do determine that we still believe the violation exists, we could issue a notice of violation, so that's the written notice, formal written notice that NRC has determined a violation occurred, and how the requirement was violated. And a written response from you guys, from the licensee, may be required for a notice of violation.

It depends on whether or not through this process, and any post PEC information you send us, did we gather the full range of what we need? Including,

and I want to stress, you're going to hear me say corrective actions quite a few times, if there is one, a corrective action step, we need to make sure we have all of that as well, not just a determination on the non-compliance, but the moving forward.

The third option could be notice of violation with a civil penalty. And the purpose of the civil penalty is to emphasize compliance. It's just in a way that prevents future violations, and focuses your attention, other folks' attention on things that are significant violations. And finally, in rare cases we can issue orders that can modify, suspend, or revoke.

Again, it's a rare action, but I wanted to make sure that I was including the full range of what the outcome could be. Next slide. I wanted to talk about determining significance. If we determine that a violation occurred, we use severity levels, and they are explained in our enforcement policy, to classify violations according to their significance. So, the NRC uses four significance levels, one to four, and violations that are severity level one being the most significant, and those at severity level four being the least significant.

So, as you can see on the slide, severity

levels one, two, and three are considered escalated enforcement. And by being escalated enforcement, those are the ones that are candidates for civil penalties fines. Next slide. So, we think about four factors when we're thinking about severity level. First, we consider if there's any actual consequences, things like over exposures, or unintended release, or loss of material.

Next, we consider if there's any potential consequences. Whether anything actually happened, could something have happened, what's the potential for that. Third, we consider whether the violation impacted the NRC's ability to perform our regulatory functions. Something may have -- the example may have a lower safety significance, but the regulatory significance still may be an issue.

And finally, we consider whether or not there were any willful aspects to the violation. Next slide. So, we refer to this as our metro map. So, after we've determined the significance, we use this as a systematic process to determine if a civil penalty is warranted. And if so, what the amount should be. So, each violation that's classified as a severity level three or above is a candidate for these monetary penalties.

So, walking through the chart, the civil penalty assessment process looks at three main elements. So, first we consider the enforcement history, and that's that first box, if it's willful, or if it has history. And that's the first green box that sits by itself to the left. So, then next we consider how the violation was identified.

Whether it was licensee identified or revealed by some other means like an NRC inspection, or an event that identified the problem, that revealed the problem. And then the third part that we look for is corrective actions. So, for the NRC to assign corrective action credit, we're looking for actions that are both prompt, and comprehensive, so that they would prevent any future violations.

So, if you, just in general looking at the chart, what it does is it gives credit for licensees who were not willful, don't have any history, that identify their own issues, and then promptly, and comprehensively fix them. So, if you look at the gradation, how the metro map puts you on the zero civil penalty to the two times the base, it encourages the actions of licensees to identify and correct things.

That said, NRC can always exercise

discretion depending upon the circumstances, and we can use that discretion to either increase or decrease the civil penalties based on specific facts of the case. So, that will be looked at as well. We look at the totality of the information. So, although each case is different, absent the use of that discretion, you can see that we do have a graded approach, and it's a systematic approach to trying to figure out what the appropriate level of civil penalty is.

Following this conference, we'll make a decision based on all the information we obtained during the inspection activities, and considering any new information that you give us today. And I'd just like to emphasize, again, corrective action credit is a very important part of this step that we're in now. This step in the process is important to us, coming in and talking to you, this step is important.

So that you have the opportunity to make sure that you provide us any information you want us to consider. The specifics of what we need to look at. So, not conclusions, your assessment, but what can you point us to that you think we haven't looked at yet that would support where you think we should be on this. For corrective actions we're looking for what actions were taken to restore compliance.

As well as what actions were taken to prevent this from happening in the future. We're looking at both comprehensive, but also timely. So, we're looking at both components for that. Next slide. I want to talk about appeal rights. So, NRC licensees have appeal rights, and you can challenge an NRC action. And the instructions, I'm not going to go into the details of how to do that for all the different types of cases.

But to acknowledge that it does exist, and that instructions for challenging the action would be either in the action itself, or in the transmittal letter, so it would have the specifics for whatever that particular outcome was. And when civil penalties are issued, that that particular type of action provides hearing rights as well as another opportunity and provides another opportunity to request ADR if a civil penalty is proposed.

Next slide. So, normally enforcement outcomes are publicly available. Security issues might be something that we might not put into the public sector, but in this case there's nothing that we've identified that would keep the information from being discussed, the types of issues involved wouldn't prevent this from being publicly available. So, if an

NOV is issued, it'll normally be publicly available in ADAMS.

And also publicly available on our NRC website where we list all of our escalated enforcement actions that are issued. So, and if a civil penalty is imposed, or an order, normally our Office of Public Affairs will issue a press release within a day or so of that action being issued. So, I guess the last thing that I wanted to bring up was I just wanted to emphasize again that we're conducting this conference to gather facts.

It doesn't mean that we've made a final decision. That our NRC inspection report that was issued in September that Shana talked about provided our current understanding, and perspective on the issue. But we're here because we want to hear your perspective. Again, same as Shana, I encourage you to be candid in providing your viewpoint, safety significance, the circumstances surrounding the violations, corrective actions taken, planned, commitment timelines, the details for what you plan to do plus the when you plan to do it.

So that I can credit the timeliness part as well, so we need the dates for that. And then any additional details you think we need to consider. So,

we'll listen to your presentation today, gather the facts, and then make our decision. I just wanted to emphasize that any statements or opinions that we make today doesn't indicate our final position.

We're looking for information, we're looking to understand, and conversely, anything we don't ask questions about, our lack of a question, or lack of a statement about anything that you say, or present doesn't indicate that we agree with it. So, I just didn't want any misinterpretation. So, we're probably going to ask questions to better understand your position, but we're not going to be communicating our final position on this.

So, after this conference we're going to use the information, and we'll notify you of our decision as far as the process goes. We'll issue documentation, written documentation of our decision, and I'd like to close by reminding you that everything that I just discussed regarding the sanctions, the civil penalties, the process, is publicly available, and discussed in detail in our enforcement policy.

And that's on our public website, so www.nrc.gov, and if there aren't any questions about the general process, then I'd be turning it over to Earl, who is the inspector, to provide a summary of

the violations. Did you guys have any questions about the process? Okay, Earl?

MR. LOVE: Okay, thank you, Michelle. So, the three apparent violations that are the subject of today's regulatory conference, again were described in the NRC's inspection report 07201014/2022-201 issued on September 12th, 2023. The report documented the findings resulting from an inspection which began the week of December 12th through the 15th, and the inspection exit was held on August 30th, 2023.

This extended period of inspection was primarily due to the additional information provided to the NRC by Holtec for review, and numerous discussions to try and help each party understand the issues of concern. So, the inspection was a routine fabrication inspection at Holtec's Advanced Manufacturing Division in Camden, New Jersey.

As mentioned earlier, we assessed the adequacy of Holtec's fabrication activities for spent fuel storage casks with regard to the applicable requirements of Title 10 of *Code of Federal Regulations* Part 72. During the inspection, the team identified that Holtec implemented a design change from the standard welded basket design to a completely non-welded basket design designated as the continuous

basket shim variant.

The NRC inquired about the design change and was informed by Holtec that the design changes to the CBS basket were made through the 72.48 design change process. Based on the results of this inspection, and the assessment of Holtec's 72.48s, the NRC determined that three apparent violations of NRC requirements occurred. For apparent violations, I'll go through the apparent violations now.

For the apparent violation number one, as required by 10 CFR 72.48 (c)(2)(viii), changes, tests, and experiments, Holtec failed to obtain CoC amendments pursuant to 10 CFR 72.244 prior to implementing proposed design changes that resulted in a departure from the method of evaluations described in both the HI-STORM 100, and the HI-STORM FW final safety analysis reports (FSARs) as updated, used in establishing the design basis.

Specifically, Holtec made design changes to four multipurpose canister(MPC)fuel baskets from the standard MPC-68M, 32M, 89, and 37 baskets to the MPC-68M continuous basket shims, MPC-32M CBS, MPC-89 CBS, and MPC-37 CBS basket variants that resulted in a departure from methods of evaluations (MOEs) described in the FSARs used in establishing the design basis,

and failed to submit CoC amendment applications prior to implementing the changes.

The staff used the guidance described in NRC Inspection Manual Chapter 0335, changes, test, and experiments, and Reg Guide 3.72 Revision 1, as well as NEI 12-04 guidance for 10 CFR 72.48 implementation, Rev 2, which has been endorsed by Reg Guide 3.72. The staff used the criteria from these documents to assess whether the changes resulted in a departure from a method of evaluation described again in the Holtec FSARs.

If the changes to one or more elements of the MOE, method of evaluation, yielded results that were not conservative, or not essentially the same, using the results from the analysis of record, or whether Holtec used a new, or different MOE that had been approved by the NRC for the intended application. So, for details of the apparent violation number one, we had nine examples associated with apparent violation number one.

Next slide. We go past it. All right. So, for example number one, a change occurred in the way the connections between the fuel basket and the shims were modeled in the finite element analysis model for the tip-over by not explicitly modeling the

CBS bolts. In the original welded basket design, welds between the standard basket and the shims were modeled by bonding the corner elements and assigning them the elastic material properties of the weld.

Effectively modeling the welds in the finite element analysis. The staff considered this an element change, because it was a change to the overall finite element analysis model of the tip-over analysis. Example number two. A change occurred in the strength evaluation of the connection between the basket and the shims by considering a bounding deceleration load of 60 gram(g) for the evaluation of the CBS bolts.

In the original welded basket design, the welds between the basket and shims were evaluated using loads taken from the finite element analysis results. The staff considered this a new or different MOE because Holtec changed the calculational framework for evaluating the bolts to one the staff has not reviewed or approved for this purpose. Example number three.

A change occurred, I'm just going to step back a second, an important point is that for the two that I just described, examples one and two are applicable to the HI-STORM 100 basket MPC-68M CBS, and

the same is true for the example number three. A change occurred in the way material property models were developed for the basket shims in the tip-over finite element analysis by using a bilinear material model and calculating the tangent modulus to account for plastic deformation.

In the original welded basket design, the material model for the basket shim was described as elastic with no plastic deformation in the shims. The staff considered this an element change because it was a change to the mathematical model associated with the material performance of the shims. Again, applicable to the HI-STORM 100 basket MPC-68M CBS. Example number four.

The change occurred in the tip-over side drop analysis for the CBS basket shims by comparing the stress in the shims to the ultimate stress of the shim material. In the original welded basket design, basket shims were designated to remain below the yield limit of the shim material. The staff considered this a different MOE because it was a change to the acceptance criteria that was previously approved by the NRC.

Example number five. A change occurred to the structural analysis of the CBS basket design by

using the finite element analysis code engineering simulation software ANSYS Version 17 without comparing the results to the original version to determine if the revised software produced comparable results. In the original welded basket design, ANSYS Version 11 was used to analyze the standard basket design.

The team considered this an element change because a later version of the ANSYS code was adopted. Example number six is applicable to the HI-STORM 100, the basket MPC-32M CBS. The lateral impact was assumed to directly transfer a load between the shims and the basket without inducing stresses in the bolts. For the standard welded basket design, the welds were evaluated using an applied bound and deceleration load of 100g.

The staff considered this a different MOE because the strength evaluation of the connections between the fuel basket, and the shims relied on a different assumption, which was inconsistent with the previous license and basis assumptions. Moving on to example number seven. Applicable to the HI-STORM FW, basket MPC-89 CBS, and 37 CBS. A change occurred in the way the connections between the fuel basket and the shims were modeled in the tip-over finite element analysis model by not explicitly modeling the CBS

bolts.

In the original welded basket design, welds between the standard basket and shims were modeled by bonding the corner elements and assigning them the elastic material properties of the weld, effectively modeling the welds in the finite element analysis. The team considered this an element change because it was a change to the overall, finite element analysis (FEA) model associated with the tip-over analysis.

Example number eight. A change occurred applicable to the HI-STORM FW, again basket MPC-89 CBS, and 37 CBS. A change occurred by not evaluating the lateral deflection results from the tip-over analysis against the fuel basket design criteria and concluding that the fuel baskets did not experience any permanent deformation in the active fuel region.

Holtec documented maximum local plastic strains, reached the rupture strain of the 89 CBS basket, and depicted small plastic deformation in the active fuel region of the 89 CBS basket, and the 37 CBS baskets. The staff considers this a new assumption in the MOE because this change is outside the conditions and limitations of NRC approval.

Example number nine, applicable to the HI-

STORM FW basket MPC-89 CBS, and 37 CBS. The change occurred to the evaluation of differential thermal expansion by allowing the combined radial gap between the CBS basket shims and the enclosure vessel to close. In the original basket design, the combined radial gap was maintained to prevent interference stresses from developing.

The staff considers this a new assumption in the MOE, because this change was outside the conditions and limitations of NRC approval. So, in summary of the apparent violation number one, changes two, four, six, eight, and nine that I just described, were different MOEs. While one, three, five, and seven were changes that we considered changes in elements of the method of evaluation.

Guidance provided in NEI 12-04 considers mixing attributes of a different and existent MOE to be an overall change to an element of a method of evaluation. Cumulative impacts from all the changes, and the changes to more than one element of MOEs were not consistent with the constraints and limitations of the fuel basket's design licensing basis. Different aspects of different approved MOEs were adopted, and changes were not applied in the same manner as the original MOE.

Changes were made to elements of an MOE that were not conservative, or not essentially the same, as the results of the analysis of record, and therefore departed from the original MOEs. Original MOEs were not adopted in their entirety, and were not applied consistently with the applicable terms, conditions, and limitations as the original MOEs approved by the NRC.

Moving onto apparent violation number two. As required by 10 CFR 72.48(d)(1), Changes, tests, and experiments, Holtec failed to maintain records of changes that included written evaluations that provided an adequate basis for the determination that changes to the MPC CBS basket variants did not require CoC amendments pursuant to 10 CFR 72.48(c)(2).

Holtec's written evaluations failed to provide an adequate basis for the determination that incorporation of the CBS basket variants did not require a CoC amendment. Holtec did not clearly and thoroughly discuss the impacts on departures from elements of the methods of evaluations described in the safety analysis reports for the original design that were affected by the changes to the CBS design fuel basket variants MPC-68M, MPC-32M, MPC-89, and MPC-37 CBS basket variants.

The impacted elements included the mathematical model associated with material performance, and tip-over analysis, calculational framework for connections between the fuel basket and shims, and the use of revised version of (audio interference) conclusion by not submitting the CBS variant design changes for NRC review and approval, the changes to the existing methods of evaluation impacted the NRC's ability to perform appropriate evaluations to confirm that design changes met safety requirements.

PARTICIPANT: This is a virtual attendee, we could hear you, and we've lost visual and audio on the meeting.

MS. TERRY: Just give me a moment, I'm sorry, evidently my computer died on me by accident.

MR. LOVE: Does that mean I'm going to have to repeat everything?

MS. TERRY: The last slide that you were getting ready to go to.

MR. LOVE: I can if you want.

MS. HELTON: Apparently, we've lost audio as well.

MR. LOVE: Are we back? Okay, can we go to slide number 26?

MS. TERRY: Can everybody hear us online? We lost audio. Can everybody hear us?

PARTICIPANT: Yes.

MS. TERRY: Thank you, sorry about that.

MR. LOVE: Okay, I'm about to go over apparent violation number three, but for the sake of Teams, I don't know at what point we lost you. So, if you want me to go back, if you could let me know, or inform me of where you dropped off?

MS. HELTON: Violation two is where the screen went blank.

MR. LOVE: In violation two? Slide 24. Okay, thankfully I don't have to go all the way back to square one. I'm going to -- are we ready?

MS. HELTON: Hold on one second, she's going to get the slides shared.

MR. LOVE: Okay, so apparent violation number two. As required by 10 CFR 72.48(d)(1), changes, tests, and experiments, Holtec failed to maintain records of changes that included written evaluations that provided an adequate basis for the determination that change to the MPC CBS basket variants did not require certificate of compliance amendments pursuant to 10 CFR 72.48(c)(2).

Again, applicable to the HI-STORM 100

certificate, and the HI-STORM FW certificate. Holtec's written evaluations failed to provide an adequate basis for the determination that incorporation of the CBS design fuel basket variants did not require CoC amendment as I just mentioned. Holtec did not clearly and thoroughly discuss the impacts on departures from the elements of the methods of evaluation described in the safety analysis reports for the original design that were affected by the changes.

To incorporate the CBS design fuel basket variants, and again, MPC-68M, 32M, 89, and 37 CBS variants. The impacted elements included the mathematical model associated with material performance in tip-over analysis, calculational framework for connections between fuel basket and shims, use of revised version of software, new assumptions, et cetera.

72.48 evaluation conclusion, by not submitting the CBS variant design changes for NRC review and approval, the changes to the existing methods of evaluation impacted the NRC's ability to perform appropriate evaluations to confirm that design changes met safety requirements. Next slide. Moving on to apparent violation number three.

As required by 10 CFR 72.146(c), design control, Holtec failed to subject design changes for the MPC 68, 32M, 89, and 37 CBS basket variants to design control measures commensurate with those applied to the original design. Specifically, Holtec failed to subject design changes for those from standard 68M, 32M, 89, and 37 basket designs to the MPC 68M CBS, 32M CBS, 89 CBS, and 37 CBS basket variants.

To design control measures commensurate with those applied to the original design and made changes to the conditions specified in the license certificate that required prior NRC approval. Holtec failed to perform adequate tip-over analysis, and to model the basket shim bolts for the four CBS basket variants. In addition, material strength comparisons were different, and the thermal expansion gap was not maintained in the CBS baskets.

Next slide. So, that is the discussion on the apparent violations. With respect to the safety determination, staff performed an immediate safety determination, and licensees have already loaded -- we're aware that licensees have already loaded and staged some of the casks affected by these apparent violations, and some are planned in future loadings.

NRC staff performed a preliminary safety evaluation to determine the safety impacts associated with continued short-term loading and staging of these casks. As a result of this evaluation, the staff concluded that there are no immediate safety concerns. The NRC will make its final safety determination when it receives additional information from Holtec.

Until a final determination is made regarding whether there is a violation, any licensees who load fuel in canisters using the Holtec CBS basket variants may be at risk of being in violation of regulatory requirements pending the outcome of the NRC enforcement determination. Okay, and so at that, that concludes my portion of the presentation. So, I will now pass it over to Tomeka to lead us into the next portion of this meeting. Thank you.

MS. TERRY: Thank you, Earl. So, we are opening the floor for any quick questions to the NRC and Holtec on our presentation. There will be a full opportunity for NRC and Holtec discussions at the Holtec presentation. If any quick clarifications are needed at this time? Okay, all right, I will turn it over to Holtec for your presentation. Give me a minute to get your slides up. Okay, ready when you're ready.

MS. FLEMING: Great, thank you. Good morning, again. And thank you for the opportunity to present this additional information in the pre-decisional enforcement conference. Holtec welcomes this opportunity to present information to the NRC staff today regarding the three apparent violations. So, today myself, Kim, and Chuck will be presenting information, and just to walk through the agenda on the next slide.

So, the first few slides, we covered our background and the timeline of events, which the NRC staff has adequately detailed, so we'll gloss over those slides fairly quickly, and dive into the first apparent violation, and the nine details that Earl went through previously. Next, we want to talk about the safety significance of the apparent violation.

And then lastly, we'll close with the root cause evaluation that's been performed of our 72.48 processes and program to identify any gaps in our program, and to assign corrective actions for going forward. As well as we'll talk through the path to compliance looking back as we discussed, as Michelle spoke about. So, at this point I'll turn it over to Kim to go through background, and timeline of events.

MS. MANZIONE: Sure, yeah, I'll just talk

a little bit for those who might be a little less familiar with the systems itself. There are two systems that -- and Earl mentioned both of them in his presentation, the HI-STORM FW, and the HI-STORM 100. They use canisters that have baskets made of Metamic-HT, there's two in each system, the HI-STORM 100 uses the 68M, and the 32M, and the FW uses the 37, and the 89.

The original design of these canisters and their baskets were friction stir welded at the corners of the basket to keep the basket cells within the dimensions that are prescribed in the FSAR. That process does lead to some deformation in welds, just as the nature of a welding process. And so, to improve the fabrication of those systems at our facilities, we developed the continuous basket shim variant.

These variants of all four canisters use bolted shims to control the basket's configuration, meaning the shims are bolted to the basket panels itself. This does eliminate some of the fabrication issues that you see with a welded basket. If you can go to the next slide? These are just, again, for everyone's understanding.

On the left is the full basket of a CBS

basket, and on the right-hand side is a close up where you can see the shims actually bolted to one of the basket panels. You can go to the next slide. I'm going to go through this pretty quickly, Earl covered it. But again, we made the changes under 72.48, the NRC came in for a fabrication inspection, identified some questions, and debriefed some potential violations, and then eventually exited, and led us to this state.

Okay, you can go to the next slide. So, just to speak high level on the apparent violations before I turn them over to Chuck, we are going to present some additional information on each of the violations, and each of those nine items that Earl referred to in his presentation. We understand that most of the questions are associated with that eighth criteria on method of evaluation.

Our 72.48 process is based in that Reg Guide 3.72, which does enforce the NEI guidance document, and it talks about elements of methodology versus inputs, and NEI 12-04 is pretty clear, we think, in what it says about physical and geometrical changes not necessarily being methodology changes, and that the methodology is the calculational framework.

And so, I think some of what you hear

Chuck talk about will reflect back some of those principles that we try to follow in our 72.48 program. So, you can go to the next slide. I'm going to turn this over to Chuck. I'm not going to read this word for word, Earl already read it to you, but we did just want to make sure we had it up front, so you can go to the next slide. And so, the next slide. Yeah, and so at this point, I'll turn it over to Chuck.

MR. BULLARD: Thank you, Kim. So, the next several slides, I'll go through what Earl described as the nine examples or elements of Apparent Violation A. Then I'd like to just provide Holtec's point of view and some additional information relative to each of those nine examples.

And I guess before I get into the first element, I did want to just make a couple of general background comments kind of picking up on what Kim says. The CBS baskets, as you heard Kim say, it was motivated to eliminate the friction stir weld and eliminate the potential for some weld distortion in the corner cells particularly.

Because one of our goals is to have a precise repeatable cell to help with the insertion and removal of the fuel. So, there is a basic difference in the geometry and the design as we talk about the

standard baskets versus the CBS baskets. And I'll show a couple of figures to highlight that.

But we see it as we talk about the CBS versus the standard, in our view, it's more of a physical change or geometric change than a change to the methodology in many cases. And I'll talk more about that.

The other thing I just wanted to mention as a general remark is most of these, almost all of these examples are related to the tip-over analysis of the basket as you correctly described. So, these elements are related to a specific accident event, a non-mechanistic tip-over analysis related to the CBS baskets.

So with that background information, let me step through the different examples that you gave. And the first example, number one, this relates to the CBS bolt specifically and the modeling of the connections within the MPC and the basket model.

Again, the text here is just taken from the choice letter, so I'm not going to read it. But you can see it talks about the CBS bolts not being modeled explicitly and draws a comparison with the corner welds in the standard basket.

And the NRC at least looked at this and

considered this to be a change in methodology or change in element of methodology.

Next slide, please.

So just to talk a little bit about the geometry, because I think this is important to understand, and it touches on several of the examples. On the left you see the original design or standard design that's being referred to sometimes. This in particular is the MPC-68M. So on the left is the original design which is the friction stir welded 68M basket. On the right you see the CBS variant.

One important thing I wanted to point out is in the original design the basket and the shims are independent. There's no connectivity between the baskets and the shim. They're installed separately from one another inside the MPC enclosure.

The basket would be installed first as a complete unit. That's friction stirs welded. And the shims are then installed separately in those interstitial spaces between the basket and the shell. So there's no physical connection between the basket and the shims themselves. And the corner welds are an integral part of the basket itself. They don't join the shims to the basket.

Conversely, when we talk about the CBS

basket variant, you know, we saw the opportunity to eliminate the friction stir welds and take advantage of the shims to keep the basket together as one integral assembly. So, the basket panels in some locations are extended and there's bolted connections to those shims.

So, this is just a -- we view this as a different physical design. On the left, we've completely eliminated the friction stir corner welds, and we've introduced the bolted connections via the CBS shims in the CBS variant you see on the right.

Next slide, please. So what does that mean in terms of Example 1, we wanted to make sure that it's clear that the corner welds described in the FSAR are between the intersecting Metamic panels within the actual basket structure. There are no welds between the standard basket and the shims as the description in the choice letter appears to indicate.

As Kim said, we have followed or used the guidance from NEI 12-04 which is endorsed in the NRC Reg Guide. And that NEI guidance document specifically discusses dimensional changes as input changes which are different than methodology, which is the calculation framework for the analysis.

And in our view, the change from the

friction stir welded basket to the bolted CBS is a change in the geometry, and physical design, and therefore the input to the model.

The models are dimensionally accurate, and they reflect the physical changes, you know, whether that be the standard design with the friction stir welds or the CBS design. And we did not change the underlying calculation framework of the analysis.

And the previously established understanding of the NRC guidance was that a change of the FEA model to accord with geometric changes was not automatically considered a change to the methodology. And we point back to the definition of method of evaluation and calculational framework in NEI, and other examples of mathematical models that would be a change in methodology versus a change in geometry.

Next slide, please. So, this is Example 2. This relates to the design and the evaluation of the CBS bolts. The choice letter talks about the impact load being transferred from the baskets to the shims. We indicate in the FSAR correctly that the CBS bolts, the shims, are not in the direct load path in a tip-over model by design which is different from the basket welds in the standard design.

As I said, the corner welds, the friction

stir welds, were an integral part of the basket. So, in a tip-over analysis previously, as the basket undergoes the impact, and internal forces, and moments developed in the basket, those corner welds that are integral to the basket, they develop some load, and that was evaluated.

One significant difference between those basket welds and the CBS bolts is by design, and very intentionally, CBS bolt holes are oversized so that they have some freedom of movement.

And this is important in the tip-over analysis, because it allows the basket to move, relative to the shims, a small amount, and ensures that the load transfers directly from the basket to the shims and in turn to the shell. So, we make sure that those bolts are not loaded in shear in that situation.

Next slide, please. So, this is summarized here in our response to Item 2. Again, we think that this is more of a change in geometry with respect to the basket shim configuration more so than the change in methodology. The comparisons between the corner welds on the basket and the bolts on the CBS shims are, to us, more of a physical design change than a change in the methodology.

Again, in the CBS variant there's, pardon me, in the standard design there is no physical connection between the fuel basket and the shims. As I said, they're independent. Then the welds, the corner welds are part of the basket itself.

We used, for the standard design, because those corner welds were an integral part of the basket, in that finite element analysis we looked at the forces and moments acting on those corner welds as an output from the finite element analysis and did an evaluation of those welds appropriately.

When it comes to the CBS variant, as I said, in a tip-over, by its very design, the bolts have oversized holes. And they are not loaded in shear. So, there's no significant loading on the bolts, and they don't warrant an evaluation in the same manner that the corner welds on the basket would in the case of the standard design.

So again, we look at this as a change in the physical geometry versus a change in the methodology. And adding to that, of course, CBS bolts were a new component, a new physical component in the basket design. So, there was not a pre-established evaluation for those.

If the corner welds in the basket were an

element of the basket, and those hadn't been evaluated previously, but as it comes to the CBS variant there are no longer any welds. They're trying to impose that weld evaluation on the bolts. It doesn't make physical sense to us.

Next slide, please. This is essentially the same sketch as before. You can see again the difference between the standard design and the disconnected shims on the left versus the bolted CBS basket bearing on the right.

Next slide, and here is Example 3. The concern here or the apparent issue is the choice for the shim material model. In our earlier work for the 68M the shims were modeled using a linear elastic material. And we concluded, based on the analysis, that the stresses that developed in the shim were below the yield strength. Even the maximum stress at any location was below the yield, and therefore there were no concerns whatsoever regarding the shims.

I should note that the shims are there, their design, purpose, or function is to support the basket. The design criteria for the basket, for the Metamic baskets is a deflection-based criteria. So, the purpose or function of the shims is to support the basket adequately to meet the deflection criteria for

the basket.

So, some deformation or displacement of the shims is permissible provided that the basket meets its criteria. So, in the original 68M, based on the design and the loading, it was adequate to model the shims as a linear elastic material, and the stresses were relatively low.

When it came to the CBS MPC-68M CBS variant, we observed that the localized or peak stresses were above the yield strength. So, in our view, it was more conservative to model the shims as a bilinear material, because it would allow for greater deformation of the shims which would, in turn, maximize deflections of the basket.

So, we viewed that as a conservative change which, in the context of the NEI guidance, if you make a more conservative change then that's permissible and not a change in methodology.

That being said, and you can go to the next slide, even for the 68M CBS variance, the stress above the yield was very localized and would be considered a peak stress. It would still remain the case that the primary stresses in the shims weren't below the yield, and there was no risk of any gross failure of the shims.

And more so, when this was originally brought to our attention and discussed earlier, we did explicitly address this and submitted it to the staff in the Revised 72.48. And what we did specifically is we reran the solution for the 68M CBS using the very same linear elastic material model. And we saw that there was essentially no difference in the results.

And this makes sense based on what I said earlier, because the stress that was slightly above the yield was very localized and not significant enough to cause any significant range in the deformation or the safe shape of (audio interference).

So, in the end, what we found is that whether, when we talk about the 68M versus the 68M CBS variant, whether we chose to model the shims using a linear elastic material, or a bilinear elastic plastic material, it makes little difference in terms of the deflection results for the basket. And therefore, our end conclusion is that either choice provides essentially the same results which is one of the criteria in NEI 12-04.

Next slide, please. Okay. So, this example is also related to the stress in the shims. And it's somewhat of an extension of the previous Example 3. The NRC staff noted that in our

presentation and discussion of the CBS variant, we made statements regarding the maximum stress in the shims being below the ultimate strength.

Whereas before, in the standard design for the 68M, the analogous statement indicated that the stress was below the yield. So, the question is, or the apparent issue is, in the earlier case comparisons were made to yield versus in the 68M CBS variant the comparisons were made to the ultimate strength.

Next slide, please. So, as I was saying earlier as I was talking about linear versus bilinear material, in both cases the primary stress in the shims is below the yield strength. And that's typically what you would check or evaluate for an accident type event, to make sure that primary stresses which satisfy equilibrium are below the yield. And that remains true both for the standard design and the CBS variant.

We made an observation and statement in the calc package that recognized that the peak stresses, the localized stresses in the shim did exceed yield, but they remained less than the ultimate strength. And the calc package that supports the FSAR itself indicates that this is conservative as the primary membrane, plus bending stress is lower and, in

fact, lower than the yield strength.

So, we don't feel that this is a change in method of evaluation. Because in both cases the primary stresses remain below yield which gives us the confidence that the shims will remain functional, and they provide adequate support to the basket. And in turn, we meet the defect basket deflections.

And as I said earlier, in the interest of conservatism, we thought it was a more appropriate choice to use the bilinear elastic material model for the CBS variant.

Next slide, please. This is Example 5. The issue here, as Earl described, is the particular version of ANSYS that we used to perform the tip-over analysis. And this is in the context of the HI-STORM 100 FSAR still, just confirming that. Yes, it is.

So 68M standard basket, which was introduced, I believe, more than a decade ago. You know, at that point in time we used ANSYS Version 11. But as you know, computer codes are always being updated. And by the time we introduced the CBS variant we had used ANSYS Version 17.

And you can go to the next slide, please. Within our QA program, it is a requirement that with any new computer code or new computer version that we

do a proper validation to show that it gives reliable and expected results. And in fact, we had done this work for ANSYS Version 17 as we do for all ANSYS versions.

And we show in our validation report, which is referenced there, that the results from ANSYS Version 17 for the set of benchmark problems that we analyzed give expected results that reached the benchmarks. And sure enough, they are also in line and very similar to the results for Version 11 that was used earlier.

So, we feel that two computer code versions, when you look at them, they do, in fact, give essentially the same results which would allow us to make the update from ANSYS Version 11 to Version 17.

We do recognize that this could have been addressed more directly and more clearly in the 72.48 evaluation that was performed originally. But in terms of the calculated results, we are confident that they are essentially the same. And it was justifiable to use ANSYS Version 17 at the time that we introduced the CBS variant.

Next slide please. So, this example relates to the CBS bolts versus the basket welds and

the loading and evaluation of those two types of connections.

The staff notes that in the standard design the welds were evaluated based on 100G deceleration. And the results were extracted from the finite element model to further evaluate the bolts which is different from the method of evaluation, or different from the modeling and the calculations for the CBS bolts.

Next slide, please. So, as I talked earlier, we feel that this is similar to Example 2. We look at this as more of a change in the basket and shim geometry than the methodology itself.

The corner welds are at the intersection of the Metamic panels, and they're within the actual basket structure. There are no welds between the baskets and the shims themselves.

So, in the earlier work, as we qualified the 68M basket, the welds being an integral part, we were obligated and required to evaluate those welds and consider the deflections and internal forces and moments that developed at those corner welds. So we looked at the finite element results to inform those evaluations.

When it comes to the CBS variant, as I

said before, in the tip-over, in the non-mechanistic tip-over events specifically, where the load is in a lateral direction, the CBS bolts are designed specifically with their oversized holes so that the shim can make direct and intimate contact with the basket as well as the encapsulating MPC shell.

And the load can transfer by direct baring from the basket panels to the shims into the shell. The load does not have to transfer through the bolts. And they're not loaded in a shear manner. So, they don't warrant the same type of evaluation as was done previously for the welds, just because of the differences in their physical design and the geometry of the basket and the shims.

Next slide, please. This is just another sketch showing the different basket designs side by side. This happens to be 32M, similar to what I said before in the standard design or the original design. The shims and the basket are independent. And the corner welds are an integral part of the basket, versus what you see on the right with the CBS variant. The corner welds are removed, and you see the bolted connections between the shims and the baskets.

And maybe here it's worth repeating. Just because you have the benefit of the sketch, you can

see if you had a tip-over accident with the CBS variant, and I'm looking on the right now at the top of the basket, if you imagine the basket impacting the ground on that top side, by virtue of the fact that the CBS bolts have oversize holes, you can see almost how the load would shift from the basket to the shims, and then through the shims, rather than the bolts, out to the shell. So that was one of the advantages or benefits of the CBS basket design as well as eliminating the potential for weld distortion.

MS. HELTON: Michele, I don't want to break process here, but is it okay if I ask a quick question about the picture. I know, you know, we're going to, process-wise, NRC, we're going to caucus during the break and come back with probably a whole lot of other questions.

But just to make sure I understand, and everybody else understands what we're looking at, so on the left there's a picture, you know, you're showing the weld between the Metamic plates. And then on the right is the weld eliminated entirely, or is it still there and just not being called out on the slide?

MR. BULLARD: It's eliminated.

MS. HELTON: Okay.

MR. BULLARD: It's eliminated. And that's a good question. On the right, with the CBS basket variant, the Metamic panels are all slotted, so they interlock together. And those slots are precisely fabricated so that we can control their dimension and control that interface.

So, at the corners, there are interlocking tabs. And, you know, depending the location there's either a stacking support from the shell or a buttressing shim. But the panels are all held together in a vertical direction from separating through the CBS shims and the bolted connections to them.

But it's more -- those basket panels can only really separate in a vertical direction as you would pull them apart, which is why in a tip-over, when you have that tip-over accident in the lateral direction, there's not really a driving force for the basket panels to separate in that manner.

MS. HELTON: Thank you.

MR. BULLARD: Okay, next slide, please. So, this example also touches on the CBS bolts versus the basket welds. Similar theme or similar issue to what we've been discussing before. Comparison is made here between the corner welds, between the basket, and

the shims, which is a slight misnomer as we've been discussing.

And you can go to the next slide, please. Again, here we look at this very similar to Item 1 and 2. The difference between the corner welds and the CBS basket with its shims is more a change in geometry in the physical design more so than a change in the methodology.

In the CBS basket, we've completely eliminated the friction stir welds, so there's no reason to -- there's no welds, in fact, to evaluate using the previous methodology from the standard baskets. And the CBS baskets with their bolts, by design they are not in the primary load path and don't warrant explicit stress analysis in the tip-over event, specifically.

So again, in our view, consistent with NEI 12-04, this is a change in the geometry or physical design which leans more towards a change in the inputs rather than a change in the calculational framework or the method of evaluation.

Next slide, please. So, this is Example 8. The issue here is more related to the lateral deflections of the MPC basket and the evaluation of the baskets to show compliance with the acceptance

criteria.

And here it's contrasting, this is related to the FW, so it's contrasting the results and the method of evaluation for the 37 and the 89 versus their CBS counterparts.

Next slide, please. So, we don't feel as though this is a change in methodology primarily because the presentation of the results and the evaluation of the results for the 37 CBS was consistent and on par with previous evaluation for the 37.

And what I mean by that is in the FSAR we presented strain results, contour strain plots for both baskets in a similar fashion, the MPC 37 standard design as well as the 37 CBS. And we drew a conclusion based on those figures that the strains in the basket were predominantly elastic.

There were only very local areas of plasticity, and, in some cases, those were -- or a majority of cases, any appearance of plastic strain was outside of active fuel region. And the strain areas within the active fuel region that did exceed the yield point were very limited in extent.

And that allowed us to conclude that the response of the basket was primarily or predominantly

elastic which is important, because the criteria for the baskets is based on deflections and more so on permanent deflections.

Next slide, please. And you can see here these are strain plots that I was referring to. On the left if the original results showing the strain plots for the MPC 37. And consistent with that, for the CBS basket, we've shown in the FSAR an analogous or similar strain plot for the MPC 37 CBS basket.

And this is a fringe plot with color contours. One thing I would point out is the dark blue or deep blue color indicates that there is zero plastic strain. And you can see, both on the left and the right near the extreme top or bottom, you have some slight variation in the color indicating some appearance of plastic strain. But it's very limited in extent and represents only a very small portion of the basket.

Next slide, please. Okay, and then we come to the ninth and final example. This is slightly different. This is actually not related to the tip-over analysis as the other examples were. This relates to the gaps, the radial gaps between the basket, and the shims, and the shell, and the changes in those gaps under normal operating conditions as the

basket and the MPC heat up under the heat load from the spent fuel assemblies.

So, the staff notes that for the CBS variants there was a closure of the radial gap, a small interference that developed between the baskets, and the shims, and the shell which was a different result or outcome versus the previous standard designs.

Next slide, please. So, the specific reason why we didn't speak to this in the 72.48 specifically was because there was already language existing in the FSAR, in Paragraph 3.1.1(i), as referenced on this slide, that provided basis and addressed the potential for interference between the basket, and the shims, and the enclosure shell.

So, the text that you see on the bottom of the slide is taken from the FSAR, and it preexisted the 72.48 evaluation that we're discussing here that introduced the 89 CBS. And what it indicates is that small interferences between the basket and the shim are acceptable provided that they do not cause distortion or lead to any significant primary stresses in the basket. So, this basis is already in the FSAR, and we looked upon this as we introduced the 89 CBS.

Next slide, please. So, I will hand it

back to Kim, as that wraps up the nine examples.

MS. MANZIONE: All right, thanks, Chuck. Yes, and I'll speak to the additional violations, some of which build on what Chuck talked about. So, Violation B, again, I'm not going to read it, but that is the one focused on the documentation in the 72.48 itself.

So, you can go to the next slide. So, in terms of Violation B, we understand and appreciate the position that additional clarity in the evaluations would have helped when you came in to do your inspection and understand what we did in terms of the CBS baskets. In fact, as soon as we heard some concerns in the debrief, we took action to revise those 72.48s. And we did share them back in May.

What we found when we revised those 72.48s was that we felt the conclusion was still the same by the additional information that we added. So, we're hopeful that the revisions we provided give the needed information. But it did not change, from our position, the conclusions.

And so, while we understand that additional information would have been useful, we still believe that a 72.48 evaluation was where we would have ended up, and where we did end up when we

did those revisions.

Okay, you can go to the next slide.

MR. LOVE: A clarification point here. You revised the 72.48 evaluations, and you provided to the NRC the audit related Sharepoint site. I understand it was the Holtec Sharepoint site, not the NRC Sharepoint site.

MS. MANZIONE: Correct, the Holtec audit related Sharepoint, yes. Correct.

Okay. On Apparent Violation C, and I'm not going to read the language again, but related to the design control violation, so you can go to the next slide.

So, I think you've kind of heard our technical response to some of the issues that were brought up. And Chuck walked through each of those. But from our perspective, we did subject the CBS basket variants to the same set of analyses that we did for the original Metamic HT friction stir welded baskets.

We did evaluations that were accurate for the revised physical configuration. We followed the methodology that existed for the components that existed. We also did the full scope of safety analyses. I wanted to note that here. We've talked a

lot about the structural analyses, because that's certainly what the inspection report focused on.

But we did the full suite of analyses, the thermal analyses, the criticality analyses, the shield analyses that needed to be done for these baskets. So, in terms of kind of the holistic design control, we certainly applied everything that existed in the FSAR to the new CBS variance.

And then this last bullet kind of leads into what we're going to discuss next, which is a little about the safety significance, is the majority of the items, and the nine items that Chuck went through, focus on the tip-over of the casks. And that tip-over analysis throughout the FSAR is described as non-mechanistic in both FSARs. And that is unchanged as part of the use of the CBS basket variance.

So then I'll go into kind of what was the next on our agenda item and, again, specifically asked for in that choice letter. As I said, we do feel like we had, you know, the additional information that we presented on the violations themselves.

But we also wanted to provide some context on the safety significance of those violations. And so, we did kind of look in the enforcement policy, and using 50.59s as sort of a comparable to the 72.48s,

looked at what constitutes a significant Level III violation.

And as Earl kind of alluded to, we would agree with the determination that there is no safety significance, understanding you haven't come to that final decision. But from our perspective we see it as that.

The safety function of a fuel basket is to maintain the fuel in a sub-critical arrangement. All the structural analyses that we performed demonstrate that that is still true and that there is no reduction in margin from the original design in safety margin. The criticality analyses use an extremely bounding version of the deflection criterion, and so there is no risk of a safety concern.

In addition, on top of that, the accident we're talking about, this potential tip-over analysis, is demonstrated to be non-mechanistic throughout both FSARs. It's demonstrated to be a non-credible event under all postulated accidents.

And so, while we do it, because we know it is an expectation of the staff in applying for a certificate of compliance, that you see that analysis, it is not a safety-significant analysis. And we wanted to make sure that context was around what we

were talking about today.

Okay, next slide. So again, while we hope that the additional information we provided, you know, has the NRC staff considering some of the apparent violations, we still do want to take the feedback that we got during this inspection seriously. And so, we've performed a full root cause evaluation to look at our 72.48 process.

We took immediate corrective actions, and the first one was to revise those 72.48 evaluations as soon as we heard the concerns in the debrief. We didn't even wait for the exit, but in that debrief. That was done back in May, and we've shared that, again, on the Holtec Sharepoint used to share that with the NRC inspection team.

At the same time, we also did an extent of condition review. We looked at all the 72.48s we've done in the last three years, identified any that might benefit from some additional information. That's been done. And as part of the root cause, we've also identified some future corrective actions again to prevent us from being in this position again.

One of the major things we're going to do is implement a 72.48 Review Committee similar to what some of our clients do at utilities. And this would

be a technical expert committee that would review complex 72.48s. So, in addition to the standard author and reviewer process that we go through, this would be an additional oversight layer on those 72.48s.

We've already drafted the procedure for that, and we're piloting it on a potential change that we're considering now. So, we hope that that will allow us to identify future problems before we get to this point.

MR. LOVE: And while it's in my train of thought here, you mentioned the 72.48, generation of a 72.48 review committee for future 72.48s. What about past 72.48s? Are there any plans to go back and look at, like, the extent of condition or previous 72.48s --

MS. MANZIONE: Yes. So, we performed an immediate --

MR. LOVE: -- by this committee?

MS. MANZIONE: We performed an immediate extent of condition review over the summer once we heard your feedback and identified any that needed updates based on that.

MR. LOVE: Okay.

MS. HELTON: I think the question it was

that extent of condition review conducted by the 72.48 review committee that you stood up, or did that take -- you know, is the sequencing different?

MR. LOVE: Right

MS. FLEMING: So that's something we'll take back and evaluate. We are piloting the review committee procedure now. And then we expect to have it fully implemented shortly, in the next -- by the end of the year. But that is something that we will evaluate as part of the extensive condition review, of any of the complex 72.48s, if they need to go in front of that committee.

MR. LOVE: I bring that up, because, you know, your biennial submittals are pretty extensive, right, they're very complex. So, I was just looking at it from an extended condition perspective, and going backwards, and looking at, you know, past 72.48s to make sure that they were adequately performed.

MS. MANZIONE: Yes, we can certainly consider --

(Simultaneous speaking.)

MS. FLEMING: -- that.

MS. MANZIONE: Yes.

MR. KOCH: Just a quick question, Kim. You alluded to it being similar to what they do with

the NPPs, Nuclear Power Plants.

MS. MANZIONE: Yes.

MR. KOCH: So, like a port committee --

MS. MANZIONE: Yes.

MR. KOCH: -- and oversight review committee?

MS. MANZIONE: Yes. That's the idea, yes.

MS. FLEMING: And that was the basis of the generation of that committee.

MR. LOVE: Sorry, one other question. Hopefully I'm not out of process here but I know she -- so in response, you brought up a number of times the fact that you revised your 72.48s, and you submitted the 72.48 evaluations to us through your Sharepoint site.

I do want to acknowledge that you did provide the information on the tip-over analysis in your Sharepoint site, and that you did amend your 72.48 evaluations, and you also -- what you didn't mention is that you initiated a technical position paper too as well.

And so, I just want to acknowledge that we did receive it through your Sharepoint site, and that that information is still currently under review, okay.

MR. KOCH: Just to clarify, the position paper was submitted as -- was that submitted as part of the inspection or as part of a --

MS. MANZIONE: The inspection.

MR. KOCH: -- related licensing --

MS. MANZIONE: The inspection.

MR. KOCH: Okay.

MR. LOVE: Well, I just don't want you to think that we took no action on your submittals.

MS. MANZIONE: No, we understand. I appreciate that. Yes.

Okay, to continue down the corrective action, our 72.48 qualified staff will be attending an industry-sponsored 72.48 training that's in November, to make sure that we have a wider breadth of training rather than just internal Holtec training. That's scheduled for the second week in November.

And then we'll also, outside of just our 72.48 trained staff, be bringing back some of what we've learned on methods of evaluation for training for our technical staff so that they understand, when the 72.48 qualified people are asking about methods of evaluation, there's a better understanding and better communication there.

MS. BURGESS: This is Michele. On the

industry-sponsored training, can you give a little bit of detail about what that encompasses?

MS. MANZIONE: Yes. So, I haven't seen the course yet, but there's an industry group that is sponsoring the training industry-wide, not just for Holtec. And we've registered to be a part of that. But it's a full day of training, and exam, and everything that comes with that. Yes, it's sponsored through NEI.

MS. BURGESS: What kind of content, do you --

MS. MANZIONE: I don't have the course content yet. We can certainly share it when it's available.

MS. BURGESS: And timeline for that?

MS. MANZIONE: That is the second week of November. I believe it's the 15th.

MS. FLEMING: And we can certainly share the root cause evaluation with the inspection team so that the corrective actions and the due dates are clear to the NRC staff.

MS. BURGESS: So, your root cause evaluation has the due dates and more detail --

MS. MANZIONE: Correct.

MS. BURGESS: -- in the document?

MS. MANZIONE: Correct. I had to follow-up with the corrective actions, yes.

MS. BURGESS: Okay, that would be helpful. So, you will share that with us?

MS. MANZIONE: Yes, we can share that with you.

MS. BURGESS: Is that already something that's produced and finalized, so it's just sharing a copy?

MS. MANZIONE: It's been produced. It's being finalized, but once it's finalized in the next week, we will certainly share it with the NRC.

MS. BURGESS: So, you could probably share that with us by the end of next week?

MS. MANZIONE: Correct, yes.

MS. BURGESS: Thank you.

MS. MANZIONE: Okay. So, moving on then to our next topic, which is path to compliance, so again I hope that the information we've been able to provide today and any of the questions we might answer for you, you know, frames the violations -- apparent violations slightly differently.

But if the NRC does, you know, come out if this process and concur that these changes should have come in as an amendment, then we would need to work to

get back in compliance. As Earl alluded to, there are sites that have these canisters loaded, and we wouldn't want them to be out of compliance. And so, the immediate action for those sites would certainly be exemption requests. Holtec has already provided templates to our users for that if that is needed.

We also have in process, and I'm sure the NRC staff knows this, the HI-STORM FW License Amendment Request, Number 7, which might be one potential path to address some of the outstanding compliance issues.

So, if you go to the next slide, FW Amendment 7 --

MS. BURGESS: This is Michele, before you --

MS. MANZIONE: Sure, go ahead.

MS. BURGESS: So, on the -- you said that Holtec's already provided templates --

MS. MANZIONE: Yes.

MS. BURGESS: -- for everybody to submit exemptions. Do you have a date, a rough date on that?

MS. MANZIONE: When we provided them? I can get you one. I don't have it off the top of my head. But, yes, I can get it for you.

MS. BURGESS: Thanks.

MS. FLEMING: But that action is completed, we'll get you a date.

MS. BURGESS: Great.

MS. MANZIONE: Yes, I can get you a date, I was --

MS. BURGESS: I was just looking for the details.

MS. MANZIONE: Yes, I can get you the date.

MS. BURGESS: Give credit for everything I can --

MS. MANZIONE: No, I appreciate that. Yes, we can get you the date. Obviously, you know, it would have to come from the utilities themselves to submit it. But at least Holtec took the action to give them the templates.

MS. BURGESS: Correct. Yes, I'm just making sure I'm understanding all the actions that you've taken.

MS. MANZIONE: Yes, I appreciate that.

MS. BURGESS: And the template that you put together was essentially, literally a plug-and-play --

MS. MANZIONE: Plug-and-play, correct.

MS. BURGESS: -- as opposed to general

guidance it --

MS. MANZIONE: No, no. It's an exemption request that says put in your utility name, and your site, and your number of canisters. Yes.

MS. BURGESS: Thanks for the clarification.

MS. RIVERA: One question, Kim. The content of that template, is there technical information included in there that will support --

MS. MANZIONE: Yes.

MS. RIVERA: -- the basis for the exemption?

MS. MANZIONE: Yes.

MS. RIVERA: Okay.

MS. BURGESS: Would you be willing to share that?

MS. MANZIONE: I think so. Yes, of course.

MR. LOVE: Okay. This is Earl, one other question. I'm kind of hanging on the comment you just made in comparison to the slide. Amendment 7 may have technical issues and it addressed -- such that it can be used as the NRC approved method.

You made a statement that it said it may be one of the potential paths. So, does that mean

either it can or it's still in the evaluation stage?

MS. MANZIONE: Let me go to the next slide. I think that'll outline this. One of the reasons I said may is because exemptions are clearly one path, right. And Amendment 7 may be another path. So let me talk through -- yes, amendment 7.

MR. LOVE: Okay.

MS. MANZIONE: And part of the reason I also said may is because we understand you guys haven't made a decision on Amendment 7 yet. So, until we see what your decision is, and that's what I'll talk through on this slide.

And so, the Amendment 7 scope included MPCs with CBS-style baskets. Those are not any of the four MPCs that are subject to this particular enforcement action, but they are CBS style baskets. And so we have worked to incorporate into that amendment enough details on the methodology of analyzing CBS baskets such that, if the NRC were to decide to approve that application, that perhaps we could revise the 72.48s and take credit for that as an NRC approved methodology.

And I say all of that with a lot of ifs. Because we understand you still have not approved that amendment. We would need to, once that amendment is

approved, we would need to look at it, review the SER, review any other documentation that comes out with it. And to see if that is a potential path, we would identify any gaps and then, if needed, submit any additional license amendment. So, I say that with a lot of ifs, because I fully understand you guys have not made a decision on that.

MS. FLEMING: And that would also be caveated on the outcome of the PEC, right? So that's an additional layer of the ifs, based on the outcome of the PEC.

MR. LOVE: Yes.

MS. FLEMING: And based off of the outcome of Amendment 7, a gap analysis would be performed. And any gaps that are not covered in Amendment 7 would then be addressed with a separate license amendment.

MR. LOVE: Okay.

MS. FLEMING: Does that make sense, Earl?

MR. LOVE: Yes, it does. So, I assume the gap analysis will, well, I asked the question is the gap analysis going to include the HIGH-STORM 100 CBS basket variant?

MS. MANZIONE: Anything that is determined to be out of compliance as a result of this enforcement action will be evaluated. It could be how

we bring --

(Simultaneous speaking.)

MR. LOVE: -- well, okay, because you haven't done the gap analysis yet. But is the intent to try to include that generic method of evaluation and make it applicable to both the HI-STORM FW or HI-STORM 100?

MS. MANZIONE: That would be an ideal situation, yes.

MR. LOVE: Okay.

MS. MANZIONE: Okay. So, we can go to the next slide, I'm sorry.

So, this just kind of, you know, in conclusion from today, I hope that we've provided our basis for why we believe this was something we could do under 72.48 versus an amendment. We made this modification to help fabricate the baskets and ensure we continue to meet existing FSAR design criteria.

We modeled what the CBS baskets looked like and understanding that some of those changes come with changes to the model itself, we talked about the REV 17 of ANSYS. I think we have to revisit that. I think Chuck did a good job of understanding why, you know, REV 17 was used.

As Earl alluded to, we've provided those

evaluations, and we understand you still haven't necessarily completed review of those documents. And I hope that we've been able to provide the clarity that you all were looking for today.

MR. LOVE: I hope this is, hopefully, maybe my last question. Going back to the 72.48, revised 72.48, those were done in May, right? So, since that time, there's been a lot of activity going on from May until now, both quality and technical perspective, right, a lot of engagements, and discussions, and commitments, and this and that.

Based on where we stand today, have you -- is there a need, or have you revised any of the revised 72.48s, May 72.48s, have you subsequently revised them to update them to include anything new or additional --

MS. MANZIONE: No

MR. LOVE: -- in those 72.48s?

MS. MANZIONE: We have not to date, but certainly we would evaluate any feedback we've heard today or from the decisions you guys come to and updating them at that point.

MR. LOVE: Okay. So, in short, I think what I really want to know is if the 72.48s that you submitted back in May to us have been revised --

MS. MANZIONE: No, they have not been changed.

MR. LOVE: And we haven't seen them yet, right, you know what I mean? Okay, and you're saying no, they haven't.

MS. MANZIONE: No, they have not. You have the most recent version.

MR. LOVE: Okay.

MS. MANZIONE: Correct.

MS. BURGESS: No further clarifying questions at the table, either about violations or for us for what they presented?

Want to go ahead and take us to the break.

MS. HELTON: Yes, sure. Thank you for a very informative, clear discussion. I really appreciate the slides and the additional information that you brought here today.

So, at this time, we're going to break for a short internal NRC caucus. And we'll also be breaking from the online portion of the PEC at this time. We will come back in -- Michelle, I think we agreed to 30 minutes.

MS. BURGESS: Yes. So, Tomeka, did you want to run us through your logistics?

MS. TERRY: Okay, thank you so much,

Holtec, for your presentation today and for clarifying some things for us as well. At this time, I don't think we have any more questions. So, what we're going to do is we'll do the caucus at this time. And we'll break, and we'll come back at -- it is 10:56 now.

MS. HELTON: It is approximately -- it takes us about 20, 30 minutes. We'll come back as soon as we, obviously we'll come back --

(Simultaneous speaking.)

MS. TERRY: -- at 11:30.

MS. HELTON: Yes, we should be back around 11:30.

MS. TERRY: So, everyone has the opportunity to take a break right now on the call and also on the Teams. We'll be back at 11:30 to start up. And then at that time we will have the opportunity for NRC staff to ask any questions to clarify or anything after our caucus meeting.

And then there will be opportunity -- time for the public to ask their questions to NRC staff. All right, we're taking break.

(Whereupon the above-entitled matter went off the record at 10:56 a.m. and resumed at 11:37 a.m.)

MS. TERRY: Hi, everyone, we are back. Everybody is seated and ready, so I'm going to turn it over to my director, Shana. She is going to go ahead and go into details, okay? Yes.

MS. HELTON: All right, thank you, everybody, for your patience as we caucused. This is a complex issue. We received a lot of new information today that I think is really helpful in going forward with finalizing our decision on the apparent violations.

So, we do have a little extra time in this room if we need to go over. I want to be respectful of the meeting agenda that we laid out as much as possible, but it's also, I think, important to get what we need on the transcript, and for the public as well.

So, Michele described the process that we'll go through here. We've got a number of questions. And I think our aim is to ensure that we clearly ask them. Clearly and concisely ask the questions that we have. They'll be transcribed on the docket. And we'll talk about the next steps from there.

So, Michele, I'll turn it over to you.

MS. BURGESS: Thanks, Shana. Yes, just as

a reminder, when we restarted the meeting we're back on the record and the transcribing has started.

So, we do have a number of specific technical questions, but given the number of questions and the limited time we have left in the PEC, what we'd like to do is outline the questions at this time, make sure that you guys understand the questions, those you're responding to them, and then respond in writing to us in two weeks. Because there was a lot of technical information provided, and we do have some very specific questions on the very specific information that you've provided to us.

So, since it's being transcribed, we want to read through all the questions. I want to ask Patrick in a minute to read through all the technical questions that we have. And they'll be on the docket.

The transcription is available in about, in less than a week. It's usually three days to a week that the transcription is publicly available. So, it will be documented there.

So, for your purposes, as well as Shana alluded to, making sure there is clarity for the public what our questions were. And then your written response back to us, we'll put it back on the docket for responding to those very specific technical

issues.

So, before I turn it over for the specific technical ones, I just wanted to just ask some basic clarifying questions. So, I think from your presentation, your accepting maybe Bravo about the documentation, is that your position?

And then your position is that from AV Alpha, AV Charlie, you're saying you don't believe they are violations; you provided the specific information that you think supports that, is that accurate?

MS. FLEMING: Yes, that's correct.

MS. BURGESS: Okay. I'm going to turn it over to Patrick.

MR. KOCH: Shana, did you want to ask your questions?

Okay. So, relating to Slide 10, this your response to Item 1. While there were geometric changes to the model, the first example of Apparent Violation A was that Holtec changed an element of an MOE by using a new modeling assumption to model the bolts with nodal constraints. Is Holtec suggesting that the use of nodal constraints is a geometric change, or a dimensional change or an input change and not an element change? If so, could you elaborate on

that?

My next question relates to Slide 12.

MS. BURGESS: Yes, at any time if you don't, if you want any clarification on what we mean by our question then just interrupt as we go question-by-question. Right now, we're just trying to not get the answer for it, but just make sure you understand what we're asking for. And then you'll have the specific words for everything we say once the transcript becomes publicly available. Okay, great.

MR. KOCH: My next question relates to Slide 12, which is Holtec's response to Item 2. While welds for the previous basket design with the extruded version of the shims are not welded to the shims, the second example of apparent violation A was that Holtec used a new or different MOE by assuming the impact load is directly transferred between the shims and the basket without inducing load in the bolts. Is Holtec suggesting that this assumption is not a new MOE because of the weld location in the previous design? If so, could you elaborate?

My next question also relates to Slide 12. Holtec states that a separate analysis was performed as necessary to demonstrate bolt suitability for the solid shims. Could you explain what that analysis was

and what bolt suitability entails?

When you say, as necessary, how did you determine when that analysis was necessary?

In cases when this analysis was determined to be unnecessary, what was the justification for this?

Were these analyses and the decision on whether to perform them part of an MOE approved by the NRC for this application?

My next question relates to Slide 15. That is your response to Item 3. Holtec states that the analysis of both canisters is the same. Which canisters is Holtec referring to? In which analyses? HI-2188448 for MPC-32M, and supplement 79 of HI-20127874 for MPC-68M-CBS? Sorry, that was a question. That was me suggesting that those are maybe the two analyses that you're referring to but seeking clarification for that.

Is the Staff understanding -- sorry.

MS. HELTON: That one seems, you know, do you have like a quick yes or no answer to that question?

MR. KOCH: Yes.

(Off microphone comment.)

MS. HELTON: Okay.

(Off microphone comment.)

MS. HELTON: Okay.

(Off microphone comment.)

MS. HELTON: All right, thank you.

MR. KOCH: It is the staff's understanding that MPC-68M-CBS was analyzed as a basket slice in ANSYS while MPC-32M was analyzed as a half-symmetry model in LS-DYNA, among other differences. Is this incorrect? How does Holtec view these analyses as the same?

My next question also relates to Slide 15. Where was the previously approved method for calculating a bilinear material model for, the bilinear material model for MPC-32M discussed? Is it Appendix B of HI-2188448 Revision 0?

Which amendment added MPC-32M? Was the FSAR updated to reflect the change in material model for the shims? Why was a bilinear material model developed for MPC-32M shims? Did these shims exceed the yield stress?

My next questions relate to, also relate to Slide 15. Holtec mentions performing a finite element analysis with the CBS using an elastic material model. Did the shim remain in the elastic region in the finite element analysis? If so, why was

the bilinear material model needed previously? If not, how is an elastic material model valid for characterizing the behavior of the shims in the finite element analysis?

Which results are essentially the same between the elastic CBS model, the bilinear CBS model, and the model for the previous design?

And finally, did the elastic and bilinear CBS models include any other changes from the model for the previous, from the previous design?

My next questions relate to slide 17, which is Holtec's response to Item 4. Did Holtec demonstrate that the primary stresses in the CBS basket shims remain below the yield strength? If so, where is that documented, in the FSAR or Supplement 79 of HI-2012787?

If not, which demonstration is referred to in the sub-bullet that is not replaced, that is not replaced by the peak stress comparison? Okay. All right.

Is this how the previous design was analyzed, meaning, did the analysis of the standard shims demonstrate that only the primary stresses were below yield?

More questions on Slide 17. What does

Holtec mean by peak stresses in this context? How is Holtec categorizing the stresses as peak or primary, and is that different than the stress categorization in the previous analysis?

Why was the peak stress comparison performed?

My next question relates to Slide 19. That's Holtec's response to Item 5. Holtec states that the results for the ANSYS Rev 17, for ANSYS Rev 17 have been shown to be essentially the same. Which results from Rev 17 were shown to the same as which other results?

My next questions relate to Slide 21. That's Holtec's response to Item 6. Sorry, I don't have new questions here. These would basically be, as Holtec points out, this item is very similar to Item 2, so I would have the same questions for Item 2. This is just related to the FW, whereas Item 2 was for the HI-STORM 100.

Then also on Slide 24, as Holtec points out, this item is related to Item 1, so I would have the same questions as I did for Item 1, which was my questions on Slide 10.

So my next question is for Slide 26. That relates to Holtec's response to Item 8. So, the CBS

results. Were plastic strains limited to areas beyond the active fuel region? What were the basket, what were the structural basket criteria, and how has Holtec demonstrated the CBS baskets meet these criteria?

My next questions relate to Slide 29. This is Holtec's response to Item 9. Was the allowance for basket-to-shell interference added as part of an amendment to the HI-STORM FW system?

In response, in which revision of the FSAR was the allowance for basket-to-shell interference added? In which revision to the FSAR was the CBS design added?

Which non-CBS baskets have basket-to-shell interference? How did Holtec address this interference, and where is this documented?

Just one more question, which is in relation to Slide 12 in the presentation. Holtec mentioned the oversized holes in discussing the assumption that the shims aren't in the load path. Were these oversized holds depicted in the drawings or the FSAR at the time of the inspection?

And I have one final question, which is, relates to Slide 33. Which is Holtec's response to apparent violation C. In Holtec's view, is the tip-

over analysis part of the licensing basis for HI-STORM 100 or HI-STORM FW? In Holtec's view, what is the purpose for the tip-over analysis? Why has Holtec submitted a tip-over analysis as part of the FSAR, and where has Holtec demonstrated that non-credible events could cause a tip-over?

That's the end of my questions. Thank you.

MS. BURGESS: So, before we move any further, just, I was watching your head nod and looking for you to signal us to stop and explain anything. The questions were understandable?

MR. BULLARD: Yes. I didn't hear anything.

MS. BURGESS: Okay.

MS. FLEMING: And what I'd like to offer up too, because there is just so many parts and pieces to each question, is that once we receive them in writing and are able to review them, if we need a phone call, we will certainly ask for one.

MS. BURGESS: Shana, did you have something that you wanted to add?

MS. HELTON: Yes. Thanks. And I think this might have been captured in Patrick's questions, but, you know, a lot of the presentation focused on a

particular basket variant, and so, you know, anywhere where you can add clarity about the information that you're presenting, if that's also applicable to the other basket design variance, that would be very helpful.

MS. BURGESS: Okay. So, I think that's the list of questions that we had. And so, our proposal was, the transcript will come out, so you'll get the specific words. And then in two weeks to have a written response from you. And then we'll be able to take that information and be able to move forward and make our final decision.

MS. MANZIONE: Can I just ask one point of clarity? Are you talking two weeks from transcript receipt or two weeks from today? I just want to make sure we're speaking the same dates.

MS. BURGESS: So, if we could do, the transcript, is it, I thought it was within like three days, no more than a week?

MS. TERRY: So, I probably --

MS. BURGESS: I think transcript --

MR. ZIMMERMAN: Two weeks from the transcript. So that you have them, and you can see them. Yes. Sorry?

MS. MANZIONE: Are we able to see the

questions ahead of time before the transcript is released?

MS. BURGESS: No. I mean, we'll get it when we get the transcript, and we'll release it at the same time and give them to you.

MR. ZIMMERMAN: Yes.

MS. MANZIONE: Okay.

MS. BURGESS: But we won't have them before we get the transcript, so, it all happens in the same step pretty much.

Okay. So, for that part with discussing putting out the list of questions, we have relative clarity on, they make sense. And then the process that we're going to use moving forward, two weeks after you guys get the transcript from us, then we'll get your written response, and then we'll move forward with that part of the process.

So, I think with that, we move on to closing. And I'll turn it back over to you, Shana.

MS. HELTON: Thanks, Michele. So, in closing, the Regulatory conference, I just want to remind everybody, that the preliminary apparent violations that we discussed today are subject to further review based on the information presented. And as well, based on the information that you

committed to provide. And in response to some of the staff questions that Patrick presented for the NRC as well.

You know, just to emphasize, also that any statements or opinions that you've heard expressed by the NRC staff at this conference should not be viewed as a final NRC position. And additionally, you should not view a lack of response by the NRC staff to any of your statements as acceptance by the NRC of those statements.

We may ask questions further, but we're done with that portion now, I think. But we won't communicate our final position to you today.

So, we'll, after this conference we'll be using the information obtained during our inspection, as well as the information you provided today, as well as the other information that you will provide following the issuance of the transcript, to come to a final enforcement decision. And we will inform you in writing of our decision. And will issue documentation of that, including any potential resulting enforcement action.

Our goal is to complete our internal review and deliberations and communicate our final decision within 60 days. With that, the regulatory

conference for Holtec International is now concluded, but the meeting is not fully adjourned.

I'll turn to, well, before I do that, I'm sorry, I did not offer Holtec the opportunity to closing remarks.

MS. FLEMING: Jake did indicate. No, we appreciate the opportunity to present additional information on the apparent violations today to the staff. We appreciate your time, and we appreciate the dialogue. We will respond to the questions once we receive them. And then like I said, if we need additional clarity on any of the questions we'll reach out and setup a call.

MS. HELTON: All right.

MS. FLEMING: So, thank you.

MS. HELTON: Yes, thank you. I think with the time being so approximate to the end I overlooked the closing remarks on your part, so apologies for that.

So, with that now, the regulatory conference is adjourned, but the meeting is not closed. And I'm going to turn it over to Aida to walk us through the process for any questions or comments from the public.

MS. BURGESS: I want to, one process

thing. So for the public part of the meeting, you're welcome to stay, but you don't have to, you're free to leave at this point if you'd like to. It's your choice whether you stay. All the questions will be directly towards NRC, so your choice if you'd like to stay.

MS. HELTON: And we do have several hands raised in the chat.

MS. BURGESS: Yes.

MS. RIVERA: So, all right. So good morning. So now is the public comment period for the meeting. And we are going to have the feature within Teams, with the hand raise, for people to let us know that they have questions.

But we also have the bridge line that we're going to be checking as well to see if there is other people in the bridge line that has questions. Maybe we can start with the bridge line and then come to the people in Teams.

MS. TERRY: Okay, Jill, can --

THE OPERATOR: Thank you, Tomeka. At this time, if you would like to ask a question on the phone please press *1 on your touch tone phone. Please unmute your line and record your name to be introduced. Once again, it is *1, and please record

your name to be introduced.

I have a call from Susan Shapiro with LEAF of Hudson Valley. Your line is open.

MS. SHAPIRO: Thank you very much. This is very informative and disturbing to find out that this has actually been going on. So, a couple of my questions that I'd like the NRC to answer.

Well first of all, I want to say I think it's horrible policy that you allow the Holtec to leave and not listen to the public. This is supposed to be, you know, the public is supposed to weigh in on these issues, and to allow the licensee to leave, you do that in every meeting, is inappropriate.

But let me go to the specific issue here. How, first of all, do the NRC became aware of the change of the baskets that Holtec had made without application or approval? How did you become aware of that?

How many, you say that they are, already been used. It's already been used at certain locations. I'd like to know at which locations it's being used, how many casks at each location it has been used in, and will they be retrofitted?

My concern about how this whole thing is being handled, I appreciate the deep concern the NRC

has for Holtec's actions. And I believe that a very serious violation is in order here.

And I'm asking that the NRC do something to prevent Holtec from going forward and just deciding, well, we don't really have to follow the rules and we'll just change it because we think it's better, but we're not going to even look at the standards by which we were first approved. We're not even going to review it. And then basically do the violation and later ask for forgiveness.

I don't think that's the way regulations work. You don't get to ask for forgiveness after the violations. You have a violation, and then if in fact there is something to be reviewed at that time, then it is. But the violation doesn't go away. They violated the design basis license.

So, one of the big concerns I have is that, as you said, this has already been installed in various locations. I'd like you to answer to where that is. This is very reminiscent of a company.

Back in the day when nuclear reactors, such as Indian Point, fire rack was being used and HPCI said it would work for three hours. And ultimately when it was tested it only worked for 24 minutes. And the NRC, after the fact, exempted them

from this fire safety standard.

We are asking, I am asking, for the public sake, for the safety of the future generations that you do not allow the company to dictate the safety standards by saying that they don't want to do wells, that they think it's better to do bulks, and that they're leaving some room in the bulks. Which means that materials, radioactive materials could be more easily gotten out. I am not comfortable with this.

I believe that if the NRC decides to not give them a very substantial violation for this behavior that the NRC needs to ensure that hot cells will be installed at every site that has this kind of defective or unapproved baskets being used. It's really shocking that they failed to even maintain their records.

MS. RIVERA: All right. All right --

MS. SHAPIRO: So that's my comment. Thank you very much.

MS. RIVERA: All right. I appreciate it.

MS. SHAPIRO: So, can I get an answer to where this is being used and at which plant how many has been installed and at which site?

MS. RIVERA: All right, thank you, Susan. Thank you for your comment. So, I'm going to turn it

over to Earl to talk a little bit about the inspection that we performed and the locations that we have.

MS. HELTON: Yes, thank you, Aida. But before you do, you know, thank you for the question. I take it to heart. You know, I would like to reiterate a comment that Earl made earlier in the conference which is that the staff does not have an immediate safety concern at this time associated with the use of the Holtec dry storage system.

The information that we discovered in the December inspection, that we talked about at this conference, one of the first things that we took on as staff was to understand the safe significance and whether there was an impact to public health and safety, as well as that of the environment. And we assured ourselves that there is adequate protection of public health and safety (audio interference).

Earl, I'll turn it over to the specifics and the location.

MR. LOVE: Okay. So, this is Earl Love. I'm a Senior Transportation and Storage Safety Inspector. In answer to your first question, this was identified in December of 2022 when the NRC staff performed a routine inspection of the Holtec manufacturing facility. Inspection manual chapters.

We scheduled routine inspections of our Part 72 certificate holders on their three-year frequency. And so, we inspected the Holtec Camden Manufacturing Division in December of 2022. And as a proactive approach during the course of the inspection it included an assessment of the transition of any design changes made from Corporate Holtec to fabrication.

And that included an assessment of engineering changes that were made to the design that were transitioned into fabrication. As well as physical observation of the components, assembly, manufacturing and testing at the facility.

And so we observed, at the time during the inspection, that the new basket configuration, it was clearly evident when we, when we were performing our duties on the shop tour. And so we assessed the design associated with that. And that's when we identified the apparent violations with respect to the Holtec's process in the 7824 HELIX, okay?

As far as the amount of licensees or where the canisters and baskets variance were being used, we attest that Holtec maintains the records that indicate which of these canisters were fabricated with the CBS variant baskets. And again, I'll list them. 68M-CBS,

32M-CBS, 89-CBS, and 37-CBS, and where they were shipped. We have verified that through communications with Holtec. We do have a list.

And we understand that Holtec has also disclosed this issue to the licensees, that they use this group meaning. Understand that certain licenses, we understand that certain licenses have already loaded these multipurpose canister basket variance. Recognizing that some of the 7824s were to incorporate the new design, were performed back in 2020, 2021-time frame. Right?

And so having said that, licensees have loaded the canisters with these basket variance with spent nuclear fuel and placed them in the HI-STORM, FW HI-STORM 100 casks. And we understand that currently they are out of compliance, again.

These are potential violations. They're apparently violations. We haven't reached a determination yet. We haven't taken final enforcement action yet.

In closing, based on the staff's assessment, the numbers might be a little bit out of date, but we have 13 sites that have loaded approximately 115 multipurpose canisters. And we're also aware that there are other sites who plan to load

and who will also, if they continue on with the loading campaign prior to final enforcement action, or decision, that they will be out of compliance. We're still --

MS. SHAPIRO: Why do not put a stay on them. Why is there not being a stay on them loading this until there is a determination?

MR. LOVE: I'm sorry, repeat the question again?

MS. SHAPIRO: Why is the NRC not saying stop loading this until we make a determination? For them to put in baskets that have not been approved, the NRC has the authority to say stop using something that we have not approved, it's not within your license basis. Not to allow them continuing to load.

MS. HELTON: Yes.

MS. SHAPIRO: It doesn't make any sense. And my other question is, you're telling, I just want to be clear. You're saying you're not going to share where, or you can't share where these are loaded because Holtec maintains the record, or can you share with the public where these casks, baskets have been loaded? These unapproved baskets have been loaded, can --

MS. HELTON: So I --

MS. SHAPIRO: -- you clarify that?

MS. HELTON: Thank you. Yes, I agree. If we had a safety concern, we would absolutely stop operations at any facility that we regulate --

MS. SHAPIRO: How could you --

(Simultaneous speaking.)

MS. HELTON: -- and in terms of loaded campaigns, my understanding is we'll be making a decision on this reenforcement conference, the subject of this conference, we'll be making a decision before any further loading campaigns take place with these designs that are in question.

MS. RIVERA: Thank you, Shana. We do have a limited amount of time for questions, and I want to make sure that I give the most people the opportunity to share their comment or question to the NRC. So I appreciate if the public, when they come in, they can keep their questions short so that we can leave the amount, the most amount of people.

All right. I'm going to go next to, so thank you, Susan for your comment and question.

MS. HELTON: And, Aida, just to close on, you know, I hear our concern about the location. And I believe it, as a matter of public record, where the baskets are loaded. And we can put that information

into the summary of the conference.

MS. RIVERA: Yes. We can do that. All right. I'm going to go to the Team's list. And, Dave Lochbaum, you're coming up first. You can ask your question.

I believe you are muted. Are you speaking, we can't hear you?

We can't hear. All right. So, I'm going to go to the bridge line while we work out the IT issue here in the room for, all right. Do we have anybody else in the bridge line?

THE OPERATOR: Yes. We have Michelle Lee with Council on Intelligent Energy and Conservation Policy. Your line is open.

MS. LEE: Thank you. Can you hear me?

MS. RIVERA: Yes.

MS. LEE: Terrific. I want to really appreciate the attention NRC staff is giving to this matter. I have sort of three categories of questions.

One is just a request for clarification of the dates. As I understand it, the NRC discovered the issue in its December 2022 inspection of the Camden New Jersey plant. Can you clarify when the design dates, design change was made by Holtec and when Holtec began manufacturing the new design? So that's

the first general category.

Second, early on NRC, I forgot who it was, mentioned that records had been destroyed. I'd like to have some elaboration on that.

And the third question has to do with the tip-over event. I'd like a little bit of explanation of how the NRC might imagine the tip-over event that might occur? Thank you.

MS. HELTON: Yes, I'll go ahead and start answering the question, and I'll try to be, I appreciate your brevity. I'll also try to be brief so we can allow for the other hands that are raised.

I'll refer you to the choice letter that is associated with this reenforcement conference for clarity on the dates as I believe they're all clearly laid out there.

I'm not aware of any records that were destroyed, so I'm a little bit confused about that question.

But as to the tip-over event, this is not an event that we necessarily see has credible initiating event that would cause it to happen, but it is what we refer to as non-mechanistic where it is an event that bounds many other types of credible events, such as shaking that could occur from seismic

activity.

And it's a sort of an efficiency that is used in the analysis to say this is everything that we can think of that would happen to impact the cask from a structural perspective would be bounded by the tip-over event. Which we, again, don't find it to be necessarily credible from a real-life standpoint. But for simplicity and analysis it's an efficiency that helps us look at the boundaries of the design.

MS. LEE: And just to clarify, I presume that does not include catastrophic transportation accident events, you're only talking about onsite storage with that?

MS. HELTON: Yes. The certificate of compliance that we are looking at, as part of this enforcement action, is limited to storage. So, anything that would be, anytime spent fuel would be shift or transported, that would be covered by our requirements under 10 CFR Part 71. And there is a difference review associate with that, a different certificate of compliance. So yes, we are only talking about the storage of fuel today.

MS. LEE: And just briefly, my last question, how, by what mechanism are the individuals who have been analyzing safety risks and

transportation becoming informed about, like, these little issues that you, I'm using your concept that this is just not such a big deal, not a safety problem, you're only looking at it under certain conditions and you don't consider anything credible, but it's a completely, from a connective point of view, from a heat, from a fire and so forth, phenomenal context, transportation would be very different.

And things that might be, have not, have negligible or even non-existent safety impacts on a canister just merely sitting at a site, could have very significant impacts in a transportation, major transportation accident. So how do you ensure the communication on things like this is spread to the NRC? And to also the Department of Transportation.

MS. HELTON: Yes, thank you. Yes. And I think we'll close on this question and go to others. But I assure you that when spent fuel is shipped, any package that ships that spent fuel must meet the normal conditions, off normal conditions and hypothetical accident conditions in 10 CFR Part 71, which looks at a variety of accident scenarios, including those hazards that you talked about. And we do work very closely with the Department of

Transportation on shipments when they actually occur.

So, Aida, I'll turn it back to you. Thank you.

MS. RIVERA: Thank you, Shana. All right. Do we want to try Teams again or --

(Off microphone comment.)

MS. RIVERA: Okay.

(Off microphone comment.)

MS. RIVERA: Okay. All right. So, I'm going to go back to Dave Lochbaum to give the opportunity to him, although I don't see him in the list of people. So, Kalene Walker, you're coming up next.

MS. WALKER: Hello, can you hear me?

MS. RIVERA: Yes, we can.

MS. WALKER: Great. My question is, a couple of them actually, is the NRC factoring the history of the shim design problem with Holtec?

In 2018 Holtec delivered a bunch of canisters with defective shims, with pins that they changed the design on. They loaded four canisters and then determined that, you know, they took back all of the other canisters that had been delivered. And so, we have four canisters there with these defective shim designs. Is this going to be factored into some kind

of record of repeat pattern type of thing? That's one question.

The tip-over analysis, is that, this is kind of a technical upping, I'd like to email you on the side but is this tip-over, that would be an accident condition, but what about the controlled tip-over for the alleged transporting of these canisters and how this would affect the internals of the canister when they try and transport these things, has that analysis been done, or will that be done as well?

And the third thing is the path to compliance. Holtec said that if the NRC determines that it's out of compliance, they will put in an exemption request. When would the NRC require compliance?

We know that there have been bad shims, bad welds, uninspectable welds, miss loaded fuel at Diablo Canyon, at Byron. Holtec left a canister overnight in an operable cooling condition. We know there was the near drop incident at San Onofre.

None of these situations can be corrected, if necessary, with the canisters, the welded canisters. None of these incidents could have been into a, been put into a compliance condition because there is no way to retrieve fuel from a welded

canister anywhere in this country. So I'd like to know when the NRC is going to acknowledge that problem with the thin-wall welded canisters. Thank you.

MS. HELTON: All right, thank you, Kalene, for your question. So, I'm going to take a stab at answering all these questions.

(Off microphone comment.)

MS. HELTON: Exactly. Okay. So, do you want to take the first one? That is, take into consideration the previous design issues of 2018.

MS. RIVERA: All right. So, I heard two questions that I think I can give the answers to. One is, whether or not we're considering, in the PEC that we're having today, the conference we're having today, the relevance of other violations that have been had in the past.

The PEC today is focused on the particular violations that were in the choice letter that was issued. So they're specific to this. So, the scope of our PEC today, our conference today, was focused on that.

However, as I listed in our representation about the process, history is one of the factors that gets considered in our final decision. We have not made that final decision yet, but yes, it's a factor

that is considered when we are making that final decision. So I think that was the first question you had on there.

Another question I heard in there was timing. When are we going to require that Holtec make corrective actions. Part of this process was to get Holtec's perspective, and any information they had on corrective actions that included the timing of those corrective actions.

So we're still in that process of getting that from Holtec and evaluating the timeliness and the timing for the corrective actions that they're going to take. So that's still in process. We don't have a date set for that yet.

But as Shana referred to earlier as far as, if there was an immediate short-term safety significant issue, then NRC would have taken action to require immediate actions, including stopping shipping. However, we did an initial safety analysis and determined there was no immediate safety significance for the limited short time while we complete this process that we have of enforcement. So at this point in time, we're waiting to get the rest of the information from Holtec on timing.

MS. WALKER: Just a clarity of fact.

There is no way for Holtec to comply in compliance with any of these issues that have happened. Had they been serious in immediate safety concerns, which is very possible it could have been, say with the near drop incident, there is no way for the canisters to be brought into compliance.

And this is to the NRC this complaint, not to Holtec. This is to NRC's lack of regulatory adequacy.

MS. RIVERA: All right, thank you. All right, Kalene, thank you for your comment. And noted.

Do we want to go the bridge line to see if we have any other questions or comments there?

911 OPERATOR: We have no other questions at this time.

MS. RIVERA: All right. So, I'll go back to the Teams. Jacquelyn Drechsler? I'm missing the full name, so sorry about that.

MS. DRECHSLER: Yes. Okay, thank you. My name is Jacquelyn Drechsler. I'm in Valley Cottage, New York.

I really agree with Susan Shapiro about the timing for this. We lost 37 minutes due to you extra conference offline and then, you know, the answers to the questions, which are really important,

but that takes up even more time. I'm not going to be, I'm just going to go. Okay.

I don't know which is longer, the list of past, present and likely future criminal behavior or Holtec International or the list of violations for Holtec International. Some of these violations have just been listed, so I'm not going to go into all of those. But there are many.

And it's very funny, in a way, how these security and safety violations come up at decommissioning oversight board meetings for the NRC and Holtec regarding Indian Point. Holtec, through Richard Burroni, is allowed to explain away things and say things like, my bad. This was a good lesson learned for us, we could have done a better job there. We're really not proud of this one to be honest with you.

We have problems with Holtec not doing the right thing. Holtec had not taken corrective action in a timely manner which resulted in civil penalties for several of their violations.

Regarding this inspection that was done in December of '22 where a Level 4 violation was found, which is being treated as a non-cited violation, you know, this is an important matter of worker, public

and environmental safety. Holtec made changes without having amendments for changes to canister for spent fuel cask designs.

They failed to maintain records of changes in the facility and in the spent fuel storage cask design. Changes and procedures. Changes of written evaluations, tests and experiments. And failed to submit applications to the NRC prior to implementing changes. They failed to perform adequate tip-over calculations, to monitor the baskets and variance and material strength assumptions that were different.

I am quoting now from the NRC report. "Holtec incorrectly completed that the fuel baskets would not experience any permanent deformation. They stated that there was no plastic deformation. The changes being considered now show plastic deformation."

Your conclusion regarding these violations is that Holtec implemented corrective action. And therein lies the problem. These violations should not be occurring in the first place. There should not be a need for corrective actions. It does matter that violations are repetitive and willful.

I want the NRC to stop treating Holtec like the crybaby company they are. I've seen their

letters to the NRC to not charge them with fines for violations.

The long-term safety of the casks, which stores the most dangerous material on earth, hot radioactive waste, is at stake. Holtec International makes changes and makes assumptions without correct testing, guidance or approval. Holtec ignores the rules.

So, one who may be on the call or not, John Sullivan, suggests that since financial penalties are one option he has two more. More robust inspections and hot cells onsite.

Holtec has to stop getting slapped on the wrist or they will keep on making it up as they go along, challenging the NRC and putting everyone and the environment at risk with their shoddy casks that they surreptitiously changed designs on and can't get right. A final determination needs to be made that this indeed is a serious safety violation.

And the full range of options includes an order. There needs to be a large civil penalty for willful and repetitive history and an order. Thank you very much for your time.

MS. RIVERA: All right. And thank you for your comment, we'll take it into consideration.

MS. DRECHSLER: Thank you.

MS. RIVERA: All right. Joni Arends is next. Arends.

You are mute, Joni, if you are speaking. There you go.

Joni, we can't hear you. All right, I'm going to go to the next person. Kenn Hunter from Constellation.

MR. HUNTER: Yes, this is Kenn Hunter from Constellation. Can you hear me, okay?

MS. RIVERA: Yes.

MR. HUNTER: Okay. So as a utility, and a lot of utility members on this call, you know, we have a vested interested in what comes out of the violations, if indeed there are violations at the end.

And if there are violations I just wanted to ask if we've considered, based on the preliminary discussions of low safety significance, have we considered maybe an enforcement discretion type memorandum in lieu of having each one of the utilities submit the individual exemption request which can be kind of consuming on both sides?

MS. HELTON: Thank you for the question, Kenn. And I think we're very sensitive and aware of the concerns from the public, as well as the concerns

from the industry about what these potential apparent violations mean and how that could impact you going forward.

Today we're just talking about the apparent violations and collecting information about these AVs to try to decide our final enforcement action. If there are going to be violations and if there are, what is the severity level.

Going forward, if there are violations, I think your question is potentially a topic for future public dialogue.

MR. HUNTER: Great. Thanks.

MS. RIVERA: Okay, I'm going to go back to Joni to see if they can speak up and we can hear.

No, we can't.

No. All right. Last chance for the bridge line. Do we have anybody else in the bridge line?

THE OPERATOR: No, ma'am, we have no one else at this time.

MS. RIVERA: All right.

MS. HELTON: Yes, we do see Joni Arends hand is raised, and we're not able to hear you, so if you would like to call in on the bridge line, we'll wait a moment to see if anybody comes in on the bridge

line.

(Pause.)

MS. RIVERA: Did somebody else join on the bridge?

THE OPERATOR: No, ma'am.

MS. RIVERA: All right. Kalene, did you raise your hand again? Do you have any additional comments?

MS. WALKER: I just wanted to read from the shim incident at San Onofre. Holtec "failed to establish adequate design control measures for selecting and applying materials, parts, equipment and processes essential to the function of safety related structures, systems and components the NRC said in the November inspection report.

Holtec also failed to maintain written records of changes to its canister design, including an evaluation of why the design change could be implemented without applying to the NRC for an amendment to the canisters certificate of compliance."

This is not a new problem with Holtec. I just wanted to put that on the record if the recorder is still on. Thank you.

MS. RIVERA: Thank you. And I think that with that I think we're closing public comments. And

I'll turn it over to Shana.

MS. HELTON: All right, thank you, Aida, for walking us through the comments on the bridge line and on the Teams. And for those who had challenges connecting by Teams I hope that you have future opportunities to express your thoughts because we do want to hear from the public.

But for today I believe we're bring this meeting to a close. And I would like to remind everybody about the meeting feedback and comment form. Please express feedback in the forms. We're always seeking to improve our public meeting process and recognize that with this being a hybrid meeting there is sometimes additional challenges that come along with that.

So, thanks to everybody for your patience and your participation and this meeting is now adjourned.

(Whereupon the above-entitled matter went off the record at 12:30 p.m.)