

WEBINAR TRANSCRIPT

This document provides the transcript from a public meeting (webinar) that was held on March 25, 2019, to discuss enforcement decisions and recent inspection activities at San Onofre Nuclear Generating Station. The recent inspections were 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.

Hosts of Webinar:

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Good afternoon, and thank you for joining the webinar. My name is Linda Howell. I'm the deputy director of Region IV's Division of Nuclear Materials Safety. With me is Mr. Lee Brookhart, the Region's senior dry fuel storage inspector. The purpose of this afternoon's meeting is to share information concerning NRC's final enforcement decision involving information developed during special inspection conducted to review circumstances associated with an August 3rd, 2018, canister misalignment incident at the San Onofre Nuclear Generating Station, or SONGS. The special inspection included on-site reviews from September 10th through 14th, 2018, as well as subsequent in-office reviews of information provided by the licensee. On November 8th, 2018, we first presented preliminary special inspection results during a public webinar and shared information about the August 3rd incident. The special inspection findings were documented in a report that was published on November 28th, 2018, and an errata to the report was later issued

on December 19th, 2018.

The inspection report described two apparent violations and included a notice of violation for three issues of lesser safety significance. Since that time, Southern California Edison and the NRC participated in a predecisional enforcement conference to discuss the two apparent violations on January 24th, 2019.

The predecisional enforcement conference was open to public observation via webinar broadcast. During the enforcement conference, NRC discussed the safety significance of the apparent violations, and Southern California Edison was provided an opportunity to present its position on the safety significance of the issues. Southern California Edison also discussed numerous corrective actions that had been completed at SONGS.

The inspection report, information presented during the November 8th webinar, and during the predecisional enforcement conference is available in the Spotlight portion of the NRC's public webpage. In addition, we have posted presentation materials

to be used during our meeting today
as well as the final enforcement action
that was issued to
Southern California Edison
earlier today.

As you see on the agenda,
following discussion of the
NRC's enforcement action,
and the factors that the
agency considers in making an
enforcement decision,
we plan to discuss our
preliminary findings
from inspection activities
that were initiated
in November 2018 and
which are still ongoing.
Following the conclusion
of the special inspection,
NRC initiated additional
inspection efforts
to review Southern California
Edison's corrective
action implementation and several analyses
that were conducted by the licensee.
The inspection efforts
included over two weeks
of on-site review as
well as in-office review
of information submitted by the licensee.
Mr. Brookhart will discuss
the inspection effort
and our observations a little
later in today's meeting.
We'll also address the status

of fuel loading activities
at SONGS and the path forward.
At the conclusion of our presentation,
we'll open the meeting to accept questions
from our audience.
This is a Category 3 meeting,
so public participation is encouraged.
I'll also note that in
addition to today's webinar,
NRC management will also be speaking
at the San Onofre community
engagement panel meeting
this coming Thursday,
March 28th, at 5:30 PM.
We look forward to meeting
with some of you directly
and answering any questions
that you may have.
Before we move forward
into our presentation,
I'd like to inform
visitors present here today
where the facilities are.
If you go out the door, turn to your left,
across the foyer area,
they will be on the right.
Also, in the event of an emergency,
we will stay together
and exit the building
through the front doors.
We'll remain in the parking lot
until the situation is over
and we're allowed to reenter the building.
Let me also ask that staff
and visitors in the room,

please silence your cell phones during the meeting and please keep your voices down because the meeting is being recorded. Lastly, please be mindful that the meeting is being broadcast, so if individuals present need to exit the room, please do so via the rear of the room so as not to cross the field of view of the camera that's recording the webcast. Again, our slides are available on the Spotlight section of the NRC public webpage at www.nrc.gov. From the Spotlight section, click on SONGS Cask Loading Issue, and from there you will see a variety of documents available for your review with today's slides being one of those options. The presentations and other documents will also be available via the NRC's Agencywide Document Access Management System, or ADAMS. The video and transcript from today's meeting will also be posted to the Spotlight section of our webpage. In addition, we'll post comments and questions received during the meeting. Please note that the

transcript of the meeting
and the questions will take a few weeks
to be posted since the NRC must receive
the transcript from our contractor
who is providing the webinar service today,
and review both the
transcript and the questions
to ensure accuracy of the information.
We are also required by the
Americans with Disabilities Act to provide
closed-captioning for the video.
We apologize in advance for the delay
and inconvenience in making
those materials available,
but we cannot control
or expedite the process.
Those of you who have
registered for the webinar
will be able to access the video shortly
after the conclusion of today's meeting.
During the presentation,
you may submit written
comments and questions
via the webinar chatroom feature.
We'll answer questions
and respond to comments
as time allows.
Webinar is scheduled
to end at 5 PM Central
or 3 PM Pacific time.
If for some reason the NRC
loses internet connectivity,
we will dial into a telephone
bridge line and continue
the presentation.

The backup bridge line may be reached
by dialing 1-800-369-1771
and using the passcode
that appears beneath
the bridge line number.

I'll give you a minute now
to take that number down
in case you need to use it.

Next slide, please.

As I noted earlier, a predecisional
enforcement conference
was conducted at Southern
California Edison
on January 24th, 2019.

Two apparent violations and their apparent
safety significance were discussed
by the NRC.

Southern California
Edison provided its view
of the safety significance of the issues,
the root causes and contributing factors,
and discussed a number
of corrective actions
that had been taken and were planned.
The NRC reviewed all information available
through its inspection efforts,
the information provided by
Southern California Edison,
in accordance with our enforcement process
and has made a final enforcement decision.
Before I discuss that final
action I'd like to give
a very brief overview of the factors
that NRC considers when
making enforcement decisions

that the members of our audience who may not have had the opportunity to attend the enforcement conference or view the video.

First, once the NRC determines that a violation has occurred, we assess the safety or security significance of the issue.

We use Severity Levels to classify the significance of a violation.

As you can see on the slide, there are four Severity Levels, with Severity Level I being the most significant, and Severity Level IV being the least significant.

Violations categorized at Severity Level III, II, or I are considered escalated enforcement actions and are candidates for monetary civil penalties or fines.

Four factors are considered when assessing the Severity Level of a violation.

Any actual consequences that may be associated with the violation, any potential consequences, the potential for impacting the NRC's ability to perform its regulatory function, and finally, any willful aspects of the violation.

That latter factor is not applicable

in this particular case.

As part of our civil penalty assessment process, we consider four elements.

First, the licensee's enforcement history and the Severity Level of the violation; identification of a violation, or in other words, whether the issue was identified by the licensee or the NRC; corrective actions from the perspective of, were they timely and comprehensive; and discretion.

The NRC may choose to exercise enforcement discretion in assessing a civil penalty based on several factors described in our enforcement policy.

Absent the use of discretion, there are three possible outcomes in most enforcement cases.

One, no civil penalty is proposed.

Two, a base civil penalty may be proposed, as defined in the enforcement policy, which is based on the type of license.

Or a civil penalty may be proposed at twice the base value.

For a spent fuel storage licensee, the civil penalties range from \$36,250 for a Severity Level III violation to \$72,500 for a Severity Level I violation.

So let me move on to the final enforcement action.

The first violation discussed in our inspection report and the final action involves a loss of redundant drop protection features. 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. The spent fuel storage system used by SONGS has a Certificate of Compliance which requires that the canister be lifted and carried with redundant drop protection features to prevent uncontrolled lowering of the load, or the canister. This violation was categorized as a Severity Level II violation, the second highest Severity Level. The NRC considers that this violation could have resulted in significant safety consequences because important to safety features were disabled during a spent fuel canister downloading operation. Based on the factors considered in the NRC's civil penalty assessment process, primarily identification

and corrective actions
in this instance,
a civil penalty is being proposed.
Because Violation 1 was categorized
as Severity Level II,
the NRC considered whether
credit was warranted
for identification and corrective action.
We determined that
credit for identification
was not warranted because this violation
was identified through
a self-revealing event.
Based on several factors identified
during our follow-up inspection efforts,
which Mr. Brookhart will discuss shortly,
the NRC concluded that
credit for corrective action
was not warranted.
Since credit is not warranted
for either identification
or corrective action,
the NRC enforcement policy
provides for a civil penalty
that is twice the base civil penalty,
an amount of \$58,000, or a total of \$116,000.
The second violation identified
in the inspection report
and in our final
enforcement action involves
a failure to make a
proper NRC notification.
10 CFR 72.75(d)(1) requires
in part that each licensee
notify the NRC within 24

hours after the discovery of events involving spent fuel in which important to safety equipment is disabled or fails to function as designed when it is required to mitigate the consequences of an accident and redundant safety equipment is not available. This violation was categorized as a Severity Level III violation. Since SONGS has not been the subject of an escalated enforcement action within the last two years, in accordance with the NRC enforcement policy, we considered whether credit was warranted for corrective action. Corrective actions taken by Southern California Edison included making the required notification, providing training to shift managers on NRC reporting requirements, revising reporting procedures, and establishing a biennial training on reportability. The NRC determined that corrective action credit was warranted for this violation. Therefore, no civil penalty was proposed for this violation. The two violations will be issued in a single notice,

and because a civil penalty is being proposed, a press release will be issued later today. Southern California Edison has three options. They can accept the violations with the assigned Severity Levels and pay the civil penalty; they could deny the violations, or protest the severity levels; and finally, they can protest imposition of its civil penalty in whole or in part.

A written response to the final enforcement action is expected from the licensee within 30 days, and that response will be entered into ADAMS and made publicly available. That concludes our discussion of the final enforcement action. We'll take questions on this portion of the presentation following Mr. Brookhart's discussion. With that, let me turn it over to Mr. Brookhart.

(cough)

- Thank you, Linda.

Good afternoon.

My name is Lee Brookhart, and I am a senior dry cask storage inspector here out of the Region IV

office in Arlington, Texas.

The recent follow-up inspection at San Onofre was conducted in accordance with Inspection Procedure 92702, which is the follow-up of traditional enforcement actions.

The objective of our inspection was to determine if San Onofre had performed adequate causal evaluations, fully identified and assessed the extent of condition or an extent of cause, and implemented adequate corrective actions to prevent reoccurrence.

As part of the NRC review, open items from the special inspection were also evaluated and will be discussed in this presentation.

The NRC has independently reviewed the licensee's calculations regarding the incidental contact during downloading operations, and has determined that the canisters at San Onofre are all in a safe condition, and the canisters are performing their required safety functions.

Four causal evaluations were performed by San Onofre related to the August 3rd incident.

Many causal factors, issues, weaknesses were examined to formulate

the conclusions identified in the evaluations.

The main causes included:

- management failed to recognize the complexity and risks associated with a long duration fuel transfer campaign using a relatively new system design;
- SC&E management failed to establish a rigorous process to ensure adequate procedures, training, and oversight guidance;
- procedures and corrective action program processes were inadequate to guide, instruct, resolve, and trend adverse conditions in a timely manner;
- and management failed to recognize that the required integration and application of 10 CFR Part 72 reporting requirements.

Each causal evaluation contained numerous contributing causes, extent of causes, and extent of conditions which contained corrective actions to address and resolve the issues.

The contributing causes included

- equipment design reviews did not capture unintended consequences,
- inadequate procedures,
- inadequate training,
- lack of continuous learning environment,
- lack of communication protocols,
- project management observations were not being routinely performed,

project management did not enforce entries into the corrective action program, there is a lack of understanding of Part 72 reporting requirements, and management did not encourage nor demonstrate a conservative bias for reporting. The NRC independently reviewed and assessed the four causal evaluations and concluded the evaluations were adequately performed to the breadth and depth as required. However, two weaknesses were identified within the causal evaluations. The first weakness: the NRC determined that changes to the Executive Oversight Board process were superficial and would not ensure that significant challenges would be properly identified and addressed. In response, San Onofre bolstered the changes to the Executive Oversight Board process. The second weakness was San Onofre failed to identify radiation protection enforcement as a contributing cause of the incident. Specifically, the site enforcement for minimizing dose directly led to critical personnel being located away from the

area, where direct observations of the downloading activities was not possible. This led to a partial loss of command and control of the evolution, and was a contributing cause of the event.

The inspectors noted that this potential causal factor was identified in the cause and effect analysis but was not identified as a contributing factor or tracked for a specific corrective action.

In response, San Onofre added an action to address the radiation protection enforcement into the training program for future personnel involved in ISFSI activities. Beyond the causal evaluations, the NRC team spent a considerable effort reviewing San Onofre's completed and planned corrective actions, to verify the actions were effective and would prevent reoccurrence.

In total, San Onofre initiated 71 individual corrective actions, many of which had multiple tasks, to close all the issues, weaknesses, and causes

identified in the four causal evaluations. The NRC found that San Onofre's corrective actions to be comprehensive to address the issues and prevent reoccurrence. However, six corrective action weaknesses were identified by the NRC. These issues will be discussed within the particular subject area as the presentation continues. The remaining slides will present San Onofre's corrective actions performed in each of the following areas. Procedures, personnel, equipment, training, corrective action program, demonstrations, reportability, and special inspection follow-up items. Corrective actions from the causal evaluations drove extensive reviews and changes to all the ISFSI operating procedures. Without getting into too much detail of all the changes performed, an example of changes included: San Onofre and their vendor conducted various discipline reviews to ensure critical steps with specific criteria was clearly specified; all operating procedures were changed to clearly define

the crew's roles, responsibilities,
and qualifications;
the use of new load monitoring
equipment with special limits
to ensure the loss of a load
is recognized by the crew;
and more personnel with direct observation
during the downloading operations.

There was one corrective
action weakness identified
by the NRC that related
to procedure changes.

The NRC determined that
San Onofre had made
substantial improvements to
the fuel handling procedures
to ensure safe operations.

However, the NRC identified
that notable procedural
weaknesses remained
in the downloading procedure.

Procedure weaknesses included
missing contingency steps
for potential new equipment failures.

While there were some criteria specified
for when to suspend downloading activities,
not all scenarios were addressed.

And the procedure lacked
some necessary steps
to maintain seismic qualification
during cask transport
from the fuel building
to the spent fuel storage pad.

San Onofre implemented the
changes to the procedure

to address the NRC's identified omissions.

Personnel enhancements.

Previously, you can see the only personnel on the ISFSI pad during the August incident was the transporter operator and the spotter in the lift basket.

Under the new process, the required personnel during the downloading operation includes eight individuals to observe and control the downloading operation.

In this slide, the relative positions of the new individuals can be seen.

The additional personnel who are capable of directly observing the critical activities can provide the required direction and oversight to perform the operation safely.

In this photo, it outlines that two individuals in the lift baskets will be directly observing the canister's movement into the vault.

The licensee made significant changes with the load monitoring equipment that is required to be utilized during the downloading operation to ensure the canister is safely lowered into the vault.

During the August incident, the previous monitoring equipment included just a screen on the transporter,

which only contained height indications and pressure indications. The pressure indication could be used to detect the presence of weight but does not provide any kind of accurate readout. Other visual indications relied on the spotter in the lift basket to visually observe that the slings were tight and the canister was properly supported by the lift equipment. Now, the operation requires two load sensing devices, devices which are calibrated instruments that can wirelessly display the weight of the canister to two different tablets. One tablet is located next to the cask loading supervisor and the San Onofre oversight specialist. The other tablet is positioned on top of the transporter's control box such that both the operator and the spotter on the transporter platform can observe the weight of the canister as it is downloaded into the vault. Each tablet will alarm if the load sensing devices experience a loss of load. Additionally, a camera has

been mounted on the side of the transporter and is positioned in a way that it can see down into the transfer cask and view the canister movement as it passes into the vault.

The camera's video is displayed on a monitor where individuals directing operation and oversight can visually observe the canister's movement.

The photo on the left is circled where the new equipment is located.

The photo on the right is a picture of the new load sensing device.

There is one device in line with each downloading sling. Here in this photo is one of the tablets which displays the weight of the canister during the operation.

Circled in this photo is the camera that is positioned over the transfer cask and can view the canister as it is lowered into the vault.

Two weaknesses were identified related to San Onofre's implementation of the new equipment.

The NRC determined that San Onofre improperly designated the new equipment as

not important to safety.
Since the new equipment
is installed in line
with existing important to
safety downloading slings,
the new equipment should
have been designated
as important to safety as well.
This is a preliminary finding
of 10 CFR 72.146(a) requirements.
In response, San Onofre revised
the design change package
to include the appropriate
quality designation
for the new equipment.
For the second corrective action weakness,
the NRC identified that
the load sensing devices
were not procured in
accordance with the vendor's
design purchase specifications,
and has been identified
as a preliminary finding,
10 CFR 72.154(a) requirements.
The new load sensing devices
were not tested to 200%
of the rated capacity, per the vendor's
purchase specification
and American Society
of Mechanical Engineers code requirements.
Additionally, the original
load test was conducted
by an unqualified vendor.
At no time was this equipment
used to move spent fuel.

San Onofre, in response, removed the equipment from service, performed the required 200% load test by an approved vendor. These issues are examples of inadequate corrective actions that factored into the NRC's decision to withhold corrective action credit. San Onofre's immediate actions relating to these issues did restore compliance.

Training.

San Onofre implemented comprehensive actions to review, modify, enhance, and retrain all individuals associated with the loading operations at the site. This included development of new training programs for the workers, a revised training program for oversight specialists, a new training for all workers in the use of San Onofre's corrective action program, and new event notification training for the responsible staff. The NRC identified no weaknesses regarding San Onofre's training enhancements. San Onofre made significant changes to their oversight program for spent fuel storage operations.

Procedure changes were made to ensure a rigorous review of vendors' training material, operating procedures, and maintenance procedures prior to acceptance and use of those documents on-site.

The licensee revised oversight procedures to include new task guides, which describe critical attributes in the field that must be observed.

The licensee developed a qualification program for the oversight specialists, which included audits by management on the specialists. Additionally, San Onofre increased the number of oversight personnel including adding an oversight training manager.

One corrective action weakness was identified which related to San Onofre's comprehensive changes to the oversight program.

The NRC determined San Onofre completed rigorous reviews of the Holtec operating procedures using the new procedural guidelines but the same level of review had not been completed of Holtec's maintenance procedures.

In response, San Onofre initiated a corrective action to complete the review of the Holtec maintenance procedures in accordance with the new procedural requirements. In the past operations, issues were captured under Holtec's corrective action program and only higher significant issues were addressed in San Onofre's corrective action program. One of the main program changes is that all identified issues will now be dispositioned through San Onofre's corrective action program. New training was developed to ensure that all individuals involved in the spent fuel activities understood the low threshold to initiate a corrective action, and how to use San Onofre's corrective action program. Additionally, San Onofre established a full time quality assurance manager to oversee and ensure proper identification and resolution of issues identified on-site. No weaknesses were identified by the NRC related to the changes made in the

corrective action program.

Demonstrations.

During the NRC's on-site inspection weeks in January and February of 2019, an inspection team observed San Onofre perform demonstrations to the following activities.

Movement of the transfer cask from the fuel building to the storage pad, demonstrations of downloading and retrieval operations using a dummy canister- and so people understand, the dummy canister is a fabricated canister that has been filled with concrete to simulate the size and weight of an actual canister.

The demonstrations included the use of all newly implemented corrective actions, which included the new procedures, equipment, oversight, and personnel.

The NRC observed this operation at day and at night to verify successful completion during the most limiting conditions.

And, the demonstrations were performed of the revised fuel building operations to ensure transfer casks will be removed from the bottom of the spent fuel pool

to the cask wash down area.

In this slide, the transfer cask is carried by the low profile flatbed transporter, also called the HI-PORT.

As part of the extensive reviews connected with the root cause and apparent cause evaluations, San Onofre identified that past operations of the HI-PORT were performed too close to interferences such as light posts along the haul route. The seismic analysis required a minimum stand off distance to be maintained during operation of the low profile transporter. In order to comply with the requirements of the analysis, San Onofre adjusted the haul path to maintain the required stand off distances.

The NRC observed San Onofre perform the demonstration moving the dummy canister from the fuel building to the ISFSI pad and independently determined that the revised haul path meets the seismic analysis.

In this slide, the vertical cask transporter is taking the transfer cask loaded with the dummy canister to the top of the ISFSI pad to be downloaded.

In this picture, the rigger in charge

and another qualified spotter are monitoring the dummy canister as it is moving from the transfer cask into the storage vault. The inspection team noted that the crew in the oversight were very knowledgeable of the new downloading process, procedures, and new equipment. The NRC team observed San Onofre successfully demonstrate the new downloading and retrieval process. San Onofre has revised a fuel building operations procedure to address a previous concern raised by the NRC, which was described as an unresolved item in the January 2018 inspection. In the past operations, the licensee utilized the intermediate shelf in the spent fuel pool, which is seen on the right. Use of the shelf placed the canister in an unrestrained condition. The licensee changed their procedure to no longer utilize the shelf and now directly removes the canister from the bottom of the pool. The NRC observed successful demonstrations to place the lid and remove the transfer cask from the pool to the cask wash down area.

One weakness was identified by the NRC during the demonstration activities. The NRC identified additional areas where San Onofre did not meet the assumptions in the seismic analysis. As the vertical cask transporter approached the mating device, the licensee prematurely removed the yellow restraint band, which braces the transfer cask to the transporter. San Onofre's seismic analysis assumed that the restraint band is on at all times during travel. The failure to correctly use the band in accordance with the seismic evaluation is a preliminary finding of 10 CFR 72.212(b) (3). This issue contributed to the NRC's decision to withhold corrective action credit. San Onofre took appropriate actions to address the NRC concern by revising the seismic analysis to restore compliance. San Onofre's corrective actions to address the failure to notify the NRC of a reportable event included: revised notification procedures to clearly direct

proper event reporting requirements
for Part 72 activities;
provided reportability
training to managers
and regulatory affairs
personnel to help identify
reportable events for spent
fuel operations, and potential
failures or deviations that
required NRC notification;
and, the program now
requires refresher training
for all responsible staff.
The NRC has reviewed
the revised procedures
and training plan and it is satisfied
with the level of improvement
that has been made
in the area of reportability.
No weaknesses were
identified in this area.
This contributed to the
NRC's decision to credit
the corrective action
performed by the licensee
for the notification violation.
One of the follow-up items
from the special inspection
included the NRC's review of
San Onofre's drop calculation,
had the canister fallen approximately
18 to 19 feet into the storage vault.
San Onofre had conservatively
calculated that for a 25 foot
drop that the calculation

was provided to the NRC towards the end of that inspection. The NRC has independently reviewed San Onofre's calculation and concluded that if the canister had been subject to a 25 foot drop, the canister would have remained intact. Since the confinement boundary would remain intact, there'd be no release of radioactive materials to the environment, and there would be no off site consequences. However, the spent fuel assemblies inside the canister would sustain damage from the 25-foot postulated drop event. Even so, the canister would still provide its structural, thermal, shielding, and criticality control functions after the drop. Regarding the canister's possible contact on the divider shell during downloading operation, prior to the August 3rd, 2018, incident the UMAX Final Safety Analysis Report, also referred to as the FSAR, Section 9.5, stated there was no risk of scratching or gouging the canister during downloading operations. And as such, the ASME Section III

pressure retaining
boundary would be maintained.

San Onofre performed a
72.48 evaluation to revise
the no-scratch requirement
to allow scratching
of the canister.

The San Onofre calculations
to allow the FSAR change
was identified to contain
numerous errors and inadequacies,
which concluded:

one, the canister may come
in contact with the divider
shell's seismic restraints
and not just the shield ring;
second, the restraints are
made of a harder material
and could cause more damage
than the shield ring;
third, the evaluation
did not address scratches
near canister seam welds;
fourth, San Onofre utilized
the wrong hardness values
in the calculation, and the
hardness values did not account
for temperature of the canister;
and fifth, the calculations
utilized the wrong sling lengths
for determining the
initial point of contact.

The original calculations,
which contained the errors,
provided an inadequate

basis to perform the change.
This issue contributed to the NRC's decision to withhold corrective action credit.
In response, San Onofre has revised the calculations to address the issues raised by the NRC.
Additionally, San Onofre has conducted testing on canister samples by applying various amounts of force to confirm that possible scratches would be minimal.
Further, the licensee has, as recently as last week, conducted actual visual inspections on different canisters to verify the scratches are minimal and acceptable.
An NRC inspector was on-site to observe these activities.
Based on the preliminary examinations, testing, and calculations, the NRC has concluded that any possible scratch from the canister should be small, or minimal, and does not pose a safety concern.
The canisters at SONGS are one eighth inch thick-thicker than the original canister design.
And all canisters have been mechanically peened to relieve the weld stresses, which provides an additional

level of protection
against corrosion and wear.
At this time the licensee's
revised design change
to allow scratches is still under NRC review.

- Thank you, Lee.

Now I'd like to move
on in the presentation
and discuss the path forward.
As Mr. Brookhart just discussed,
a number of corrective
actions have been taken
by Southern California Edison to address
the causal factors and
noncompliances identified
through extensive reviews of
the August 3rd, 2018, incident.
Substantial improvements have been made in
procedures and training;
equipment enhancements
have been implemented;
oversight processes,
including direct oversight
of canister downloading
activities, have been improved;
as well as improvements made
in the licensee's
corrective action program.
And reporting processes have been improved
through training and procedure changes.
During our follow-up inspections,
which again, began last November,
we did identify some
areas where further work
was required.

Those observations were factored into our decision to not grant corrective action credit for one violation, resulting in a proposed \$116,000 civil penalty. I noted earlier that our inspection efforts continue, although we will bring the current effort to close soon. Through those inspection efforts, we believe that the weaknesses that Lee just described in corrective actions for the areas where further work was required have been satisfactorily addressed by Southern California Edison. There's one outstanding issue involving changes made to the Final Safety Analysis Report, or the FSAR, associated with the Certificate of Compliance for the UMAX spent fuel storage system used at SONGS. We continue to review analyses completed by the licensee, as well as the process used to make the change in the FSAR. The change that I'm referring to is the modification to permit minor scratching of canisters as they are downloaded. This type of change would

need to be consistent with engineering codes, which do allow for minor defects. This is a compliance issue that needs to be resolved before Southern California Edison resumes fuel loading. This is not a safety concern. At this time we have not identified safety issues associated with canisters that have been loaded into the dry spent fuel storage system at SONGS. We continue enhanced inspection oversight at SONGS for several reasons. Most important, we have a responsibility to provide independent oversight of licensee activities, and we need to directly observe that the corrective actions that have been put in place are, and remain, effective. Secondly, in support of the changes made to the FSAR, Southern California Edison has accelerated its plans for physical inspection of a representative sample of canisters that have already been downloaded into the spent fuel storage system. Initial canister

inspections began last week,
and we had an inspector
on-site, as Lee mentioned,
to observe and evaluate data
that the licensee is obtaining.
The data will also be reviewed
by other NRC team members
from our headquarters
licensing and inspection staff
to provide as comprehensive
and independent review as possible.
This effort is in the initial phases,
so I am not able to
report out results today.
In fact, the results that
I've seen are very preliminary
and have not yet undergone
full engineering review
by Southern California
Edison's engineering staff.
But we will continue our
review of the final data
and report the results of
our review in an upcoming
inspection report.
Today, Southern California
Edison continues to suspend
fuel loading operations.
Southern California
Edison has been responsive
to our request to ensure
that we have the information
needed to assess changes to the FSAR,
and has continued to suspend fuel loading
until we've completed our

review of their analyses,
and agree that fuel loading
operations can resume
safely and in compliance with applicable
licensing and regulatory requirements.

At this point in the meeting,
we would like to take a
break in this session,
15 minutes, and we will
then resume with the meeting
and take questions and
comments from the audience.

Okay.

Thank you.

I'd now like to introduce Mr.
Michael Bloodgood to my left.
Mr. Bloodgood will facilitate
the remainder of the meeting.
He has been monitoring questions submitted
during the presentations, and grouping them
so that we can maximize
our time and address
some of your questions
without duplicating responses.

Michael, I'll turn it over to you.

- Thank you, Linda.

My name is Michael
Bloodgood, and as facilitator,
I will be asking questions
that we received in the webinar
to the NRC for response.
This portion of the meeting
is to address the questions
related to the enforcement
actions, regulatory process,

and path forward, within the content and the scope of the meeting.

As Ms. Howell mentioned earlier in the meeting, a complete list of all of the questions during the webinar will be posted on the NRC website at a future time.

So, for those people online there, you all have a question section on the online portion, that if you'll put your name and contact information in the question section and you can submit questions through that process.

And it's online, which is what you're seeing right now on your webpage.

So, with questions that we've already received as we're going through the webinar, we've had many that have had multiple questions asked about specific topics.

The first one we'll go to is, why did the NRC allow the SCE to not report the August 3rd, 2018, event for six weeks after a report was due, and only took action after a whistleblower disclosed the event?

- I'll take that question.

That is not the exact sequence of events.

San Onofre did make a courtesy notification to the NRC the following Monday after the Friday incident. At that time, the NRC staff made Southern California Edison aware that we believed that the event was reportable, but it took some effort to convince them that the loss of the redundant safety features was actually something that was required to mitigate an accident. So there was some delay, and it wasn't until the conclusion of the on-site week of the special inspection that Southern California Edison arrived at the same conclusion that we did and made it formal in that report.

- The next question, Ms. Howell, has inspection been performed on other canisters?

- As we noted during our presentation, Southern California Edison just recently initiated a new program.

It was very much accelerated beyond what they thought they were going to be doing, and they are now performing physical inspections using remote video of representative samples

of the canisters.

As I noted, that data is just being received; the NRC and even Southern California Edison has not had a chance to put it through all of the formal reviews, but we will be looking at it and reporting on it in the future.

- Next question is, for the canister moves in the future, will the NRC have an inspector on-site to observe those?

- We have enhanced our inspection oversight for Southern California Edison, and when they resume fuel loading we do anticipate having one or more inspectors on-site to review that. That's to ensure that the newly implemented corrective actions remain effective.

We do not have a resident inspector program in place for spent fuel storage programs, but we've all enhanced our oversight and that may even include unannounced inspections.

- There has been several questions on the webinar as we were going through with asking about what were the differences between the dummy

and the actual canisters
being used for fuel transfer?

- I'm going to let Lee take that,
as far as initial size goes.

- The dummy canister is
used for a training tool
for the individuals.

It's required by their
certificate to perform operations
utilizing the dummy canister.

The dummy canister, I
believe, could be a maximum
of three fourths of an
inch smaller in diameter,
so it would have a
clearance on either side
of about three eighths of an inch, maximum,
per the fabrication drawings.

The reason of that is, since
it's filled with concrete,
it may bulge due to the weight
of the concrete in there,
so the weight of the canister is-
it's filled with concrete
to simulate the weight
of an actual canister.

The one used at SONGS is
painted on the outside
and it's made of carbon
steel versus the stainless
steel of normal canisters.

- When- The discussion earlier
with the potential fuel
damage during the drop-
will there be any kind of analysis

that will be made public from that?

- Yes, There actually were a couple of analyses done, and Lee mentioned them during his presentation.

The drop analysis is available in a nonproprietary form in the NRC's ADAMS system.

- Additionally with that, for analysis, will there be any review or analysis for the scratching and gouging that was discussed earlier in the presentation, and will there be any part of that public?

- Yes, we plan to complete our review when final data is available from the physical inspections that are ongoing right now by Southern California Edison, and we will report the results of that out in the future inspection report.

- With the violation and civil penalty, there was several questions online with, who pays that actual civil penalty for the violation itself?

- The civil penalty is proposed to the licensed entity.

- So the licensed entity would be...

- Southern California Edison.

- Another question was, did SCE informally inform the NRC about the downloading incident prior to the official report, and did the NRC work with SCE to cover up the incident?

- Well, first, Southern California Edison, as I just noted, did give us an informal notification, the Monday following the Friday incident.

And the second part of your question?

- Was the question with, worked with SCE to cover up the incident?

- There is absolutely no work on the part of the NRC to cover this incident up. We initiated development of an inspection charter, which was made public on August 17th, to outline our intended activities to review the August 3rd incident. Our briefings were, well, the inspection results were made available in a public webinar on November 8th, and then a final inspection report that was issued in late November.

So there was absolutely no effort to cover up the incident.

- has There been, is There a procedure for removing an in-place canister and has that been practiced with San Onofre?

- I'm going to give that question to Mr. Brookhart.

- Say that again?

- is There a process for removing a canister in place,

and if so, has Southern California Edison exhibited that they could do that?

- Yes, The Certificate of Compliance does require that each licensee of Part 72 activities perform operations to demonstrate that they can successfully retrieve and remove the fuel from a storage cask, and Southern California Edison did perform those activities to the NRC during the months of, I want to say, June through December of 2017 and then we issued our report after that, after they began their first canister loading in January.

- Most of our common questions, that we've had several questions on each one of those, is what we're seeing here.

(pause)

- Well, while you're looking, Mike-
- Just give me a second and let me look at-
- I'd like to, since there were several questions that came up concerning the NRC's on-site presence, I'd like to perhaps address that again to make sure that everybody understands. We have had substantial presence on-site and we have also conducted or performed very short notice,

or no-notice inspections at San Onofre.
It is our intent to be
there to observe some
of the physical inspection
activities we hadn't
inspected there for three days last week
and it is also our intent
to be there and observe
the resumption of fuel loading activities,
once we have all agreed
that San Onofre can resume
fuel loading operations.
From that, we will most likely conduct
enhanced oversight of
fuel loading activities
for some period of time.
Normally our inspection cycle
would be to observe activities
ongoing by the licensee biennially.
We've stepped that up quite a bit and
plan to continue it,
and Southern California
Edison has been very receptive
to that because they would
like to have the independent
regulators' eyes on-site
to observe what's going on.
And I think we're just
collecting a few more
questions here from the audience.
- I apologize.
We're just making sure we're collecting
additional questions that have
been asked while I've
been up here.

One of the questions which pertains back to the dummy canister was, why did the NRC allow them to use a different size canister for that evolution?

- Well, There is no requirement in the regulations or in their license that states that the dummy canister has to be exactly the same size as the canister. So there is no requirement that it has to be exactly the same size.

Ideally you want it to be pretty close in weight, to the exact weight of the canister, in order to ensure that the components aren't going to fail or have issues carrying them around, but there is no actual requirement to enforce it to be, you know, a quarter of an inch larger just to make it exact.

- In other words, there's no regulatory requirement, nor in the Certificate of Compliance, that the simulator or dummy or training canister be the identical dimensions of a real multipurpose storage canister. These objects are intended to be training tools. They exist so that operators

can practice downloading
operations as well as
retrieval operations.

- Bear with me for a second.
I've lost my connectivity to
get some the question updates.

(inaudible)

I'm back connected now.

Pardon me.

Is there any plans for-
The next question, a couple of things,
is there any plans for, does
Southern California Edison
have any plans to offload
canisters in the event
of an incident? Or something,
and that's what it says,
in case of an incident,
so I would assume something that happens
to the canisters themselves.

- I guess I'd ask for clarification,
did the commenter or the
individual who offered
the question indicate, do they
mean extraction of canisters
or...?

- Extraction of canisters.
- At the present time,
there is no plan in place
for Southern California Edison
to extract the canisters
that have been downloaded.
That will be an activity that
occurs when they are ready
to move the spent fuel

to either an interim consolidated storage location or a final storage location.

- Another question on The canisters, discussing and "missing a big opportunity to learn with the dummy canister being more like the actual size of the regular canister," I believe we've answered that question a couple times. Again, we're speaking, we're talking more of the regulatory aspects, what the identified violations are, and the plans going forward with the inspections on-site.

We do have some discussion that we have for future plans, on inspections that's talked about in the past, or talked about as Ms. Howell has already spoken to. We did speak about future or previous inspections that's done on other canisters.

Do we have any discussion on how these inspections, are they being done on that?

- no, There have not been previous inspections other than acceptance inspections when the manufacturer actually transfers the product

to Southern California Edison.

And in Southern California Edison's case, they document the results of those acceptance inspections.

They actually have taken photographs and, Lee, I don't know if you want to speak to that in any greater detail.

- San Onofre, As part of their receipt inspection criteria, they do take pictures of the canisters for evidence to utilize eventually in their aging management program, so they're very thorough in documenting the canister's acceptance prior to use.

I'm kind of confused on the question, was it talking about-

- I think it says it's talking about already installed canisters themselves.

- Well this would be The first inspections that were done last week of canisters that are in use at San Onofre.

There have not been previous inspections performed on canisters in use.

- and this is a significant achievement for Southern California Edison.

For those who participated in the predecisional enforcement conference, you might recall that they had planned to initiate this inspection program sometime in 2020.

Well, they have brought everything to bear and have been able to initiate the physical inspections just last week.

- we do have a lot of other discussions dealing with some items that are in future inspections and really not pertaining to the discussion that we had here.

That we have.

And a lot of questions on gouging and cracks and scratches, which, as you had said before that those are in process and I believe are being inspected or looked at in the future.

(inaudible)

I'm looking at, the questions we're receiving now are mostly dealing with future corrosion inspections and future types of inspections that are ongoing.

It doesn't really have to do with the discussions for the violation and what we are trying to get in the meeting today.

I understand there's a lot of different comments, and I understand there's some future inspections ongoing, which there'll be more answers as part of these future inspections that will answer some of these questions.

With that- sorry, I'm getting
50 million questions at a time-
And with that, questions
look like they're just
future questions that will be answered
at a future time, not
pertaining to what we
were talking about in this meeting.
So, with that, turn it back over to you.
- thank you, Mike.

Okay, in conclusion,
first I'd like to thank
the audience, members of
the public who took the time
aside to participate in
the webinar and to actually
listen to some of the
information that we've shared
with you.

As I noted when we began
this afternoon's meeting,
we will have some NRC managers present
at the community engagement
panel later this week,
and you will be able to
interface with us directly
during that meeting,
either before or after.

This may not be the
last time that we engage
with the public.

We do understand that there
have been some concerns
about where and how we
hold these meetings.

These meetings are effective for us to conduct in this format because they allow us to share the information that we're developing in a very timely manner. We've not ruled out any further formats for public engagement, but that will be somewhere down the line. We will continue to share information as the inspections are ongoing, and should, as I noted earlier in my presentation, we plan to conclude the current inspection effort and produce an inspection report probably in the early to mid-April timeframe. And that inspection report will cover the full details of what Lee and his team have been reviewing since November of 2018, but that will not conclude our only inspection effort; as we just noted, we do plan to have inspectors on-site when fuel loading operations resume and we'll be communicating with the public again at that time. With that, I believe the meeting is closed.