

## WEBINAR TRANSCRIPT

This document provides the transcript from a predecisional enforcement conference (PEC) webinar that was held on January 24, 2019, between the Nuclear Regulatory Commission (NRC) and representatives of the licensee, Southern California Edison (SCE). This meeting was held to discuss preliminary findings of a Special Inspection that the NRC conducted at San Onofre Nuclear Generating Station in September 2018. The inspection was conducted in response to an incident that resulted in the misalignment of a multi-purpose canister loaded with spent fuel at the San Onofre Nuclear Generating Station.

### NRC Participants:

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Michele Burgess, Senior Regional Coordinator  
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Linda Howell, Deputy Director  
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Chris Smith, Reactor Inspector  
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Michael Vasquez, Team Leader  
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Licensee Participants:

Stefan Anton, Vice President of Engineering  
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Al Bates, Manager  
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Southern California Edison

Doug Bauder, Vice President of Decommissioning and Chief Nuclear Officer  
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Lou Bosch, Plant Manager  
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Tom Poindexter, Attorney  
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Jerry Stephenson, Manager  
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- [Scott] All right, good afternoon.  
I'm Scott Morris, Regional Administrator  
NRC Region IV Office here in Arlington Texas.  
This afternoon, we will conduct a public  
predecisional enforcement conference  
between the NRC and  
Southern California Edison  
concerning activities at the San Onofre  
Nuclear Generating Station.  
During this conference, we will discuss  
two apparent violations  
of NRC requirements  
that we are evaluating under  
the NRC's enforcement policy.  
Before I go any further, I'd  
like to ask the NRC staff  
to introduce themselves,  
then give Southern California  
Edison an opportunity to  
introduce your representatives.  
So, with that, Michael.

- [Michael] Good afternoon,  
I'm Michael Vasquez.  
I'm the Team Leader for the Allegation  
Coordination and Enforcement Staff.

- I'm Dr. Janine Katanic  
and I'm the Chief of the,  
can't even remember anymore, Fuel Cycle  
and Decommissioning Branch.

- [Linda] And I'm Linda

Howell, I'm the Deputy  
Division Director for the Division of  
Nuclear Materials Safety.

- [Eric] Eric Simpson, I was  
the lead inspector for the  
special inspection at the San Onofre  
Nuclear Generating Station.

- [David] I'm David Cylkowski,  
Regional Council for NRC.

- [Chris] I'm Chris Smith,  
I'm a Reactor Inspector  
in the Division of Reactor Safety.

- [Lee] I'm Lee Brookhart,  
I'm the dry cask storage  
inspector here at Region 4.

Okay and on the phone, we  
also have some NRC staff  
as well. We have Patty Silva,  
she's the branch chief in NMSS,  
Division of Spent Fuel Management,  
we also have Thomas Marenchin,  
he's a Enforcement Coordinator  
in the NRC's Office  
of Enforcement back at Headquarters,  
we also have Michelle Burgess, who is an  
Enforcement Coordinator in the Office of  
Nuclear Materials Safety and Safeguards,  
again at Headquarters so I'll now turn  
the table over to you,  
Mr. Bauder, and introduce your reps.

Thank you, we appreciate  
the opportunity to be  
here this afternoon,  
so thank you for that.

- [Doug] I'm Doug Bauder the  
Vice President of Decommissioning,  
and Chief Nuclear  
Officer for San Onofre.

We have Tom Palmisano,  
our Vice President of  
External Engagement, Al  
Bates, Manager of Regulatory  
Affairs & Oversight, Jerry  
Stevenson, our Manager  
of Engineering, Jim Peattie,  
General Manager of Oversight  
and Lou Bosch our Shutdown Plant Manager.

Once again, we appreciate  
the opportunity so thank you.

- [Scott] Ah before we move forward,  
just a couple of logistical  
things just to inform you all,  
and maybe you know this already,  
but for the visitors here today, we have  
facilities down the hall,  
restroom facilities,  
drinking fountains et cetera,  
just out this door and down.  
To the left, also in the  
event of emergency,

we will stay together, we'll  
all exit through the main  
entrance unless that's  
blocked and there's a side  
exit as well but we would gather  
out in the parking lot and  
do a count up before we're  
allowed to reenter the building.  
Also logistics, let me  
ask everybody to silence  
their cellphones, and  
let's see, for those of you  
who are having sidebar  
conversations or those in the  
audience, please keep your  
voices down to a minimum  
because this session is  
being recorded, and so just  
to increase the fidelity of the recording  
we want to keep the voices and background  
noise down to a minimum.  
Lastly, please be mindful  
that this predecisional  
enforcement conference  
is being broadcast again  
to a wider audience, via  
webinar, I think we have  
on the order of about 400  
folks who have registered.  
I don't know how many

exactly are online right now  
but we may get more  
joining us as we proceed.  
So if members of the  
public or licensee staff  
present here, oh also if  
anybody needs to take a break,  
please, because it's being  
recorded, please do so  
via the rear of the room,  
you can see that the Skype  
camera's right there so  
we want to minimize the  
amount of traffic walking  
back and forth in front of  
the camera.

Okay, so this is a category  
NRC, Category 1 meeting  
between the NRC staff and  
Southern California Edison.  
It is open to public  
observation but not to public  
participation. The NRC  
staff will be available  
after the business portion  
of this conference  
has concluded to answer  
questions from members of  
the public and to receive  
comments concerning the

matters discussed during the conference.

Including those participants  
who are observing  
this conference via the webinar.

They can submit their  
questions through the webinar  
application, all right,  
so I think we can go to  
the next slide.

So to those of you who  
are participating via  
webinar, welcome. In the  
event that we encounter  
any technical difficulties  
with the webinar we do  
have a backup conference  
telephone line, it will be  
available, it's not active  
now but if the webinar has  
a problem we'll activate it  
at the number you can see  
and the passcode that is on that slide.

Also note that the link  
to the NRC Spotlight page,  
that's our homepage, the  
NRC homepage, where you can  
locate a copy of the NRC inspection report  
that's really at issue  
today, that describes the  
apparent violations that

we will be discussing.

And a reminder to all  
conference participants,  
please state your name before speaking.

Just for the benefit of  
the audience, it will also  
help with the transcribed  
version of this that  
we'll also be posting  
on our website in the  
coming weeks.

So I want to just emphasize that we,  
that the fact that we're  
conducting this conference  
today does not mean that  
we've made a final decision,  
or determination that  
the violations occurred or  
that any enforcement action  
will be taken.

The conference however  
is, an important step  
in our well established  
deliberative process.

The main purpose of this  
conference is to provide  
Southern California Edison  
an opportunity to share  
with us any additional information you all  
think we need before we make, to make an informed

enforcement decision,  
however again, no decisions  
will be reached or discussed  
during this conference.

So I strongly encourage  
all of you to be candid,  
provide your perspectives  
on the apparent violations  
or any other related issues,  
their safety significance,  
the circumstances surrounding  
the apparent violations,  
corrective actions you've  
taken or have planned or  
any other information you  
believe has a bearing on  
our final enforcement decision.

We get the next slide.

So the agenda you'll see  
here, copies of the agenda  
have been made available  
to the participants as part  
of our slide presentations,  
I think we have some  
in the back of the room as well so,  
I'm shortly going to turn  
over to Linda and Linda  
will further discuss some  
details about the purpose  
of this conference.

Afterwards I'll give you,  
Southern California Edison,  
an opportunity to make  
any opening remarks if you  
have any, and after those opening remarks  
I'll ask Michael Vasquez,  
the lead for our Allegations  
and Enforcement staff here  
in Region IV to provide  
a high level overview of  
the NRC's enforcement policy  
and our process, and then  
Dr Katanic will discuss the  
two apparent violations  
that are at issue today  
in a little more detail,  
and then we'll turn the  
conference over to Southern  
California Edison to provide  
your input and perspectives.  
I note that, just note  
that near the end of the  
conference, business portion  
of the conference, there  
is an item listed as NRC Caucus.  
That's really just an  
opportunity to take a short  
break probably 10, 15  
minutes. It will give all of  
us here, NRC staff and

those who are participating  
by phone an opportunity  
to caucus in a separate  
conference room to discuss what  
we heard and make sure  
that we don't have any  
further questions or  
clarifying information  
that we're looking for.

I don't anticipate that  
caucus will, like I said,  
last 10 or 15 minutes at  
the most, we'll come back.

If we have an additional  
question or two we'll  
ask it, otherwise we'll  
end the conference, okay?

Okay I think that is  
about it, so let me just  
turn it over to Linda.

- [Ryan] Sorry to interrupt,  
we were getting some feedback  
about not getting enough  
sound from the microphones  
so folks please make  
sure that you use your  
microphones.

- [Scott] All right,  
thanks for that, Ryan.

- [Linda] Thank you.

Good afternoon, I'm Linda Howell,  
the Deputy Director of the Division of  
Nuclear Material Safety  
in Region IV, and since we  
have the conference open for  
public observation I'm  
going to repeat just a little  
bit of background  
concerning the two apparent  
violations that are the  
subject of the conference.  
Those two apparent  
violations were described  
in the NRC's inspection report  
issued on November 28th, 2018.  
That report documented the  
findings and observations  
resulting from the special  
inspection that was  
initiated in early September 2018.  
The inspection was conducted  
to review circumstances  
associated with an incident  
that occurred on August  
3rd, 2018, at the San Onofre  
Nuclear Generating Station.  
On that day, during placement  
of a loaded spent fuel  
canister into its intended storage vault,  
licensee staff and

contractors failed to notice  
the canister was misaligned  
and not being loaded  
directly into the storage vault.

In addition to the two  
apparent violations which  
Dr Katanic will discuss  
shortly, other violations  
of lesser safety significance  
were identified and  
documented in a Notice  
of Violation that was  
issued with the inspection report.

The purpose of the conference  
today is to discuss  
the two apparent violations.

As Scott noted, there are  
apparent safety significance  
and corrective actions  
that have taken at the plant.

We do not plan to discuss the violations,  
identified in the Notice of Violations  
in today's conference.

The inspection report and  
other relevant information  
is available on the NRC  
public webpage in the  
Spotlight portion as Scott just mentioned.

I also want to note that the  
purpose of the conference

today is to share information that will be sufficient for the NRC to make an informed enforcement decision. The purpose of the conference is not for us to make any conclusions or draw any conclusions on whether Southern California Edison's ready to resume fuel loading operations. That decision will be made following further inspection efforts by the NRC. The predecisional enforcement conference is being broadcast by webinar to members of the public to directly observe and listen to information presented by both the NRC and Southern California Edison. While the conference, again, is not open for public participation, we will prove an opportunity for members of the public to ask questions of the NRC staff who are present here today concerning

the enforcement process  
and the next steps forward.  
Members of the public  
who are observing the  
conference via the webinar  
can submit questions  
via the question box  
throughout the course of the  
conference. NRC staff  
will be monitoring the  
webinar application to collect  
your questions and will  
attempt to respond to  
as many of the questions  
as possible within the  
timeframe allotted this afternoon  
with our priority on questions that directly  
relate to the NRC's enforcement  
and decision making process.

We'll try to address this as we go.

I just want to note, only the NRC staff will  
participate in the public  
portion of the meeting  
after we conclude the  
predecisional enforcement conference.

We'll excuse Southern  
California Edison staff so  
that it's really the NRC  
addressing the public comments.

Presentations that are

being used in the conference  
have already been posted  
to the NRC public web page  
as we noted. Those presentations  
and other documents  
associated with the conference  
that might be received  
following the conference  
will also be made available  
in the NRC's Agency-wide  
Document and Access  
Management System, or ADAMS.  
The video and transcript  
from the conference will be  
also posted to the Spotlight  
section of the webpage,  
and in addition we'll post  
the comments and questions  
that we receive from  
members of the public to the  
Spotlight portion of the web page.  
I want to note that the  
transcript and the other  
comments and questions  
will take a few weeks  
to be posted since we have  
to receive the transcript  
from the contractor who  
is providing the webinar  
service and review both the

transcript and the questions  
to ensure accuracy of the information.

For the Licensee representatives,

let me just remind you,

I know you might probably

be aware of this,

should you provide us any

additional information

shortly after the

conference that you believe

is sensitive and you would

like withheld from the

public you must provide

us with justification

for doing that in writing

in accordance with NRC

regulations.

So were there any questions on how we plan  
to proceed with the conference?

Thank you.

So let me turn the discussion over to  
Southern California Edison now to provide  
any opening remarks that they might have.

- [Doug] Well thank you, once  
again, this is Doug Bauder,

the Vice President of Decommissioning  
and-

Thank you.

Once again, this is Doug Bauder, the  
Vice President of Decommissioning

and Chief Nuclear Officer for San Onofre.

I want to again appreciate the opportunity to be here today and provide our analysis about the August 3rd downloading event and what followed, to give our safety perspective and to discuss our corrective actions as well and so we really appreciate the dialogue and are thankful to be here, appreciate it.

- [Linda] Thank you Doug. We'll now turn the conference over to Michael Vasquez to discuss our enforcement process.

- [Michael] Good afternoon, my name is Michael Vasquez, again I'm the Team Leader for the Allegation and Coordination and Enforcement staff.

There are a couple of things I want to know to start off with, like Linda said before about, no final decision will be made today. The NRC has not made any final decisions yet on whether the apparent violations actually occurred. This conference is the last

step in our information gathering in order to make an informed enforcement decision.

We provided Southern California Edison with an inspection report and that is what really provides our understanding of the apparent violations and the circumstances, and this conference is your opportunity to provide your perspective on the apparent violations. So during this conference, we'd like to hear your perspective on whether violations occurred, the circumstances surrounding the identification of the apparent violations, and any corrective actions you have taken or plan to take. This is your opportunity to give us any information that you believe that we should take into account when making our enforcement decisions. Next slide please.

If the NRC concludes a violation has occurred

then the NRC will assess the significance of that violation and we use severity levels, and in order to classify the significance of violations. There are four severity levels with Severity Level I being the most significant, and Severity Level IV being the least. Severity Levels I, II, and III are considered escalated enforcement and are candidates for monetary civil penalties. We take four factors into consideration when determining the severity level of the violation. First we look at whether there were any actual consequences. Second we look at whether there were any potential consequences, third we look at the potential for impacting the NRC's ability to perform its regulatory function, and four, we consider

any aspects of willfulness associated with the violation. Now, if we determine that a violation was categorized as a Severity Level I, II, or III, it is a candidate for, they are candidates for civil monetary penalties. So the NRC's civil penalty assessment process appears in the NRC Enforcement Policy in this diagram but let me simplify it for you. First, the NRC considers the enforcement history and the severity level of the violation. Second, we may consider the circumstances surrounding identification of the violation, and that is whether the licensee is deserving of identification for that. And third, we are always going to look at a licensee's corrective actions, whether they were sufficiently prompt and comprehensive to prevent that violation from recurring in the future.

And forth, we may consider discretion, what we term as an exercise of discretion to either increase or decrease the size of a civil penalty based on factors described in the NRC Enforcement Policy. So, during this conference, we really want to hear your position on how the issues were identified, and corrective actions you've taken and plan to take. Although each case is different, there are three possible outcomes on the civil penalty assessment process. First, there may be, if the licensee identifies and corrects a violation, there may be no civil penalty. Second, if a licensee corrects, or, but doesn't identify a violation, that could end up with a base civil penalty. And third, if the licensee does not identify and does not correct a violation it could end up with twice

the base civil penalty  
and for this case,  
an independent spent fuel  
storage installation,  
the base civil penalties range  
from \$36,250 for a Severity Level III  
violation, to \$72,500 for a  
Severity Level I violation.  
After the conference we're going to have our  
enforcement decisions  
to make, and there are  
four possible outcomes for  
our enforcement decisions.  
First, the NRC may decide  
to take no enforcement  
action if you've demonstrated  
that no violations  
occurred. Second, the  
NRC can issue a Notice of  
Violation, this is a written  
notice documenting that a  
violation has occurred and  
requires a written response  
documenting corrective action.  
Third, the NRC can issue a  
Notice of Violation with a  
civil penalty. The  
intention of the fine is to  
emphasize compliance  
in a way that prevents

future violations and that focuses the licensee's attention on significant violations.

Fourth, the NRC can issue an order which is a written directive that can modify, suspend, or revoke a license and an order can require specific corrective actions be taken.

The NRC's enforcement actions we take are publicly available on the NRC website.

After this conference it may take us four to eight weeks to publish the enforcement decision.

If a civil penalty or an order is issued, normally our Office of Public Affairs will also issue a press release on that day or the day after.

And last, licensees, NRC licensees have appeal rights and may challenge NRC enforcement action.

The instructions for challenging an enforcement action will be discussed in the action itself when coming in.

Next slide.

Any questions on this overview

of the enforcement policy?

Thank you.

Back to Linda.

- [Linda] Okay, well I'll turn the discussion next over to Dr Katanic who will provide some details concerning the apparent violations.

- [Janine] Okay, I'm Doctor Janine Katanic, and I'm the Chief of the Fuel Cycle and Decommissioning Branch, Mr Eric Simpson who was the Lead Inspector for the Special Inspection who works with me in this branch. I'd like to go over the two apparent violations and I will note for our audience that the apparent violations described in the slides are in abbreviated or summarized version just for ease of presentation. I will, however, verbally provide the full text of the apparent violations, which can be found in the handout. As previously noted, the apparent violations are subject to further

review and may be revised.

On slide 10, just to give a very high level overview before I read the text of the apparent violation, this apparent violation is related to the August 3rd, 2018 incident when a loaded spent fuel canister was being lowered into the vault and the canister was misaligned and was not being supported by the redundant, important-to-safety, drop protection features which in this case were the slings.

Apparent Violation One, to read the text of it, 10 CFR 72.212(b)(3) requires, in part, that each cask used by the general licensee conforms to the terms, conditions, and specifications of a Certificate of Compliance listed in 10 CFR 72.214. 10 CFR 72.214 includes a list of all the approved spent fuel storage casks that can be utilized under the conditions specified

in a specific Certificate of Compliance.

This includes Amendment 2 of Certificate of Compliance 072-01040. That Certificate of Compliance, Amendment 2, Condition 4, heavy loads requirements requires that lifting operations outside of the structures governed by 10 CFR Part 50, must be in accordance with Technical Specifications, Appendix A, Section 5.2. Technical Specifications Appendix A Section 5.2.c.3 requires that the transfer cask when loaded with spent fuel may be lifted and carried at any height during multi-purpose canister transfer operations provided the lifting equipment is designed with the redundant drop protection features which prevent uncontrolled lowering of the load. Contrary to the above, on August 3rd, 2018, the licensee failed to ensure

that the redundant drop protection features were available to prevent uncontrolled lowering of the load.

Specifically, the licensee inadvertently disabled the redundant important-to-safety downloading slings while lowering canister 29 into the storage vault.

During the approximately 45 minute timeframe, the canister rested on a shield ring, unsupported by the redundant downloading slings at approximately 17 to 18 feet above the fully seated position.

This failure to maintain redundant drop protection placed canister 29 in an unanalyzed condition because the postulated drop of a loaded spent fuel canister is not analyzed in the Final Safety Analysis Report.

- [Ryan] Janine, I apologize. We're getting major feedback that folks are not able to hear so we're going to

take just a one minute  
pause if we can, we're  
going to move the mic just  
one second, hold on.  
Please try to move your  
microphones to the best  
of your ability, close to your mouth.

- [Man] Sorry folks.

- [Janine] Thank you.

If there are no questions  
regarding Apparent Violation  
1, I'll move on to  
Apparent Violation 2.

Are there any?

- [Doug] No questions, thank you.

- [Janine] All right on  
slide 11, regarding Apparent  
Violation 2, again, just to  
give a high level overview  
before I read the apparent violation,  
the apparent violation involved timely  
notification to the NRC of  
the disabling of important to  
safety equipment. The incident  
occurred on Friday, August  
3rd, 2018, and on the afternoon  
of Monday, August 6th, 2018,  
you provided a courtesy  
notification of the  
incident to our office, in

fact, to myself and others.  
Following this courtesy  
notification the NRC  
discussed the reporting requirement with  
Southern California  
Edison during subsequent  
conversations. On September  
14th, 2018, at the  
prompting of the Special Inspection Team,  
the condition was formally reported by  
Southern California Edison  
to the NRC Headquarters  
Operations Center.  
Apparent Violation 2,  
10 CFR 72.75(d)(1)  
requires in part that  
each licensee shall notify  
the NRC within 24 hours  
after the discovery of any  
of the following events  
involving spent fuel in  
which important to safety  
equipment is disabled  
or fails to function  
as designed when: one,  
the equipment is required by regulation,  
licensed condition or  
Certificate of Compliance to be  
available and operable to  
mitigate the consequences

of an accident and two,  
no redundant equipment was  
available and operable  
to perform the required  
safety function. Contrary to  
the above, from August 6th  
to September 14th, 2018, the  
licensee failed to notify  
the NRC after discovery  
of important to safety  
equipment being disabled and  
failing to function as  
designed when required by  
the Certificate of Compliance  
to provide redundant  
drop protection features  
to prevent and mitigate the  
consequences of the drop  
accident and no redundant  
equipment was available and  
operable to perform the  
required safety function.

And if there are no questions  
about Apparent Violation 2,  
I'll turn it back over to Linda.

- [Linda] Thank you Janine.

We'll turn the discussion over to  
Southern California Edison  
so that you can provide  
your presentation, but

first in advance of that,  
to the extent possible I  
want to recommend that the  
NRC staff holds their  
questions until the conclusion  
of Southern California  
Edison's presentation to give  
them an opportunity to  
complete the full presentation.  
There will be ample time  
for the NRC staff to ask  
questions at the conclusion of  
Southern California Edison's  
presentation, so let me  
go ahead and turn it over  
to you, Doug.

- [Doug] Thank you.

So for our presentation  
if you could just go  
right to slide three  
where the agenda is listed.  
Today, we intend to talk  
about both potential  
violations, the August 3rd download event,  
a description of the event,  
its safety significance,  
what our causal analysis  
has shown us and then  
our corrective actions.  
And then we move into

Reportability where we talk about the timeline, the causal analysis and once again, corrective actions associated with reportability.

We also have a segment on regulatory considerations, then we'll conclude, so that's the basic structure for that, if you could move to the next slide please.

The next slide.

So the incident on August 3rd, when the redundant safety functions of our lifting system were not maintained, is a serious matter which should not have been allowed to happen.

We accept the proposed violations of regulatory requirements. Next slide.

So immediately following the event, we placed the affected canister as you know in a safe condition and suspended our Fuel Transfer Operations. We've analyzed the incident and developed corrective actions with the utmost rigor, depth,

and thoroughness. We've also used top industry experts to verify our conclusions and actions.

Further, we know now with full confidence, that in the unlikely event of a load drop on August 3rd, the canister would not have been breached, and there would not have been any radiological hazard for our employees or to members of the public.

Next slide.

There were, however, significant organizational and programmatic lessons learned. We've established comprehensive and rigorous criteria prior to restarting our Fuel Transfer Operations. Those include: demonstration of effective corrective actions and equipment operations to the NRC, multiple independent reviews, full satisfaction by Edison that our actions are complete and they are sustainable and then

planned post-restart  
actions to ensure further sustainability.

Next slide please.

You'll see this slide later  
on in our presentation when  
Jim Peattie talks to it,  
we've provided our  
corrective actions, I just  
want to cover a couple  
of highlights here.

In procedures, we took a  
hard look at error traps,  
worker usability, and we  
put a lot of effort into  
making our procedures more  
usable for our workers.

In training, we strengthened  
the entire training process  
for San Onofre, this includes  
new training materials.

And we took a look at training  
with the perspective that  
ensuring that when a new  
worker shows up at the station,  
that worker is fully  
trained before being able to  
take a spot in fuel transfer operations.

With regard to equipment,  
we installed load monitoring  
devices and those

devices have proved to be very effective. This week on Tuesday, I spent time in the field watching the load monitoring in action during an actual simulated canister download.

I am pleased with that process.

In corrective actions, we took a broad look at the program and expanded it such that we now have one corrective action database for all workers, whether they are contract workers or Edison workers, and we've encouraged lowering the threshold for workers to enter issues into the corrective actions system. Moving on to Oversight.

Simply put here, we've overhauled our oversight process, we've put new leaders in place, we looked at the organizational structure of Oversight.

That structure includes instead of filling out checklists, active coaching, and monitoring the work in the field. Also

in the area of Oversight,  
my managers are now in the  
field, more often under a  
structured program observing  
and coaching for performance.  
Once again, we'll talk in  
more detail later on today  
about these specific areas.  
I would like now to turn  
the presentation over  
to Lou Bosch, our Shutdown Plant Manager,  
for the description of the event. Lou.

- [Lou] Okay. Thank you Doug.

Next to that.

Okay, so what happened?

On August 3rd, 2018, as a  
loaded multi-purpose canister  
was being downloaded into  
the storage vault, it became  
lodged on the shield ring.  
For less than an hour, the  
MPC remained lodged and  
was not suspended by the rigging.

So what is the significance of this?

Although unlikely, the  
canister could have fallen  
18 feet to the bottom  
of the cavity enclosure  
container.

Two, the canisters have

been analyzed to be able to  
withstand drops of up to  
25 feet with substantial  
margin of safety.

And three, during the event, there was no  
radiological risk to  
employees or the public.

However, this is still  
an unacceptable incident  
and Edison takes it very seriously.

Can you hear me?

So now, next slide, we're going to go to a canister  
download evolution, before we start,

I want to take the time to  
walk through an animation  
of a canister download.

This will help in our  
discussion to ensure there  
is a clear understanding  
of a normal canister  
download, what exactly happened  
on the August 3rd event  
and what should have happened  
on the August 3rd event.

So start the video please.

Stop there.

So I'm going to point out  
the different components.

So, we're looking right  
here on the orange,

this is the vertical cask transporter.  
The transporter is  
basically a mobile crane,  
and it's different than a normal crane  
in that it doesn't have a spool with a cable,  
instead it has rising hydraulic towers  
with fixed length slings.

One end of the slings  
is mounted to a fixed  
position on the tower,  
and the other end is on the load.

Exactly.

The next we're pointing to  
is the transfer cask itself.

The transfer cask is a lead  
shielded cask that houses  
the canister, its function is to provide  
shielding during the transport operation.

In the cutaway view, we're  
looking at the actual canister.

Holtec calls this MPC.

This is a five-faced  
stainless steel container  
housing 37 fuel  
assemblies, welded shut and  
back-filled with helium.

On top, is a shield cone.

The shield cone lowers the dose to our  
employees working on the  
downloading of the canister.

At the bottom, is the mating device.  
The mating device, you can look at that as  
the doorway into the  
cavity enclosure container.

The cavity enclosure  
container which is below  
that, houses the canister  
during long-term storage  
of spent nuclear fuel.

Okay, continue the video.  
Now the transporter is moving  
up to the mating device,  
the transfer cask will be lowered.  
And we'll stop there.

The transfer cask is now  
bolted to the mating device,  
when we continue the video,  
you'll see the transfer  
cask lift links removed, the  
transfer towers move up  
and the canister rigging  
slings that attach to the  
top of the canister.

So continue.

So these are the lift  
links that got removed,  
the towers are now moving up to the top  
and you'll see the slings connected.  
Stop there.

So now, the canister's being

suspended by the rigging  
slings. The crew will then  
remove the transfer cask lower  
lid, and opening the mating device door.

The canister is now  
ready to be lowered into  
the cavity enclosure container.

I will now describe the  
make up of the crew.

There is two people out on the MPC pad  
during the event. One  
is the actual operator,  
in the location and two is  
a spotter that is up there.

And the spotter, the roles of the spotter  
is to visually verify  
the canister continues  
to lower throughout the  
download operation and  
stop the transfer operation  
during any abnormalities.

The transport operator  
is in communication with  
the spotter and also is  
watching his tower heights  
and stops during any  
abnormal indications so  
To reiterate the operator's  
looking at tower heights and  
load then the actual person

up in the man basket watches,  
makes sure the sling continues  
in a downward direction.

So now I'm going to go  
through the three evolutions.  
What does a normal download look like,  
what happened on the event,  
and what should have happened  
on the event.

So the way the transfer  
operates on normal,  
they lower the canister  
and the slings follow right  
down with it so this is very simple,  
the beam comes down,  
the canister goes down  
and it goes to the  
bottom and they're done.

So, what happened? In August.  
About four feet down  
there is a shield ring  
down in the cavity  
enclosure container that I  
will show you.

The canister got hung  
up, the people did not  
recognize the canister got  
hung up, as a matter of  
fact the slings at this  
point started piling up

at this location both  
here, and at that location.  
Once the crew recognized that the canister  
was in an abnormal  
condition they contacted a  
cask loading supervisor and  
they actually raised it back up,  
put it back onto the load  
and it safely loaded down  
to the bottom.

So, what should have happened?

What should have happened  
is, at that four foot  
point when it got hung  
up, the spotter should  
have operated in radio  
communication with the  
operator should have stopped.

Very simply they would  
have stopped the evolution,  
they would have put the  
MPC back under load,  
and they would have raised it  
up and then lowered it down.

Continue the presentation.

So they pull the mating device door out,  
and, stop right there.

So, right here is the area of concern  
where we had the shield  
rings, where it got hung up.

So basically, the  
canister was sitting here  
and it was on the shield  
ring, resting at the  
inner side of the transfer cask.  
And then, like we talked about,  
they actually raised  
it back up and lowered it back down.

So, to finish this slide  
we're just going to  
finish the presentation,  
so we're just demonstrating  
the normal canister downloads  
to the very bottom  
and that's the final  
spot in the storage vault  
where the cask will be loaded.

I do want to mention here at the end that  
Jim Peattie will be  
presenting in his video  
all the improvements that we have made to  
the download process.

Next slide.

This kind of goes back through and explains  
the actual hang up. So  
then here is the canister  
which we described, here is  
the transfer cask on the back,  
this is the shield ring  
where it got hung up,

and this is where it was bonded to the shield ring and resting on the inside of the transfer cask.

Next slide.

As Jerry stated, I'm turning over to him for the safety significance.

- [Jerry] Good afternoon.

Good afternoon, I'm Jerry Stephenson, I'm SONGS Engineering Manager and I'll be talking about the safety significance.

I'll start with a photo of the- next slide.

Photo of the cavity enclosure container.

This assembly, the entire assembly is the cavity enclosure container.

The shield ring is marked on the slide, it goes 360 degrees around, and gets welded to the divider shell. The wall that you see there is the divider shell. The divider shell is part of the cavity enclosure container.

The shield ring is there to reduce dose to workers during the fuel transfer operation.

It's designed to be a tight fit, to be an effective shield.

It's two inches thick,  
and securely welded to the  
cavity enclosure container  
and reinforced with eight  
gussets. You can see the  
eight gussets there, you can  
see some gussets on the top.

Thank you.

The canister's carefully  
inserted through the shield ring,  
but in this case it became  
lodged on top of the ring.  
The shield ring and the welds  
to the divider shell have  
been analyzed to be fully  
capable of supporting  
the loaded canister. We'll talk more about  
the shield ring and the divider shell in  
upcoming slides. Next slide.

Okay the actual consequences.

In this event the canister did not drop,  
there was no significant  
damage to the canister,  
and no damage to the fuel.

The discussions on the  
following slides will address what  
might have happened if  
the canister had fallen.  
So what did actually  
happen, what the actual

consequences that occurred on August 3rd, are, with the canister resting on the shield ring, the canister was exposed to a potential drop of 18 feet. That's because the shield ring is 18 feet above the bottom of the cavity enclosure container. Later we'll talk about our analysis which is done at 25 feet, but the actual level of the shield ring is 18 feet.

The contact with the shield ring when it was lowered may have caused minor scratches that were evaluated to be acceptable. We'll monitor the external condition of the canister for our Inspection and Maintenance Program which will be implemented in 2020.

Next slides.

So, what was the probability of a canister drop on that day? When the canister was lowered onto the shield ring, because of the small

contact area, the ductile stainless steel of the baseplate formed around the shield ring and the gusset and they molded against each other. Because of the weight and the small contact area, there's local conformance and the two items took each other's shape.

Once they're pushed together, formed together, a significant force would be required to dislodge them, such as a seismic event.

The canister was supported by the shield ring for less than an hour and we know from probabilistic work that we've done over the years, that the probability of a seismic event during a one hour period at SONGS is very low.

Next slide.

Okay, as I've been saying, in this event, the canister did not drop, there was no significant damage to the canister, and no damage to the fuel.

However, we did a SONGS  
specific analysis of  
what would have happened  
if the canister had  
fallen from the shield ring.  
We used very conservative assumptions,  
and the damage to the  
canister would have been less  
than what we calculated.  
We postulated a drop that  
was much more severe  
than what the canister  
was actually exposed to,  
we did a deterministic analysis  
with the following inputs.  
We analyzed a fall height of 25 feet.  
The actual fall that it was  
exposed to was only 18 feet  
from the shield ring.  
We analyzed a wall  
thickness of a half inch,  
it's actually five eights  
inch, 25 percent thicker.  
We assumed no friction  
all the way to the bottom  
of the CEC impacted with maximum energy.  
We assumed an infinitely rigid bottom,  
actually the bottom of the  
cavity enclosure container  
would have absorbed some energy,

we assumed all the energy was available to affect the canister. We used a conservative strain limit, .55 inches per inch, and we used the method of evaluation approved by the NRC and a computer code LS-DYNA.

Next slide.

So the calculated maximum strain was well below the conservative calculational limit of .55 inches per inch. The external shape of the canister would be unchanged, the calculations show us that the canister will not breach. The calculational results have a lot of margin in them and they have reviewed by Holtec, SCE, and third party experts. So with no breach, there can be no release of radioactive material. This was a very conservative, deterministic analysis using NRC approved methodology. We now know, with full confidence based on this thorough and conservative

analysis that even in the unlikely event that a load drop had occurred, there would not have been any breach of the canister and therefore no release of any radioactive material or change in the radiation dose rates associated with the dry cask storage system. This system does not, therefore, present any significant additional radiological risk to our workforce or to the general public. Next slide.

We have evaluated that there would be some fuel damage if the canister had fallen. Our conservative analysis has shown that while there would have been some damage to the fuel, there would be no material impact to the safety considerations of cooling, or criticality. There would be no release of radioactive material, and there would be no change in local or offsite dose rates. Next slide.

The canister cooling would not

have been significantly more affected if there had been a load drop. The internal cooling is dependent on geometry and to a lesser extent helium flow through the fuel bundles. The helium inventory would be unaffected since the canister does not breach. The helium flow through the fuel would be mostly unaffected, and conductive heat transfer, which occurs by the metallic components and the surrounding helium is unaffected. External cooling is by air flow down the outside of the divider shell and then back up past the canister. Clearance between the canister and the divider shell is large, six inches radially and 12 inches diametric. Any slight deformation in the exterior dimensions of the canister would not affect flow past the canister. Our conservative analysis shows that the canister will remain cooled.

Next slide.

In summary, the possibility of a canister drop during the 53 minutes that it was on the shield ring was very low. Even if the canister had dropped, we have shown with very conservative assumptions that the canister would not breach. Without a breach, there would have been no release of radioactive material, there would have been no impact to the cooling of the canister. There would have been no change in local offsite dose rates, the canister would have remained cool and safe in a cavity enclosure container. We've performed thorough and conservative analysis that shows that there was no significant radiological risk to our workforce or to the general public.

Thank you.

Now I'll introduce Jim Peattie.

- [Jim] Good afternoon,  
my name's Jim Peattie,

I am the General Manager for Decommissioning Oversight. So in response to the August 3rd incident, two cause evaluations were performed to identify the causes and the corrective actions to prevent recurrence. We utilized third party cause evaluation experts, and industry peers to assist us in the development and review of the cause evaluations and the corrective actions. We performed a root cause evaluation focused on why the fuel transfer download team failed to recognize the unload condition and stop the download activities. We also performed an apparent cause evaluation, in order to understand why management expectations were not met for oversight. These expectations included: thorough review and acceptance of contractors' programs and procedures, ensuring that the procedures and process are

adhered to by the contractors,  
and that we stop work  
if compliance or safety  
issues are identified.

Next slide please.

Our root cause evaluation  
concluded that we failed  
to recognize the complexity  
and risk associated  
with a long duration fuel  
transfer campaign while  
using a relatively new system design.

SONGS project is a long duration  
campaign and is projected  
to transfer more than 70  
canisters of fuel from  
wet to dry storage. This  
is different from a typical  
fuel transfer campaign  
which might move five to  
ten canisters using a  
stable crew of personnel  
with high levels of experience.

Next slide please.

Our root cause evaluation  
also identified five  
contributing causes.

These include, number one,  
a design review process  
that did not capture the

unintended consequences  
of the design addition of the shield ring.  
Resulted in tighter  
clearances during downloading  
and the potential for hang up.  
Number two, inadequate  
content and procedures to  
recognize the special conditions related  
to the new shield ring.  
Number three, the training  
program did not consider  
the uniqueness of the  
shield ring addition,  
nor did it consider the  
challenges of a long-term project.  
Four, there was a lack  
of a continuous learning  
environment promoting the  
use of both internal and  
operating, and external  
operating experience.  
Number five, the chain  
of command communication  
methods in place during  
the canister download  
were not well defined, within  
the procedures or training.  
Our apparent cause  
evaluation was focused on why  
SCE management expectations

were not met for Oversight.  
This evaluation identified  
one cause, and two  
contributing causes.  
Our identified apparent  
cause was that we failed  
to establish a rigorous  
oversight process to  
ensure that we had in  
place technically accurate  
contractor procedures  
and effective training  
to support our oversight  
of the contractor,  
and sufficient guidance  
for Oversight personnel  
on when to intervene.  
The two contributing causes  
linked to the event include,  
management observations  
of fuel transfer operation  
activities were not being  
routinely performed,  
and management was not  
consistently reinforcing the  
use of our Corrective Action Program.  
This slide provides an  
overview of where our  
corrective actions are focused from the  
root and apparent cause evaluations.

It's also intended to provide an overview of how all of these areas combine to provide for what we consider to be an industry leading dry fuel transfer program. Starting on the left, there's five areas: our procedures, in Procedures we've added a significant amount of detail for our operating and oversight procedures. In Training we've completely restructured our training program and made it specific to SONGS. As we've mentioned in the Equipment, we've added several new enhancements, including load monitoring shackles and use of the cameras. Our Corrective Action Program, we've mandated the use of a single corrective action program for fuel transfer operations and we've retrained those personnel on low threshold issue identification. And in Oversight, we now have more robust

procedures and training  
to provide more intrusive  
and effective oversight. I'd like to go  
into more detail in each section.

First section is Procedures.

We've made a significant  
number of improvements  
in the operating procedures  
for the fuel transfer project.

Prior to the event, the  
procedures used for the project  
were not robust, these procedures  
lacked detail and relied  
upon experienced supervisors  
to make the decisions  
in the field. As such, they  
lacked detail, and they  
failed to identify critical  
steps for higher risk  
activities. So what's changed?

The corrective actions that  
were put in place were focused  
on ensuring that the  
procedures align with the  
requirements of the Final  
Safety Analysis Reports  
and other regulatory documents.  
They identify critical  
steps, they list required  
qualifications of workers.

They define responsibilities,  
they clearly identify  
criteria for stopping  
work, they incorporate  
lessons learned and operating experience.  
And they minimize steps  
that allow for field  
decision making.

All six of the operating procedures listed  
have been evaluated by Holtec, SCE, and  
independent industry  
experts and in addition,  
these procedures have also been updated  
with the lessons learned  
from our recent training  
and practice activities.

Our Oversight procedures have  
also been greatly enhanced.

Our procedure that defines how  
we review and accept a  
contractor's procedures  
and training programs was  
revised, it now includes  
verifying the procedures  
meet the requirements  
of appropriate regulations  
and procedures identify  
required training  
and qualifications.

And in addition, we've

revised procedures describing how our Oversight personnel are to perform their effective oversight of fuel transfer work.

I'd like to talk about training next.

Next slide.

So our corrective actions for training were primarily focused on developing our own site-specific training program for the project.

So as training was an essential element of the successful execution of the project our vision was to develop a training program that is industry leading and encompasses all fuel transfer project personnel.

Prior to the event the training was conducted under the contractor's program.

It was a generic corporate program, and a program focused on the training of the supervisors and some specialty contract positions such as a vertical cask transporter operator. The craft personnel were provided very

limited training and they were under the direction of qualified supervisors. We've accomplished our vision by bringing in multiple training experts familiar with the systems approach to training. There was collaboration between us and the contractor to produce a new SONGS specific training program and procedure. The new program now covers 20 fuel transfer project positions. It includes 21 lesson plans, and seven on the job training modules. Some of the key changes that were made are that every individual is required to complete all the required training elements for their position prior to performing work independently. Operating procedures include all required training qualifications within the procedure. On the SCE Oversight side, we've enhanced our training program, which

should improve our technical knowledge, we now require our Oversight personnel to attend and pass the contractors classroom training as part of their Oversight qualification.

In addition we've added a training subject matter expert to our Oversight organization to assess and monitor the effectiveness of the changes we've made in training going forward.

I'd like to talk about some of the equipment changes.

Next slide.

So one of the most beneficial corrective actions we took was to install load monitoring shackles for canister downloading and uploading. It was an important equipment enhancement.

Later in the presentation as Lou mentioned, there is a short video and I'll be able to point out some of those equipment features.

During and prior to the August 3rd event, the involved personnel relied on visual indication

of slack in the load handling slings as the primary method of identifying a hang up or interference. The vertical cask transporter controls include the ability to observe the canister's weight and monitor load. However, on the event of the day of August 3rd, the operator had switched the indicator to monitor tower height, and that was due to a concern about maintaining the tower's level.

The use of the load indicator on the controls was not required by procedure, and the operator and rigger in charge failed to properly monitor the load.

Our newly installed load monitoring shackles are calibrated, there are two redundant portable load monitors in use at all times, they are utilized by the transporter operator and the supervisor in charge.

The monitors include an

underload alarm feature  
which is set by procedure  
to alarm an underload  
of 15,000 pounds which is  
essentially 50 percent of  
a fully loaded canister weight.

If a loss of load is  
identified on the monitor,  
or if the alarm is received,  
the operator would stop  
the download and immediately  
regain 100 percent of  
the load weight.

The load monitoring  
shackles have been installed  
and verified functional  
during recent practices  
of the download activity  
and management has been  
in the field observing their use.

The additional features  
also included the use  
of a camera. The camera  
is installed above the  
transfer cask and the  
canister and it's in a  
position such that the  
supervisor has the ability  
to remotely observe the  
canister download in progress

similar to the rigger.  
Finally, we've added a physical tag-line as a method of ensuring the canister is lowering. This tag-line is attached to the canister and it is maintained by a rigger who is in position right next to the operator such that he can detect movement of the canister in a downward position through the physical use of the tag-line. The next area is Corrective Action Program. The most noteworthy action we've taken in the area of Corrective Action Programs or commonly referred to as CAP, is that we have integrated the contractor program into the use of our site program into one. We now allow the use of only one corrective action program for all issues for fuel transfer work. SCE's program is the primary program for identifying the problems or issues for performing any fuel

transfer work activity.  
Previously there were two  
Corrective Action Programs.  
Holtec was authorized  
to use their program,  
we took their issues, we  
would transfer them to our  
program for monitoring,  
that's no longer the case.  
We've implemented the  
use of our corrective  
action changes in December.  
We've provided training  
to both the Holtec staff,  
their craft personnel  
and the SCE oversight personnel.  
Training was conducted to  
reinforce the low threshold  
for the identification of entries into the  
Corrective Action Program.  
We've provided examples  
of the impact of poor  
Corrective Action Program  
use in the training,  
and this included the  
failure to identify the  
unexpected difficulties  
that were experienced  
on July 22nd as a missed opportunity which  
should have been entered into the CAP.

The next area I'd like to talk about is Oversight.

Next slide.

So as the Management Owner for Oversight for the fuel transfer project I have overall responsibility in this area. So for background information, prior to the event, the oversight of the fuel transfer project was not sufficiently intrusive.

Oversight personnel did not participate in Holtec training.

Technical understanding of the work was learned on the job, expectations and guidance on how and when to intervene in the contractors' work were not focused on immediately addressing performance weaknesses.

As discussed earlier, one of the Oversight corrective actions was to proceduralize how we review and accept the contractor's procedures and training program to ensure that there is adequate and consistent review.

We utilized this criteria when we reviewed and accepted the new program procedure changes. We've changed our organizational structure to improve our experience by placing a manager with extensive onsite dry fuel project experience in charge of Oversight personnel supporting the work. We've hired several new Oversight specialists with field experience in performing fuel transfer operation activities. Another recent action taken by SONGS is that we've implemented a new senior management observation program. We've identified 20 specific managers that are in the program with four scheduled each week to conduct field observations of fuel transfer activities. All these observations are entered into our Corrective Action Program to be evaluated and tracked. All these observations are

required to be debriefed  
with other site leaders  
during daily work meetings.  
And lastly, I've met  
with my Oversight personnel.  
And I've clearly defined  
what my expectations are  
going forward, on how we  
engage not only with the  
fuel transfer contractor,  
but all personnel on  
our site and the  
expectations are number one,  
ensure that work is  
being performed safely.  
Ensure that work is being  
performed in compliance  
with the procedures or work instructions.  
Perform coaching on the  
spot, stopping the work if  
necessary to restore  
compliance, escalate issues  
to the senior management  
personnel, and to utilize  
the Corrective Action  
Program to identify all  
observed issues.  
Next slide please.  
This slide through  
slide 48 are provided as

a line-of-sight matrix  
identifying the causes to  
the corrective actions  
for both the root cause  
and apparent cause and  
corrective actions necessary to  
support fuel transfer operations.

The slides were submitted  
for the record but it  
was not my intent to go through each slide.

- [Man] So we are on slide 49?

48. Okay.

- [Jim] So slide 48.

What you'll see is a short  
video of a recent download  
practice activity utilizing  
a simulated canister  
which does not contain fuel.

The things you'll see in the video are the  
additional personnel  
involved in downloading,  
load monitoring equipment, the camera,  
the tag-line, and the  
headset communications  
that personnel are utilizing.

I'll periodically stop  
and point out some of the details.

So we can proceed please, and stop.

So in this spot of the video, you can see  
first off, there's the aerial lift.

In the aerial lift there  
are now two personnel,  
both of them are qualified riggers.  
One of the individuals  
is the Rigger in Charge.  
He is the one who directs  
the VCT operator on  
whether he can proceed or not proceed.  
All right, all other  
personnel involved can  
direct the operator to stop,  
but only the Rigger in Charge  
can direct the operator to continue.  
On the right hand side,  
that is the Cask Loading  
Supervisor in Oversight.  
The Cask Loading Supervisor  
has with him, an additional  
load monitoring tablet  
such that he can see what  
the operator is seeing as  
far as load weight, and  
he can also see what  
the camera sees where the riggers are at.  
Right above the canister  
is a camera that's mounted  
directly above the high  
truck, or the high track  
where the transfer canister  
and the canister, the MPC,

such that you can observe the download of the canister. Individuals located on the bottom, many are spotters for the movement of the vertical cask transporter. One of the issues that resulted from this event was that the canister wasn't centered before they lowered it, such that they allowed it to catch, right, it didn't hang up. The new procedure changes require the individuals up top to center as best as possible, the spotters down at the bottom ensure that the operator has the ability to understand whether or not the transporter can impact anything. So they're there for the transporter operator's good. There are RP techs located in the locations on the pad to observe from the radiological control perspective. And go ahead and proceed.

- [Scott] Hey Jim, just for the benefit-

- [Jim] Stop please.

- [Scott] Just for the benefit of those listening, RP tech.

- [Jim] Oh I'm sorry, RP Tech would be a radiological protection technician responsible for radiological controls.

In this slide you can see that the canister is still in the up position, the rigging is attached and you'll see the two riggers in the aerial lift. In that lower right hand corner of the tower is the location, or excuse me, lower left hand corner of the tower is where the operator and the rigger would be located.

And please proceed, and stop please.

This is a practice activity.

The individual sitting in front of the control panel is the Vertical Cask Transport Operator. Directly behind him to the right is an Oversight Specialist.

To his left, is a rigger and an additional

operator who is in  
training that day watching the activity.  
The Rigger that's standing  
there without the headsets  
is the one who would  
maintain control of the  
tag-line such that he  
can direct the operator  
to stop if in fact the  
tag-line is not moving.  
And please proceed.  
And stop please.  
As you can see here, the  
canister is now on its way  
in the download, you no  
longer can see the shield  
cone above the transfer  
cask. The two Riggers  
are watching the download activity,  
the procedure now requires,  
that at a certain fixed  
height which is 216 inches,  
all downloading will  
stop, that is a location  
above the shield ring.  
That's to refocus all  
personnel on the download  
operation that we are now entering the  
interference point and to be very sensitive  
to any unusual condition.

Go ahead and proceed please.

Stop please.

What you see in front of  
the Transporter Operator  
is the load readout screen.

It's a wireless tablet  
that directly reads both  
load cells and the overall total weight.

And as I mentioned, it  
also has a alarm that  
will flash from green, normal condition to  
red, if in fact it detects  
the underload condition.

Please proceed.

This is the downloading continuing.

You can see the slings, you  
can see the tower lowering.

Riggers continuing to  
monitor and stop please.

This is the camera that I  
mentioned that's installed.

It's physically installed onto the VCT and  
provides the remote indication.

So please continue.

And stop please.

I mentioned the monitor for the camera.

This is what that monitor looks like.

This is what the supervisor can observe.

In this monitor it's  
clear that the canister is

beyond the shield ring  
interference based upon  
how far down it is and  
you can observe that  
the slings are clearly visible  
going down. Please proceed.

Downloading continues and in this position  
the canister is fully  
in the down position.

Stop please.

This is the remote tablet that  
the Cask Loading Supervisor  
would have, so in his  
location he has similar  
indication to what the Operator  
is seeing on the machine.

On this tablet, as I  
mentioned, are both of the  
chapter read outs individually,  
the total weight read  
out, you can just make out  
that it's green there and  
in an underload condition  
everything would turn red  
to identify the underload.

Please proceed.

Alright, next slide please.

So in conclusion, so as a nuclear worker,  
with 37 years of experience  
at SONGS as an SCE

employee and now as a  
Manager for Oversight of  
the fuel transfer project  
I believe we demonstrated  
the right nuclear safety culture  
behaviors to address  
the August 3rd incident.  
We placed the loaded  
canisters in a safe condition,  
we stopped all further  
fuel handling work and  
over the last five months  
we've developed thorough  
cause evaluations.  
We've developed and implemented  
effective corrective  
actions by utilizing  
cause evaluation experts  
and industry peers for reviews.  
In October we had an  
independent assessment team  
made up of nine nuclear  
industry leaders brought  
in to assess not only  
our corrective actions  
but our progress. Their  
action report in December  
concluded that with the  
completion of our remaining  
corrective actions, SONGS

has the tools and the organization to safely resume fuel transfer operations. We are committed to ensuring that our corrective actions are sustainable, through effective reviews and the use of our Corrective Action Program.

We are also committed to ensuring that work is performed to high standards and to protecting the health and safety of the public and our personnel.

This concludes my discussion on the corrective actions, I'd like to turn it over to Lou.

Next slide, thank you.

- [Lou] Thank you Jim.

Okay so we're changing subjects now, we're going to reportability.

So the problem statement,

on August 3rd, 2018

we had a rigging event that disabled an important safety load control function while no other support function was available.

We failed to formally report to the NRC within a

24 hour period, next slide.

This is the reporting timeline.

This slide shows the  
timeline of the August 3rd  
event which I'm not going to go through.  
But we immediately suspended fuel movement  
at the time of the event  
and informed the NRC  
by phone at Region IV on August 6th.

We did not formally report  
to Headquarters but we  
had a narrow understanding  
of the regulations.

We are the licensee and we were wrong.

Next slide.

So, the root cause and contributing causes.

The root cause is management  
failed to recognize  
the transition to fuel  
transfer operations as  
requiring the integration,  
familiarization and  
application of the 10 CFR  
72.75 reporting requirements  
into plant processes.

We had two contributing causes.

Contributing Cause 1

was we did not provide the  
shift managers with good  
guidance and training on

implementing the requirements of 72.75(d).

This resulted in a narrow understanding of the regulations which complicated the decision making process on August 3rd, and two, we were not consistent in ensuring management expectations where a conservative bias for reporting were understood.

The staff had different views on the requirements to report.

Next slide.

So under the extent of condition of the root cause:

For extent of condition we had a few issues entered in the Corrective Action Program since the beginning of fuel transfer operations.

We interviewed key SCE and Holtec personnel to identify any other reportability lapses, this review identified two additional issues that were required to be reported and this has to do with the HI-PORT and the HI-PORT is just the heavy hauler that travels from the spent fuel pool to

the ISFSI pad.

Two issues with the lateral clearance of fixed objects and the height of the center of gravity. These issues were reported on December 20th, 2018 to the NRC and have been corrected.

Next slide.

The extent of cause. For extent of cause, we looked broadly at reportability requirements associated with decommissioning activities. We will enhance training to ensure that shift managers and staff have knowledge and guidance necessary to make timely decisions on reportability. Additionally, as the Plant Manager I am personally involved as is our Chief Nuclear Officer in ensuring the site embraces a bias for reporting when there is not a clear consensus on reportability of the mission.

Next slide.

So immediate corrective actions. We have trained the shift

managers and regulatory personnel on this event and the 10 CFR 72.75(d) notification requirements. And we revised our procedures. So we made two significant medium changes as a result of this event. One, we now have a conference call if the shift manager has an issue, with the Senior Plant Manager, Ops Manager, Engineering Manager and NRA Manager. And two, we're continuing a bias to report to the NRC whenever there is a question about the requirement to report. Next slide. So planned corrective actions. We're going to provide enhanced 10 CFR 72.75 training that includes a number of issues. The design basis events, analytical limits, important to safety components and identifying potential failures. We're also establishing biannual refresher training requirement for

reportability so that we ensure that we have sustainability.

Next slide.

So planned corrective actions continue, and the difference is the future corrective actions are more broad so it's going to be the planned corrective actions are reinforced, the shift manager is the person responsible for the final decision on reportability and two, create a reportability check off sheet to be used by the shift manager when needed for reportability calls.

And two, we're going to take a broad look at 72.75 requirements associated with other regulations, associated with extent of cause.

Next slide.

Under effectiveness review, after the required training is complete, SCE Shift Managers, Plant Manager, Operations Managers, NRA personnel and Engineering Manager will be given real

time reporting exercises  
once a month and success  
will be based on three  
consecutive months with no  
incorrect reportability calls.  
Also, appoint a skeptic at reportability  
conference call meetings.

Next slide.

So this slide, through  
slide 69 are provided as  
a line-of-sight matrix for  
the cause/action correlations.

These are submitted for  
the record, but it is not my  
intent to discuss the  
details of each slide.

Please go to slide 68.

Okay, so conclusions.

We conducted a thorough  
root cause and developed  
effective corrective  
actions by using cause  
evaluation experts and  
independent peers for review.

We are committed to  
ensuring that our corrective  
actions are sustainable  
for effective reviews  
and use of our corrective action process.

We are committed to ensuring

work is performed to  
high standards protecting  
the health and safety  
of personnel and the public.  
That concludes my area of reportability,  
I'm going to turn this over to Al Bates.

- [Al] Thanks Lou.

So I'd like to review the  
regulatory considerations  
for the two apparent violations now.

Slide 70 please, okay.

So, first of all, looking at the loss of  
redundant load protection  
apparent violation.

There were no actual safety consequences,  
no one was harmed, as you heard  
earlier in the presentation.

The vulnerability itself  
lasted for a short period  
of time, less than one  
hour, and then the canister  
was safely recovered and stored.

If the canister had  
dropped, as we had shown  
earlier in the presentation,  
the canister remains  
intact, there would have  
been no radiological release,  
and under a postulated  
canister drop, no harm to

the health and safety of the public.  
However, putting a canister in a situation  
where it could have  
dropped is unacceptable  
and we have taken strong  
corrective action to  
never let that happen again.  
We ask NRC to consider  
these factors in determining  
the final severity  
level. Next slide please.  
So next the second apparent violation,  
reportability of the event.  
Considerations include the  
impact on the ability of  
the NRC to perform its  
regulatory oversight  
functions and willfulness.  
All downloading work  
was immediately stopped  
once MPC 29 was safely secured.  
The NRC was notified informally  
and thoroughly briefed  
on the first and second  
working day after the event  
and there was no intention  
to hide, and this was  
not a willful act. The NRC  
have performed a special  
inspection as a result of

the event and have access to all the requested personnel and all the materials. SCE maintained frequent and transparent correspondence and communication with the NRC following the event. And the industry was notified shortly after the event. We ask the NRC to consider these factors when determining the final severity level of this event and this violation. So in terms of the overall regulatory considerations for the two violations. So SONGS has had no violations in escalated enforcement in the last two years. The redundant load drop protection violation was self-revealing. The reportability violation was NRC-identified and as explained earlier in the presentation, we have taken comprehensive robust corrective actions. We believe in many

areas the corrective actions are industry needed. When characterizing the two violations, SCE believes that the loss of redundant load protection and the reportability of violations could be considered a single problem with two examples.

Next slide.

In looking at the NRC's Enforcement Policy manual, we believe as I have said, that the violations represent two examples of single problems stemming from the same event and therefore both violations can be considered concurrently running through the full diagram together, not one after the other. Looking at the diagram, the diamond shaped conditional block on the left asks the question, first willful Severity Level III in two years. As I said, we have not had a Severity Level III violation in two years, and

neither of the violations  
was- (Inaudible) Non willful violations, sorry.  
And then, so the answer  
was yes for both of these  
violations. The next diamond block  
we covered asks the question,  
credit for corrective actions.  
As discussed earlier in the  
presentation, we believe  
we have shown for both  
violations, comprehensive,  
robust, sustainable corrective actions.  
Therefore, full credit should be given for  
the corrective actions  
for both violations,  
and the question is answered, yes.  
Now we'll turn it over to  
Doug for closing remarks.  
- [Doug] Thank you Al.  
So the San Onofre team  
today has brought a lot  
of details around the August  
3rd downloading event,  
what we've done to  
improve, and further, how  
we have addressed our  
reportability knowledge processes.  
In summary though, in  
conclusion, I would like to  
reinforce that SCE takes

the violations, and this incident, seriously. We have performed extensive cause evaluations and implemented timely, and what we think are effective, corrective actions. We will be demonstrating the effectiveness of these corrective actions to the Nuclear Regulatory Commission during upcoming inspections. The incident did not create nor have the potential to create a radiological hazard to the public or our employees. So that's the end of our planned remarks for today, thank you for the opportunity and we'll move into the next section. Thank you Scott.

- [Scott] Well thank you for your presentation, I know it was very helpful for me to understand the scope and depth of the corrective actions you've taken and the significance evaluations that you've performed,

clearly these are significant issues or we wouldn't be here today, a lot of elements to consider and clearly we rely on licensees to meet all of our requirements all the time, because we're not there all the time. You own the license, so it's your overall responsibility to ensure the public health and safety. So that's why these issues are serious and we're here today, so again, I think your presentation was very helpful to help us better understand the scope and breadth of your actions. Nonetheless, as you might expect, I do have a few questions, I'm sure the staff here does as well. I'll just start if that's okay. I was obviously taking notes while you were speaking. Let's see, some of which you have subsequently answered in many of your slides so some of those are no longer applicable. You mentioned at one point

that the shield ring was analyzed and can carry the entire weight of the loaded canister.

And I guess, I mean that was demonstrated on August 3rd. I'm curious though, was that an analysis that was performed before, was that a later analysis, has our staff looked at that, have we seen that?

We have seen that, okay.

- [Linda] Yeah but I think it's still worthwhile Scott to maybe have Southern California Edison answer your first question whether that analysis was done at the time that the design was changed or subsequent to the August 3rd event.

- [Scott] Right.

- [Jerry] So subsequent to the August 3rd event we asked Holtec to do that analysis, so the analysis that I was referencing was afterwards to confirm it. It doesn't mean that it wasn't part of the original

analysis.

- [Scott] I'm not sure what you mean by that last, the end.

- [Jerry] That would mean that you would have to direct that to Holtec.

- [Scott] Oh I see, I understand. Thank you. And with respect to all the analysis that you did, Jerry, with respect to the significance evaluation, have those been provided, did we have those evaluations, have we seen those, do we have those evaluations or is that going to be part of our follow up inspections?

- [Man] As far as the shield ring is concerned?

- [Scott] All of them, the ones about the canister drop, the impact on the fuel cooling, all that kind of stuff.

- [Linda] I think some of us do have questions on those, and to clarify that for members of the public who may be listening, Southern California Edison has

provided several analyses following the August 3rd event to the NRC, many of them were completed by its contractor, Holtec, to the extent possible we asked Southern California Edison to redact some information so that the documents could be placed in a non-proprietary version in the NRC's public docket room, so, there are some, the drop analysis is available on the Spotlight page and in NRC's ADAMS, the electronic docket system, there is another analysis, there are a few analyses that we'll ask questions about this afternoon that remain proprietary.

- [Scott] Yeah, I mean I think that it's appropriate that we do some independent look at that, that's really my point. I wanted to make sure that we had an opportunity to see that, I didn't know if we had seen it, we all hadn't seen it yet or not, so.

You mentioned the changes to the Corrective Action Program and having a single program, combined program, and lowering the threshold, and providing training on how to use it, et cetera, one thing I didn't hear is, when the issues come in and are documented, I don't know what you call those documents, condition reports or whatever, but whatever you call it, how often do those get reviewed and by whom?

- [Jerry] Yeah so we use a system they're called action requests, we call it the AR system, all action requests are reviewed every business day by a screening committee, and the screening committee is leaders including the Operations Manager, Engineering Manager, Plant Manager typically, CAP Manager, so there's some core key individuals that must be there to have a quorum to review those and we also

invite Holtec personnel  
to sit in on that discussion  
so we have a clear  
understanding of the  
issues we've identified.

- [Scott] Thanks for  
that, so what decisions,  
what range of decisions  
might you make after having  
that screening review?

- [Jerry] So during that  
screening process we would look  
at the description of  
the issue itself, the  
grammatical understanding  
of what was observed,  
what the issue is, we would  
also look at the significance  
level of that issue, whether  
or not that issue is a  
CAP item such as a condition  
adverse to quality or condition  
adverse to regulatory compliance  
and then we would also  
assign the actual assignment  
to an individual as  
an owner and then in many  
cases we would escalate  
that also to a manager  
to own the overall issue.

- [Scott] Thank you. Do you have a-

- [Linda] Yeah I have a remaining question and you may want to elaborate a little bit more.

- [Scott] By the way Linda, we're not following our own rules which is that you identify yourself.

- [Linda] Thank you, I'm Linda Howell, the Deputy Division Director.

- [Scott] I'm guilty as well, so.

- [Linda] A clarifying question, if you could explain in a little more detail since we have some members who are observing the conference and don't have the benefit of having some of the information we've taken, how your current process, the enhancements that you have done to the Corrective Action Program which you hold high in the programmatic changes that you've made, differs today from how it was being conducted on August 3rd

and along with that,  
some specifics on how you  
ensure the field change  
report that might be  
implemented by a Holtec employee  
makes its way to an AR report  
and what's done with that  
and then I'll follow up  
with another question.

- [Jim] Okay, so Jim Peattie,  
I'm the General Manager  
of Decommissioning Oversight.  
Previously I was the  
CAP Manager, so.

Prior to this change,  
Holtec was authorized to  
do their work in their  
Corrective Action Program.  
They utilized a field  
condition report process.  
What we did earlier in  
the project, based upon  
our previous issue, we  
decided that all field  
condition reports, upon  
their generation, would then  
be copied into our  
Corrective Action Program for  
tracking, not necessarily  
for assignment of our

actions but mostly to ensure that we understood the issue, the significance of the issue that was identified in the condition report and ensured that an order was assigned with Holtec that we would follow that. The biggest change is the field condition report process in place could not be implemented at the craft level, the Holtec field condition report procedure process allowed it to be executed at the supervisor and project manager level. All right, so a craft person on the project could not generate an FCR without going through management, going through supervision. So that was fundamentally, what we considered a gap in how our process works. So one of the biggest changes was, first off, recognizing that that procedure itself had some weaknesses overall. The

July 22nd event, within the definitions of procedure, would not clearly require them to generate that FCR and that was essentially the position taken whereas ours would say that was definitely an unexpected condition, we would have expected that to be generated. So that was the first change. The second piece to that was, Oversight also was aware of the issue previously of July 22nd, there were Oversight specialists who were aware of the issue but because they were reliant on Holtec to use their process, they didn't take it upon themselves to identify the issue within our station program, so that was also a gap.

- [Linda] If I could just ask you to clarify a couple of things on this Jim just for the benefit of the audience, if you could just very briefly,

a few sentences, remind everybody what the July 22nd event, I don't really know that it was an event, and then go ahead and go on.

- [Jim] On July 22nd we have documentation within our turnovers that there were unexpected conditions, issues that had to be dealt with during the download of a canister. During that canister download it took an extra hour, hour and a half to get the canister downloaded. And in fact there is documented hang ups in the Cask Transport Operator during that evolution it observed a unloading condition. So they followed their procedure, they escalated it internally, they had notified their project manager, they got additional supervisors and ultimately within an hour and a half they were able to recover and lower that canister safely. What

didn't occur is that condition was never identified within either of the corrective action programs to be followed up.

So essentially, management in our case was unaware of that actual issue until we went backwards for root cause (inaudible).

- [Doug] And perhaps Linda, and Jim just for the benefit of the audience again, during the July 22nd incident the load was always supported, the slings were never what you would call slack sling conditions and that's different from the August 3rd event.

- [Jim] Yes.

- [Linda] Thanks for adding that, that was some of the additional feedback. Maybe you could help us understand some of the specific actions that you may have taken to address the transition from going from two Corrective Action Programs or at least

documenting issues to a single program. You noted that the field change report process previously in use by Holtec, who is your contractor, had the potential for the craft workers who are really, you know, the majority of the people who are out there on the pad, doing canister downloading, to not have been able to raise issues up, so now that you've transitioned to a Southern California Edison Corrective Action Program what steps have you taken to ensure that the contractor has trained his craft people to ensure that the information gets to the right level of supervision so that you can ensure that it gets into your Corrective Action Program.

- [Jim] Right, so as the Corrective Action Program Manager I specifically had the existing Corrective Action Program revised, the training

material revised, that was number one. We then delivered that new material, including the recent lessons learned to both the Holtec personnel, all personnel including all the craft people personnel on site and I personally delivered that training, so essentially I was the one who presented the material, and I answered any questions. So that was the primary. The second thing is we took it upon ourselves to go put in computers in their actual craft briefing locations such that the craft personnel had access to the computers and those computers allow them to write an action request anonymously. We were more interested in them writing the issue and putting it in the system than to have to log in and have to put in a name. And we communicated that in the training, we want your input. We've had numerous

action requests written.  
Very low threshold, like  
the need for batteries  
for devices, very low  
threshold, so it appears  
that it's working. But along  
those lines, we're also  
weekly going out and  
reinforcing during those Holtec  
craft briefings what's  
occurred. What we've seen,  
what's been generated through  
the action request system and  
providing that feedback to  
individuals on what's being  
done about the issues  
that are raised and that's  
an ongoing action that  
I'm also tracking as a  
CAP action in my change management plan.

- [Linda] Okay. Thank you  
Jim, Linda Howell again.

- [Eric] This is Eric  
Simpson, I was the lead  
inspector for the special  
inspection out at SONGS.  
You've mentioned the  
Corrective Action Program  
and how it is now, a single  
Corrective Action Program

that will encompass  
Southern California Edison  
with whatever contractor  
they are using, Sonic,  
Holtec, how do you communicate?  
See, as an inspector,  
I know what a low  
threshold looks like and a  
Corrective Action Program  
has it, by reviewing  
the corrective actions that  
come in for a period  
of time, how do you train,  
how do you communicate  
to bring up low threshold  
incidents into the  
Corrective Action Program?  
- [Jim] I think the primary  
means is you provide  
examples to them of what  
low threshold means.  
And then secondary, we do  
observations so my Oversight  
personnel do observations,  
those observations are  
looking for low threshold  
CAP treated follow up. Right.  
If they see issues in the  
field, right, where the  
craft people are generating

those, are those issues being generated during the observation process. Additionally, SCE management is now in the field, so we're spending quite a bit of our time in the field, also following up with how CAP is being implemented and are our corrective actions or our action requests being generated at the right threshold. So I would say that's to ensure that there's consistency going forward.

- [Eric] So essentially you're saying you also know it when you see it and you see improvement already in lowering the threshold, items being addressed into the Corrective Action Program.

- [Jim] Yes, that is correct.

- [Scott] I'm going to switch topics. I have a question about, this is Scott Morris, I have a question about the, in the process of downloading the canisters into the vaults, because of the shield ring, because of the

tight tolerances which you actively demonstrated today, there is a high likelihood of impacting the canister itself on the shield ring or other parts of the vault, which induces potential flaws, scratches, call them what you will, and I know there's been some evaluation done around the impact of those scratches long-term, short-term, long-term, and I know we've had some conversations, the NRC staff's had a number of conversations with Edison about that. I guess, what my question is, so with that as sort of a preamble, my question is what, because of the propensity to induce scratching because of this design, to what extent have prevention measures been put in place to mitigate or otherwise prevent or minimize the frequency and/or significance of those scratches?

- [Jerry] Okay, so the

significance of those scratches,

I'm sorry Jerry Stephenson,

Engineering for SONGS.

The significance of the scratches has been evaluated in great detail.

We have not done anything

to mitigate those scratches

because they are so

minor in the first place

and there's no need or

feasibility to reduce it

further so we calculated

that the depth of the scratches using very

conservative analysis is

the thickness of a couple of

sheets of paper at the

worst. We've documented

their existence in the

design, we've added them to

the FSAR and addressed them

in the 72.212, so they

are now officially part

of the design. Okay.

- [Scott] I just want to make sure I

understand that question.

Or that response, this is Scott again.

You captured the

occurrence of scratches on

canisters as part of

the design, it's like,

in other words, it's a  
given, it's going to happen  
based on the way canisters are manipulated  
and the evaluations found  
their significance in  
your words, not your  
words, my words, it's okay,  
and we've captured it  
in our design document.

Is that what you're-?

I'm just trying to make  
sure I've heard it correctly.

- [Jerry] We evaluate- I can say it's been  
very thoroughly evaluated,  
it's well below the  
size of the defect  
allowed by the ASME code,  
it's well within the  
manufacturing tolerances that  
Holtec uses in the shop for fabricating  
these canisters and it's been thoroughly  
documented and evaluated  
and will be of course  
monitored by our inspection  
and maintenance program,  
and (inaudible) aging management.

- [Tom] This is Tom from  
Oversight. You might have  
mentioned the improvements  
for the procedures and

the alignment of the canister to minimize the incidental contact on the download.

- [Jim] Right, as part of the- I'm sorry, this is Jim Peattie, General Manager of Decommissioning Oversight.

As part of the procedure review changes we recognize that the centering of the canister within the transfer cask was essentially a critical step prior to download, so there is additional steps that are captured within the procedure now, focused on ensuring that the canister is visually centered before you attempt to do any downloading of the canister so hence the presence of additional spotters and that actually takes us a little bit more time because we want to spend as much time as possible ensuring that a hang up doesn't occur through preventive measures by ensuring the canister is centered

before we download it.

- [Scott] So thanks for that, this is Scott again.

So that's done before the initial lowering or that's done when you get to the, I think you said the 216 inch or lower.

- [Jim] That's done before we do any lowering essentially as you open the mating device gate and it's free hanging, validate that it's centered, and at the 216 inch just above the shield ring, you evaluate again that it still appears centered before you continue downloading.

- [Scott] Did you have any follow up questions?

- [Linda] This is Linda, I do have a follow up question, and perhaps Jerry is the one to answer this. You mentioned that you've done extensive analysis and I think that analysis, are you referring to the scratch analysis, okay. So, that analysis was done

based on the NRC's prompting following the August 3rd event, it's based on a slightly different technique than some of the other analyses and its largely based on engineering judgment but the question that we have because the information that was given to us by Southern California Edison employees, the Holtec contractors is that it was not uncommon. And this is documented in our special inspection report for the canisters to come in contact with the CEC even when they were well aligned, something different from the August 3rd event, as they were being lowered to the CEC height. What gives you confidence that the calculations that you've done in that scratch analysis are really and truly representative of the body of canisters that has already been downloaded. Have you done

any additional physical testing, or are there plans to do physical testing to ensure that those canisters and future canisters that you're going to download even with better central alignment are going to be within the manufacturing tolerances that are accepted and assessed as part of the COC design basis?

That is a long question,  
I apologize Jerry.

- [Jerry] Yeah so, the calculations that we did were very conservative, they were by established methods developed in the 1800s, it's not new evaluation techniques and we have high confidence that the numbers are very, very well-bounded by the design. We also-

- [Tom] Jerry- again this is Tom. Let me interject. So as Jerry is describing, we do the specific analysis that we've done (microphone fades out)

When we've looked at the  
downloading activities,  
the depth of scratching is very shallow,  
I think we've provided  
information that shows  
a protective oxide layer forms relatively quickly  
in that environment on  
one canister's surface.

And as Jerry noted,  
we are implementing an  
inspection maintenance program  
somewhat similar to a  
NRC aging program (inaudible)  
so we factor all this in  
to the need in future  
to look at some physical  
activities on scratching.  
But that provides the basis  
for our confidence and  
certainly if the staff  
has more questions we'll  
be glad in the future  
to answer those questions for you.

- [Linda] Okay thank  
you Tom, it looks like  
you're prepared.

- [Doug] I'm just going to follow  
up and mention pretty much  
what Tom just mentioned  
regarding the issue.

We're looking at it, we fully expect as part of our inspection program which will be implemented before November 2020 to take a look at this and so I think as Jerry indicated, we're well-bounded, we have a good analysis, it's a conservative analysis yet we're still interested in it and so we still want to look at it and that will be part of our inspection program which, we indicated, prior to November 2020 but also taking into consideration the NRC's aging management program well in front of that.

- [Linda] Thanks for that addition Doug, we discussed preliminarily some of your plans in that area. I'll leave with that, we may have additional questions concerning the scratch analysis, we have looked at it, it will be part of our continued inspection activity so we'll see if we have

additional questions here this afternoon but we'll probably be looking at it further.

- [Scott] This is Scott again, I've got one more question and then I'm going to yield. The other question I had had to do with, I think it was on slide 54 where you're talking about extended condition of the reportability issue. And specifically the first bullet on that slide, it talks about in the course of the extent of condition of the reportability issue, the two additional issues associated with HI-PORT were noted.

I assume you mean two additional issues associated with reportability or is it-

- [Jerry] Yes, yes.

- [Scott] Okay. And thank you, so, I'm not personally familiar with these other issues, are these lateral clearance of fixed objects, height of center of gravity, this is with the transfer vehicle, while moving the transfer cask.

- [Tom] That's correct.

- [Scott] I'm just trying to understand from a- what made those reportable? And what, well only just answer, start with that.

- [Lou] Okay, so, during our review, this is Lou Bosch, I got that right. So during our review of the reportablility, we looked at a lot of other issues out there. One of them had to do with the actual physical movement of the HI-PORTs, the, this is the heavy hauler that goes from the spent fuel pool to the ISFSI, that it actually traveled too close, okay, to some of our fixed objects. Okay, so then we reported that under the same regulation 72.75(d) (1), okay, and we sent that report to the NRC.

- [Scott] So, just to clarify, so what made that reportable because presumably something in your design or licensing basis

is specific to the lateral distance allowed during the movement of that cask?

I apologize, you know, I don't have all the details of your exact license.

- [Lou] So, it was, I'll just read it to you here, it says the HI-PORT lateral clearance between the transporter and other structures did not maintain in accordance with the procedure directions, it was less than the analyzed clearance limit, and because of that, the analyzed clearance limit, that's why it made it reportable because it failed its function.

- [Scott] So, I'm not going to go down this rabbit hole too far, but, so there's a body of questions around that issue and what was that about, how significant was that, and I presume our staff is working on those issues with you?

- [Linda] Yeah, I'll supplement that.

There are criteria in the COC that requires a specific vertical height off the ground, as well as the lateral distance away from a big structure and in doing the extent of condition, Southern California Edison made the staff at Region IV aware that those criteria may not have been met, and so that will be part of our future inspection activities prior to making a decision for resuming fuel loading operations because it is considered part of the-.

- [Scott] Okay, that's fine.  
- [Al] Yeah and this Al Bates, Scott, to put that into context, that particular issue had been entered in our Corrective Action Program and then when we did the extent of condition, in other words applying our new criteria for our new threshold for reporting, we found this issue.

- [Scott] I see.

- [Man] And that's how it ended up in the, as we report.

- [Scott] And I don't want to get ahead of our inspectors but I would surmise there is probably, we've got a quite a few questions about that I would imagine so we'll, that'll be captured as part of our follow up, okay.

That's all the questions I have for now, let me defer to you Linda.

- [Linda] Okay, thank you, I'm just going to do a follow on here so maybe we can move past reporting issues. In the Corrective Action Program when we have gone through the matrices that you provided as part of your presentation, I know we didn't talk about it, or you didn't talk about it in detail here this afternoon, but one of the questions that the staff has concerning the upgrades or revisions to the

Corrective Action Program  
relative to reportability,  
in your daily meetings  
that you have now expanded  
are you looking at those  
entries for reportability  
criteria as well? We want  
to understand the full  
extent that you're  
examining reportability.

- [Lou] This is Lou  
Bosch, so every morning  
we have a screening  
committee, and every AR  
that's written gets screened  
for significance and  
reportability, so every one  
of- every AR that gets written,  
I personally look at on a daily basis,  
I look at it and  
then we actually have a  
management team that actually looks  
at this and they screen it.  
One of them is its  
significance, is it corrected,  
is it part of the CAP system, is it a  
condition adverse to regulatory  
quality and, we also  
look at reportability.  
The shift manager every

day in real time looks at these for reportability, okay, so we're kind of a back up, the shift managers looking at it in real time.

- [Linda] Thanks Lou, I just wanted to make sure that you had the opportunity to get that on the record since that is part of your corrective actions for that apparent violation.

I'm going to turn this over to Janine in case she has any questions.

- [Janine] Sure, again, this is Janine Katanic. And I did want to go back to the scratch analysis if you don't mind so you've discussed the enhancements that have been put in place, and Jim, you talked about making sure the canister was centered and the things you're doing in that regard. So is it the position that there won't be scratches in the future, or given

those very tight tolerances  
of a quarter inch, are we  
just still accepting of  
yes, there will continue to  
be scratches going forward?

- [Jerry] This is Jerry Stephenson.

Yeah we put these  
scratches into the design  
as a potential, not that  
they are on every canister,  
we don't know if they're  
on every canister but there  
is the potential for  
scratches on every canister.

They've been evaluated,  
the same evaluation that we  
did applies to every canister.

- [Tom] This is Tom Palmisano, I  
would add that the way  
we look at this, the incidental contact,  
the potential we have for  
every download, some  
downloads we may not have  
any incidental contact but  
practically there would  
would be incidental contact as there are  
for many dry cask storage systems. So it's important to  
recognize that as Jerry  
said, any scratches  
that would occur are well within acceptable limits

and monitored

in the inspection report.

- [Janine] Okay and then  
Tom again, this is Janine.

So all that that you've  
just stated again is based  
on a engineering judgment,  
it's just not based on  
actual inspections to  
confirm that judgment.

- [Scott] Listen I don't  
want answer for you but  
I will, I think what I heard,  
Janine, was the evaluations  
that they did were, there  
was a calculational  
methodology employed, and  
it's not just judgment.  
That's what I heard, just,  
I'll give you an opportunity  
to -

- [Tom] I think this  
is something that warrants  
further discussion but it  
is an engineering evaluation. It estimates  
the worst case scratch we put it on  
canister 29 and found (inaudible) to be  
acceptable.

- [Scott] Okay.

- [Janine] I did have a question

in the area of Oversight.

I heard some of the numbers regarding how many Oversight personnel there were and some of the changes that have been made to the training for the Oversight personnel and just as a matter of function, will those Oversight personnel be present during the entire downloading ops or are they people that kind of come and spot check and leave.

- [Jim] This is Jim Peattie.  
So the answer to your question is the procedure for downloading actually has the requirement for Oversight to be there. That one procedure actually has repeated direction for Oversight to be there. I would also tell you that not only downloading but other canister lifting activities that are medium-high risk, will have an oversight person there, 100 percent of the time for a pre-job brief

through to the end of the actual evolution.

- [Linda] Just a follow up question on that one.

This is Linda again, I didn't want to stop you during the presentation because I advised everybody not to do that but in the video for the changes that you have made to equipment and downloading, could you maybe elaborate, Jim, for the record, the true changes you talked about, more people in the aerial lift, you have more people at the VCT control panel, you now have, you know, greater ability to truly monitor the load but one of the things that we noticed back on the August 3rd incident is that the people who were supposed to be monitoring the downloading basically reduced people on the pad to two people and they weren't really monitoring the

things that we would have expected, and hence they didn't notice that the slings had gone slack. So, what have you modified in the downloading procedure that ensures that the riggers that you've got positioned on the aerial lift will actually be able to view in addition to the camera since you have an expectation that they are part of your safety net, the canister being centered before you actually lower it down and that the supervisors will be able to actually observe what's going on in a little more closer fashion, I'll just turn it over to you Jim.

- [Jim] Yeah so if we go back to the August 3rd event as you mentioned, there was really only one person that had the ability to visually monitor the download activity, right, and that was the individual that was in the aerial lift.

That individual at that time was not a rigger, they were not qualified as a rigger, they were just a JLG Operator, an aerial lift operator, assigned the duties of a spotter. So what's changed? The procedures been changed now such a they use a pre-scripted pre-job brief. So all the details of lessons learned are all discussed through the pre-job brief as you go through each item. The procedure itself actually lists every required position to execute the download activity. So it identifies the riggers, the Rigger in Charge, the VCT Operator, the Cask Loading Supervisor, the Oversight specialist, every single position is now described in the procedures required here, and they're actually acknowledged. In addition we've put two personnel who are responsible to visually observe the canister physically

going down, so those two individuals are ideally in two aerial lifts but the procedure allows for them both to be in one single aerial lift to monitor, both doing the download observation.

In addition we have the camera.

The camera allows the supervisor to observe essentially what the rigger in the JLG is seeing.

Right? So now the supervisor can ask questions through the headset communication on what the individuals are doing, confirming that he sees what they see, when they say the canister is centered, and then lastly we put a physical tag-line also maintained by a rigger by procedure who understands that, I should expect to see the line move during different downloading activities.

So essentially we've increased from the single person operation to a six

person operation and in addition we've mandated Oversight presence there and I also mandated two Oversight person. One person to directly engage with the CLS, or the Cask Loading Supervisor, and an additional Oversight person to stand back and be that third party observer overall of how the process is doing.

- [Linda] Thank you.

- [Janine] And Jim, this is Janine again.

I appreciate your discussion of all of the enhancements that were made, such as the camera, the load indicator, so those types of equipments and enhancements that have been made, if any of them were to fail during a downloading operation that the camera goes out, the load shackle fails, what would be the process, how would that be handled?

- [Jim] So in the procedure,

those events such as the loss of a load monitor occurs. The procedure now drives the individuals to stop the work and go to the abnormal operations procedure and in that procedure it will detail exactly what you're supposed to go do, what are the steps. And those steps would depend on where the position of the canister is in relation to the download. If the canister is in the position above the shield ring and you lose load monitoring the safest position might be to put it back within the transfer cask and close it up. If it's within the shield ring on its way down, the safest position most likely would be to continue lowering with additional sensitivity to visually monitoring that. But those are now all captured within the procedure and we've provided gap training last week to the downloading crews on the

transition between the two procedures.

Additionally during that training we utilized our Oversight personnel to participate in that training so there's a clear understanding between the cask loading supervisors and our Oversight personnel on how those procedures are to be executed.

- [Janine] Thanks Jim, I appreciate that. Another thing I wanted to ask about was, and I was there as an observer during the special inspection but one of the documents that the Special Inspection Team had reviewed was the SCE Program for Abnormal Occurrences and how, you know, this August 3rd event just did not fit into that process so have there been changes made to that Abnormal Occurrence Procedure and, you know, have the experiences from the August 3rd event and the July 22nd incident, have those things been taken into consideration in updating that?

- [Jim] I'm going to have to get back to you

on that Janine, I'm not sure, are you asking about the reporting procedure in which case we review an event to determine how we report or an actual procedure that SCE has-

- [Janine] No there is a procedure for, and I think Tom or Al, you may know what I'm talking about, where there's a procedure that says, if a canister is damaged do X, but there were no criteria for entry into canister damage so in this case, you know, there could have been damage to the canister but that procedure was not entered to and so, has that procedure been enhanced as to what might constitute entry into that procedure?

- [Tom] I think Jim's right, what is (mic interference) we'll provide an answer after the break and if not we'll get back to you.

- [Scott] That's fine. That will be good.

- [Linda] Okay let me do just a few more questions and then we might be ready to caucus. You noted it and I appreciate, you know, your going through several of the analyses, under the safety significance portion of your presentation I think it was around slide 19, you did note that one of the analyses that you completed, although it indicated that there would be no breach of the canister, had a drop occurred on August 3rd that there may have been some fuel damage and hypothetically speaking, I mean, the canister was not dropped, I'm going to make that absolutely clear but hypothetically speaking, knowing what you know today and even with the improvements that you've made, are you looking at any contingency planning should that occur, you know, what you would do if a canister

inadvertently did drop during  
downloading operations?

- [Doug] This is Doug  
Bauder, so we would as  
the procedures would  
direct, would stop and  
place all equipment at a safe  
condition. Hypothetically,  
if the canister dropped.  
However if that was  
to occur, as Jerry  
indicated there would be a  
potential for fuel damage  
inside the canister.  
There would be no canister  
breach so no release of  
radioactivity, no threat  
to our employees or  
to the public and so since  
we know that, we know  
that's the case, after  
placing the equipment  
in a safe condition, we  
would have plenty of time  
to develop a strategy  
as it's such a low, such a long-term  
event for us that we would  
have plenty of time to  
back off, develop a strategy,  
engage the appropriate

vendors with specialty equipment, if needed, to address the next steps for the canister and you know, we know that the canister would also remain cool and there would be no criticality inside the canister, there is no moderator that would be introduced during an event like that because the canister stays sealed so, once again, the canister would be in a safe condition and it's a long-term issue for us to deal with at that point. No threat to our employees or to the public.

- [Linda] Thank you Doug.

- [Scott] I think we're, what questions do we have that haven't been answered? We're going to caucus very briefly we'll take a ten minute break, tops, and we'll be back here at 20 after the hour, and if we have a couple of extra questions we'll ask them otherwise we'll

go ahead and close up the meeting.

For those of you on the webinar, we're going to go silent for about ten minutes.

- [Linda] For NRC staff who are-

- [Scott] Okay, we're back.

As you might expect we do have a couple of follow up questions, I'm going to ask Chris Smith to go first.

- [Chris] Yeah, hi, I'm Chris Smith, I'm a Reactor Inspector from the Region IV office.

My question to SCE is, to perform the drop analysis for the MPC for a hypothetical drop, and we did review that but the question I had is, did that analysis address potential stress cracking or the ability to cause cracks?

I know that the conclusion was there was no immediate breach but was there any concern or analysis of the long-term crack propagation that would lead to a release, because the NRC study comes up with a non-zero probability of a release for a similar drop event.

- [Jerry] Okay Chris,

I'll answer the last part first, okay. The NRC analysis you're referring to is NUREG-1864?

- [Chris] Yes sir, that's correct.

- [Jerry] Okay that, the analysis in that document is for a different MPC, an MPC 68, with different internals that significantly increase the stresses.

So long-term, the first part of your question was the long-term potential for scratches.

We didn't- this is a long-term potential for cracks.

We analyzed ductile material and the strain rate, strain limits and concluded it wouldn't crack and being the type of material that it is, we wouldn't expect it to crack promptly.

I'll have to get back to you on maybe some longevity of the design after they drop.

- [Chris] Okay, thank you.

- [Scott] All right, this is Scott.

Janine, you had a question?

- [Janine] Sure. And again, this is Janine, and Jerry, this might be for you.

Again, going back to the scratch analysis,

and just recognizing  
that, our greater audience  
doesn't have the benefit  
of having reviewed  
or read that analysis as  
we have, can you comment  
on what was found as  
the worst case scratch,  
what width and depth  
would be the worst case  
scratch?

- [Jerry] Okay, so we postulated a worst  
case misalignment. Okay  
remember the transport  
canister cask that goes  
right in the canisters  
is very tight fit so  
you can't misalign much  
so we just took just a  
simple geometry and came  
up with the worst case  
misalignment and then  
resolved the forces  
involved and the maximum  
transverse force that  
you can come up with is  
about 2000 pounds,  
about two percent of the  
weight of the canister, okay?  
With that small transverse

force, and using conservative assumptions on the depth of the scratch, conservative assumptions on the different inputs into the equation and I reviewed the paper that was produced and there is an engineering judgment, there's a few places where numbers have to be chosen with some engineering foresight and the numbers were chosen conservatively which is different than engineering judgment, choosing a conservative number and so using the inputs that were chosen conservatively, the maximum depth of the scratch with the two percent transverse load is about 10,000ths of an inch. Compare that, that's about as thick as two to three sheets of paper and I'll compare that for the layman to the acceptance criteria which is a sixteenth of an inch

or 62,000ths so the acceptance criteria for the manufacturing procedure and bounded by the ASME code is six times the maximum depth that we calculated in the paper.

I don't recall the width of it, I'll have to get back to you on the width but the length of it could be the full length of the canister.

- [Janine] Okay, and again, this is Janine and just given that, given the scratch analysis and maybe this is for someone else on the panel, I mean what is precluding Southern California Edison from actually examining the worst case canister that's out on the pad currently?

- [Tom] Yeah this is Tom Palmisano, as I said, this would be an input in consideration of the Inspection and Maintenance Program (inaudible) I think you're all familiar, the NRC's Aging Management Program is required at the 20 year point as

part of the license renewal.  
For the Holtec system which  
was submitted to an  
inspection and maintenance  
program much earlier, this  
will be one of the inputs  
we consider. We see no  
need for any immediate  
inspection, we think it's  
more appropriate to factor  
this into the upcoming inspection program.

- [Doug] This is Doug Bauder,  
I also want to emphasize  
that in a prior statement that  
we made, indicated that  
we would be inspecting,  
I'll choose my words  
carefully here, we would  
be inspecting on or before  
November 2020, in fact our  
requirements are to have  
the program developed and  
ready in place prior to  
November 2020. So it's not  
a big difference but it's  
something we indicated earlier.

- [Scott] Thank you.

That's it.

I had a question, I want  
to take you to slide 24,

if we could pull that  
up. Basically this is a  
statement of your root cause evaluation,  
I'm sorry, your root cause for the first  
of the two apparent violations and,  
management failed to  
recognize the complexity  
and risks associated with the long-term,  
long duration fuel transfer  
campaign while using  
a relatively new system  
design. So, I think what I  
would like to focus on,  
really the question is,  
it wasn't- granted, a relatively  
new system design,  
right, the UMAX system and  
obviously your employment  
of that is new to you  
certainly. So my question is,  
if consistent with your  
root cause statement,  
if it's true that it's  
management failed to  
recognize the complexity  
and risks associated with  
using a relatively new system  
design, my question is,  
why? I mean it's a simple question but I'm  
trying to understand why?

If you have a new design  
then it's, you know,  
it's, well I don't want to  
go too much further than  
that because I don't  
want to sound overly  
pejorative, I'm just trying to  
understand, why is it, how is it you  
accept that as a root cause?

That's my question.

- [Jim] Yes, this is Jim Peattie.

The root cause of corrective  
action for that goes  
back to the Holtec  
design procedure, the design (inaudible)  
procedure and it really,  
of the corrective actions  
associated with having a  
second independent team looking  
at it from a site support  
services execution side of  
the design, more so than  
the engineering technical  
design itself.

So in the case of the  
shield ring, the shield  
ring was designed but  
that design wasn't  
reviewed or challenged by  
personnel that had to

go then execute the work  
utilizing that new design  
so the corrective action there  
associated with changing  
the design review process.

- [Scott] Okay I think  
I understand but it's-  
Okay, let me try to repeat back,  
so I make sure I have  
your answer, clear.

So the shield ring, the  
addition of the shield ring  
inside the walls was also new, it was an  
addition based on, there  
was some reasoning that  
was applied, presumably for dose reduction  
but that introduced additional challenges  
associated with tolerance,  
clearances and downloading  
and so what, are you saying  
that management failed  
to recognize that the  
addition of that shield ring  
introduced additional  
complexities associated with  
the downloading operations  
and all the manifestations  
of those complexities in terms of training  
and procedures and everything else?  
Is that what you're saying?

I'm just trying to be clear.

- [Jim] This is Jim Peattie.

So the answer is yes,  
that's exactly what we're trying to say.

- [Tom] Scott this is Tom Palmisano,

the addition of the  
shield ring is one factor,  
it's certainly feasible  
to download the canister  
successfully with the  
shield ring (inaudible).

The real issue in looking at some of this,

looking at the extent of a

73 canister campaign and

the turnover of people

that is going to occur,

I think Jim in his

earlier comments laid out

that when you're doing a five to ten

canister campaign, you

typically have one or two

experienced crews that stay

together during the course

of the campaign, but we

failed to really appreciate

that you'd have of turnover of people

(inaudible)

experience and that's where

the quality of the procedures

and training and supervision, it

became apparent that we had underestimated the complexity from that standpoint.

- [Scott] So I'm going to play that back again so I understand it. So, the training, the presumption is, that the training, the procedures, the oversight, was all adequate before, assuming that it was a short duration campaign.

- [Tom] And assuming there was a certain ,say, prior experience level, and that, you know-

- [Scott] So the root cause statement, I'm sorry to cut you off Tom.

- [Tom] Yeah and when you've got a small group of people on a short campaign you don't have the turnover, your lessons learned are much easier to deal with, they have experience, they've learned the lessons. As you turn over people in the longer campaign that's where some of the weaknesses contributed to the event.

- [Scott] So, okay. So thank you for that.  
So the root cause then  
is management failed  
to recognize that because  
of what you just said,  
because it was a long duration evolution,  
and because of that, there is turnover,  
the changing of the guard, so to speak,  
you know, experience  
that you might have had  
at the beginning was  
no longer there because  
of turnover, attrition,  
whatever, and management  
didn't recognize that  
that loss of experience,  
knowledge, skill, what-have-you, then that  
ultimately was why the  
quote-unquote, inadequate  
training, inadequate  
procedures revealed themselves.

- [Tom] Yeah so exactly,  
we had procedures and  
training that may have been adequate for  
the short campaign  
but not adequate for  
the longer campaign.

- [Scott] Did you have  
a follow up on that?

- [Linda] I did, that's a perfect segue,

this is Linda again. You've provided us with a lot of corrective actions here, I know it's not all encompassing, but the benefit of it lies in it gets you on the record, since this is an important element for both of the apparent violations you've identified management oversight as an issue. And there's not a lot of specific corrective actions in your presentation that are directly related to that element and it is related to what Scott was just asking about, so bottom line question is, can you just review for us the corrective actions that directly relate to management oversight because this is not a Holtec activity, this is a Southern California Edison activity, so it's not sufficient to just say, we didn't recognize that they weren't minding the store,

its all of you sitting at  
the table minding the store.  
And then if you've added  
anything into the Corrective  
Action Program now that you're using that  
maybe a little more  
aggressively, or will be in  
the future, that also would  
capture management oversight  
gaps or issues.

And I'll let whoever on  
the panel thinks that  
you're the appropriate  
person to answer.

- [Jim] So I'd like to  
start by just explaining  
that I am the new General Manager  
for Decommissioning Oversight.

I am an SCE employee, I've  
been an SCE employee for  
37 years, my experience is,  
I've been in maintenance,  
I've actually been a  
refueling supervisor for  
I don't know, 13, 14  
outages, in fact I was the  
Manager in Charge of  
safely defueling both units  
after we announced the  
shutdown, also utilizing

essentially a small crew  
of experienced personnel  
so, you know, I take this  
issue very seriously.  
As far as other changes,  
I've actually changed  
my organization such that  
I go back to the model  
that works for me which is  
Oversight is intrusive,  
right, that the personnel  
that I put to go oversee  
the contractor are in fact in the field  
providing guidance to the contractor,  
validating that the contractor is in fact  
following your procedures  
step-by-step, doing  
their pre-job briefs, such that  
personnel are properly  
instructed before they  
go out in the field.  
In fact, we're doing what  
we committed to go do  
by our procedures, that is  
a full-time responsibility  
that I've assigned to my Oversight people.  
All right, that is a  
separate oversight function  
than how it was being performed previously  
which was more of a

surveillance activity where  
you could plan and then  
go monitor and then  
basically document what you're observing.  
I think that's the primary thing.  
In my CAP experience,  
the new senior management  
observation process where all observations  
now have to be entered into  
the Corrective Action Program  
also helps us ensure  
that Management is doing  
observations at the level  
that Senior Management  
would expect right, and  
that screening committee  
should be challenging those observations  
with regard to their  
depth, are these management  
observations adding value,  
are they looking at the  
right things, in that  
I'll be reporting directly  
to Doug with regard to  
what we're seeing within  
the Senior Management  
Observation Program also.  
- [Doug] Thank you Jim  
and this is Doug Bauder,  
I'd like to emphasize a couple of points.

First, although the number of corrective actions around Oversight are not as great as in other areas the impact is pretty high. Some of the key ones Jim discussed, changes in roles and responsibilities, holding his organization accountable. These oversight specialists, some were let go, additional skilled people were brought in, and their expectations to directly coach in the field not just sit back and write an observation sheet. Further, what I've asked for, is a management program for us, that includes me, to be out in the field in teams on a structured basis. So Lou Bosch has put that together. We had our first team in the field last week, I think that's correct, right Lou?

- [Lou] That's correct.

- [Doug] And on Tuesday I spent three and a half hours observing a training download evolution

as we indicated, I had  
six or eight comments that  
Jim is working through the  
process to put in place,  
so I completely understand  
the perspective here,  
Edison owns this, this  
is not a contractor issue,  
it's our oversight  
responsibility, and we take  
it serious, I will tell you  
that from my perspective  
if the right oversight had been in place,  
on August 3rd and prior  
to that, the other aspects  
of shortfalls that have  
been talked about here:  
procedures, training, they would have been  
identified and we wouldn't  
have just been relying  
on skill of the craft as Tom indicated.  
So we talk about Oversight,  
maybe the number of  
actions isn't as great  
but the impact is great.

- [Scott] So thank you for that.

The reason we're boring  
in on this issue is  
because this is central  
to your root cause, right.

So if your root cause is about oversight,  
the failure to recognize,  
that's why we're trying  
to draw out you know, more  
precisely, what specific  
actions were taken to  
address that failure to  
recognize, do you have a follow up?

- [Eric] This is Eric Simpson.

I had a question and this  
is sort of an inspection  
item that we'll fire on you now but, your  
Oversight Specialists, are they  
going to be in the  
field for each and every  
evolution or only the most critical tasks?  
Or will they be in the  
field observing every  
task 24/7?

- [Jim] Eric, this is Jim Peattie.

So to answer your  
question, the procedures  
actually require their presence  
in the field for medium  
and high risk activities  
especially those activities  
that have already been pre defined  
for lifting. But that is a  
requirement by procedure.  
Other activities that are

of low risk would not be a procedure requirement but it is my expectation that as long as I have Oversight personnel available that they are out in the field observing the work activities for that day.

- [Linda] Jim, this is Linda again. Just for the benefit of the audience and the benefit of those of us on the NRC side, who are participating, could you just give us a couple of examples of when a medium or high risk would be, so we can kind of understand what the threshold is?

- [Jim] Yes, so a high risk activity would be essentially activities that involved handling the fuel, so loading of the canister, removing of a canister with a NUREG-0612 activity would be a high risk activity. A medium risk activity could be a heavy lift that's outside of the guidance of NUREG-0612, so it may not be

handling the fuel but we would still look at that as it's a heavy load, heavy activity, it has risk, industrial safety risk.

We would expect the same behaviors apply.

- [Linda] Okay, thanks Jim.

- [Scott] I think we've reached the end of our questions.

Was there any additional information, Doug, that you or your team wants to provide before we move to close?

- [Doug] I think one item is a follow up to a question that Janine had regarding kind of the procedural flow path we would go through if we had an incident in the dry fuel storage area. So, Jim if you don't mind stepping us through that, or Lou.

- [Jim] Yes Janine, so I think your question was, what action would we take if we found that there was MPC damage, right. The Holtec property procedure

600 which is the Abnormal Operations Procedure has a section in it specific to damage. It does not say canister drop, it's essentially any damage to a canister. That procedure directs the supervisor in charge to place the equipment in a safe condition to move personnel to a safe low dose area, to immediately notify the Shift Manager and Senior Management and then our RP or Radiation Protection Technicians would survey the area for radiological conditions or changes. We would also then write an action request, enter that into our Corrective Action Program with as much detailed information as a supervisor can provide regarding the actual condition, in which case that action request would be evaluated and appropriate action taken, work planned and approved before we

proceed with any recovery.

- [Janine] Jim, thank you for that.

It's Janine and just

to follow on with that,

one of the questions

that underlies all that

is, what is considered MPC damage?

So in this particular

case, it even has been

noted on slide 16 where it talks about the

ductile baseplate locally

conforming to the shape

of the ring, you know,

essentially a dent in

the canister is that something that would

cause you to enter into that procedure?

What is considered MPC damage?

- [Jim] This is Jim Peattie, so, without

having the procedure in

front of me, in understanding

what the definition

within the procedure

was, I can't really

answer that completely,

but I would tell you that

the day of the event,

August 3rd, that in fact

those actions were taken

although personnel may

not have known whether or

not the MPC had damage  
or the dent at the time.  
So there was a action request generated,  
right, to identify that  
event which ultimately  
led our engineering group to assess it.

- [Tom] So Jim I think  
this is probably one  
where more- we need to  
provide more information  
to the inspection team to follow up with  
that discussion. Just  
to add to what Jim said,  
once our Shift Manager is notified, he  
assesses the overall  
condition, he reviews our  
emergency plan for any entry criteria, would  
review the radiological  
conditions, to ensure  
any actions needed on a  
broader basis are taken.

- [Linda] Thanks for  
elaborating on that Tom,  
this is Linda again.  
That procedure along with  
several of the other  
procedures identified in  
the presentation, even  
though Holtec may have  
authored them, I know

they have gone through  
Southern California Edison  
review, those will be  
the subject of our additional future  
near-term inspection activities so  
just to put that on the record.

- [Scott] All right can I get  
the NRC slide 13 up please.

So I'm going to go ahead and  
move to close the meeting,  
note that, again, as  
we said at the outset,  
the NRC will consider all  
the information we have  
obtained today in making  
our final enforcement  
decision and of course will notify you by  
telephone and in writing  
which should be publicly  
available when we're ready  
to announce our decision.

We strive to make that  
decision within 45 days,  
it could be sooner. At the  
outside I would say 45 days.

So what comes next?  
We'll make a final  
determination as to whether  
or not apparent violations constitute  
actual violations, and

their severity levels,  
consistent with our enforcement policy.  
This determination will be communicated to  
Southern California Edison  
and will be made public.  
As we've noted a couple of times, the NRC  
staff in Region IV plans  
to conduct follow up  
inspections to determine  
whether corrective  
actions are appropriate and adequate to  
prevent future recurrence of the issues.  
And in addition, the  
results of those follow up  
inspections will be  
communicated to the public  
in the form of a public meeting or webinar  
prior to or concurrent with the release of  
the inspection report.  
As Linda mentioned earlier,  
a decision on whether or not  
Southern California Edison  
is ready to resume fuel  
loading operations will be  
made after our inspection  
efforts which I believe  
we have planned here  
in the next couple of  
weeks. That decision will  
be shared with the public

during the aforementioned public meeting or webinar as well as in writing on the public record. I'll remind everyone, that the apparent violations discussed at this conference are subject to further review and may be revised prior to any resulting enforcement action and that any statements or expressions of opinions made by NRC employees made at this conference, or the lack thereof, are not intended to represent final agency positions.

Slide 14.

The NRC is interested in feedback from all participants and observers on how it conducts these meetings and other meetings, and in particular, interested in comments about this meeting today.

We provided written comment forms which are available in the back, we invite any person who has a comment to complete the form,

please leave the forms  
with the individuals in  
the back or if you prefer  
you can send them in via email or mail.  
Persons attending through the webinar  
can find the feedback form on our website.  
So with that, the business portion of this  
conference is closed, thank you.

Slide 15 please.

All right, now that  
the business portion of  
the conference is  
concluded, I'd like to offer  
any observers the  
opportunity to comment on  
the meeting or to ask the  
NRC staff present any  
questions they may have  
about the NRC and/or  
our enforcement process.  
Doug, you and your team  
are welcome to stay and  
observe or you're also  
welcome to depart, it's  
your decision, you're  
not going to be asked to  
respond to any questions  
that we get, so if you're  
at the meeting we have  
collected comments and

questions through the  
webinar application and  
in the time remaining  
we'll try to answer those questions with a  
priority on questions  
that relate directly to  
our enforcement process.

All questions received via the webinar  
will be posted on our Spotlight page on  
the NRC homepage, along with closed captioned  
video and an audio transcript  
of today's meeting,  
that will take a couple of weeks, as Linda  
mentioned at the outset.

So I'm going to hand this  
over to Ryan Alexander  
in the back, where's Ryan? There's Ryan.  
So Ryan, take it away.

- [Ryan] All right, good afternoon,  
thank you Scott, I appreciate it.

My name again is Ryan Alexander, and I'm  
actually a member of the  
NRC Region IV staff who's  
primarily involved with  
our operating reactors  
and doing inspections and oversight  
of those facilities  
but I was asked to support  
today for the Q&A session.

As Linda and of course now Scott has also

mentioned, our priority in this portion of the meeting is to address your questions related to the NRC's enforcement decision making process.

Now most of those questions that have all been raised have all been from the webinar.

Just for everybody's- and full disclosure, there are no members of the public that have arrived at this meeting that are with us today, so all the questions that we'll be presenting to the NRC staff came from the webinar straight, which myself and several members of the staff have been monitoring throughout the activities this afternoon. So first of all, I want to thank you all for pointing out some of the technical difficulties that we were having at least early on with microphones and volume on the systems.

We hope we appropriately

addressed those for you  
so you could continue  
to participate here as  
we went through that this afternoon.  
And the other thing is, is that there were  
many, many questions that were asked,  
most of them, I'll be honest,  
were very focused on  
some of the technical  
aspects which ultimately  
either SCE  
addressed at least  
in its part of the Q&A  
session with the NRC  
throughout many of these questions.  
But as Scott mentioned,  
a full transcript of all  
the questions will be posted at some point  
in the future from this webinar.  
What we want to focus on  
with the NRC staff right  
now is to focus on those  
questions related to  
the enforcement and  
decision making process and  
so I'll go ahead and just  
pose those questions to staff,  
and Scott, and take them or hand them off as  
necessary.  
One question from one

member of the public,  
and these are in no particular order,  
is can the public challenge  
any NRC enforcement  
actions and if so, how?  
- [Scott] So really the  
only mechanism for the  
public to challenge an  
enforcement decision  
rendered by the NRC is  
through what we call,  
what we refer to the 2.206  
process, it's actually  
Part 2 of the Code of  
Federal Regulations 10 CFR  
part 2, section 2.206 and  
that is basically a request  
by anyone to take some enforcement action  
against a licensee, it's not necessarily a  
challenge to a decision  
per se, it's another  
request to consider an alternate course  
of action and that- there is  
a very formal process  
by which that can be done.

- [Ryan] All right, thank you Scott.  
Another question that we received was,  
and I think Scott you  
may have just touched  
on this in your closing

remarks but just to clarify for the individual, what is the expected timeline for the NRC's enforcement actions on each of these apparent violations?

- [Scott] Yeah, so consistent with our own internal metrics and policies, and like I said, we strive to get a final enforcement decision in the public domain within 45 days.

- [Ryan] 45 days, okay, appreciate that. Moving on, third question, a little more technical in nature in terms of the process, is: How does the NRC consider the licensee's failure to identify the July 22nd precursor event in determining the violation, either significance or severity level of the event?

- [Scott] I'll open that up to Linda or anyone.

- [Linda] This is Linda. The July 22nd incident, I don't want to use the term event, has already

been discussed in the inspection report,  
and documented the results  
of the special inspection  
and the other two  
apparent violations and it  
has been handled in one of  
the lesser safety significant  
violations at Severity  
Level IV, really had to  
do with entering information into the  
Corrective Action Program, so that has been  
dispositioned.

- [Ryan] Along those lines,  
there is something that  
came in when we were in  
caucus with the staff  
that also goes back to  
the special inspections.

How did the NRC assess the licensee's  
implementation of their  
fitness for duty program  
for those individuals involved during the  
August 3rd event?

- [Scott] Eric or Janine?

- [Eric] It was my understanding, and I've  
discussed it with the  
Licensee, they did perform  
a for-cause fitness for duty evaluation  
of those individuals  
involved in the event and

they both came back negative.  
They were not impaired  
during this evolution so  
there was no fitness for duty  
impact to the individuals.  
There was no fitness for  
duty issue.

- [Ryan] Different line  
of question that came up  
was regarding what it means,  
Southern California used  
the term self-revealed in  
terms of some of the events,  
can the NRC describe what  
this means and how the  
NRC considers this in  
determination  
in the enforcement process.

- [Scott] Michael, do  
you want to take that?

- [Michael] I'd be happy  
to. Self-revealing is a  
term that we use when we're  
considering identification  
credit, some of that is  
identification of an event  
that was self-revealing  
and so when we're looking  
at identification credit,  
we look at the licensee's

actions in there. Were they self-monitoring and that's how they found it, we look at the ease of discovery, were there prior opportunities to have discovered it, that's the kind of thing we look at for a violation when we're considering identification for that.

- [Scott] But with respect specifically to self-revealing it's an incident that occurs, nobody found it before it occurred, it found you. It's a self-revealing event is, you know, I'm trying to think of a good example.

- [Linda] Let me use the August 3rd example to be you know, very obvious, the redundant safety systems were the slings that were connected to the vertical cask transport system and it was very obvious that they were no longer supporting the load of the canister so that is why we believe Southern California Edison characterized

that one as self-revealing.

- [Ryan] I appreciate the clarification on that.

With that, we actually have one last question that had not been addressed either in Mike's preamble on the enforcement process and it had to do with the NRC's interactions with the US Attorney General or the Department of Justice and specifically, in this case, are the findings turned over to the US Attorney General or Department of Justice for criminal prosecution?

- [Scott] So the short answer to that question is no.

I know that we've had conversations with members of the FBI, maybe Linda you want to just comment on that.

- [Linda] Sure. In this particular case, the NRC has sole jurisdiction over taking a civil action, we have been in communication with the Bureau of Investigations, there has been no expressed interest nor would they

have the primary  
jurisdiction at this point in time.  
We have coordinated information with them.

- [Ryan] With that I'm  
going to look back to my  
cohorts in the back, were  
there any other process or  
enforcement agency  
questions that have come up  
just in the last few  
minutes while I've been up  
here that you would share? No.  
Okay, we're getting no on  
that, so with that, Scott,  
I'm going to turn it back to you.

- [Scott] Well remarkably we  
were able to get everything  
covered within the allotted  
three hour window and  
I want to thank everybody,  
I want to thank the staff.  
I want to apologize again to  
those of you participating  
on the webinar for the  
technical challenges you  
experienced during this with respect to,  
I understand there has  
been some feedback and  
some difficulty hearing.  
This format for conducting

these type of meetings is a relatively new innovation for us, it's not innovative by any stretch, but for us it is and we haven't done too many of these and I think this is actually only our second or third where we've conducted a public meeting like this via webinar and so there's bound to be challenges so again, I apologize for those challenges and I look forward to any and all feedback we get about how we conducted this meeting. With that, we are adjourned, thank you.