



San Onofre Special Inspection Webinar

November 8, 2018

NRC Region IV, Arlington, TX

Logistics

- Webinar Format
- Back-up Bridge Line
(888) 469-1677, Passcode 2471451
- Questions and Answers

NRC Staff

- Eric Simpson, Special Inspection Team Leader
Region IV Fuel Cycle and Decommissioning Branch
- Patricia Silva, Branch Chief
Division of Spent Fuel Management
- Troy Pruett, Director
Region IV Division of Nuclear Materials Safety

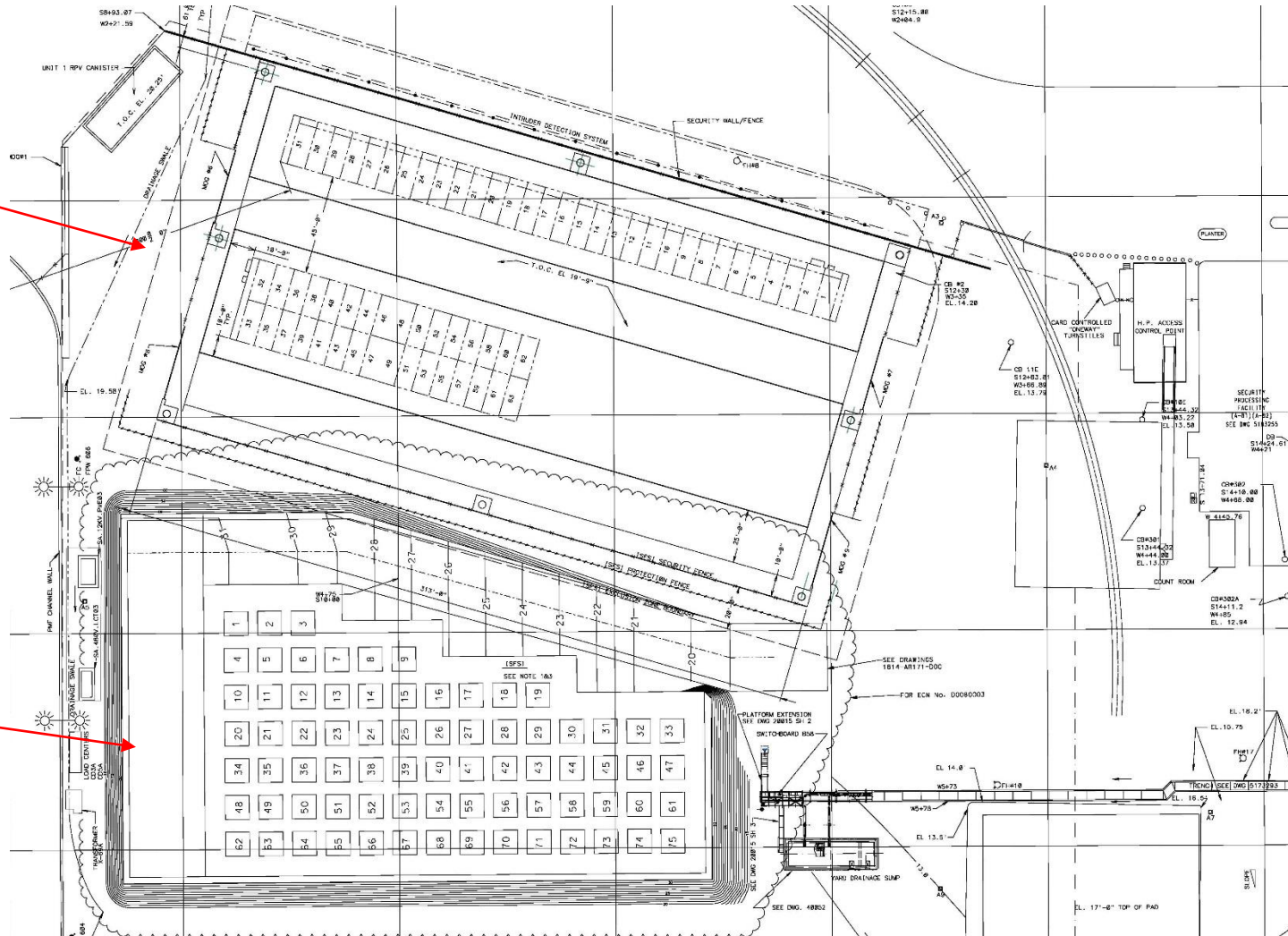
Webinar Agenda

- Background
- Canister Downloading Operations
- Inspection Team Findings
- Current Status
- Summary
- Questions & Answers

ISFSI Layout

**TN
NUHOMS
Design**

**Holtec
UMAX
Design**



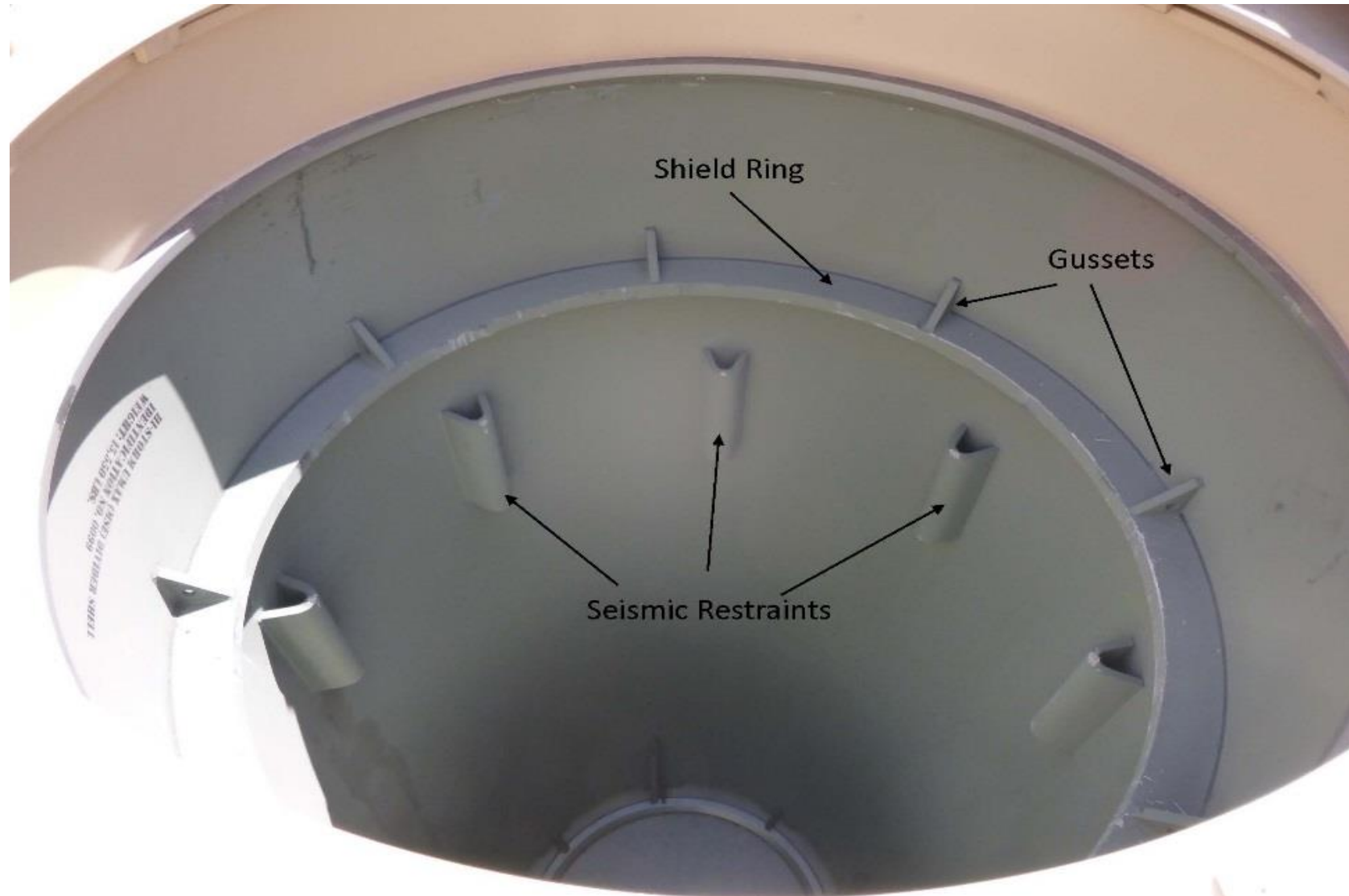
Transnuclear NUHOMS

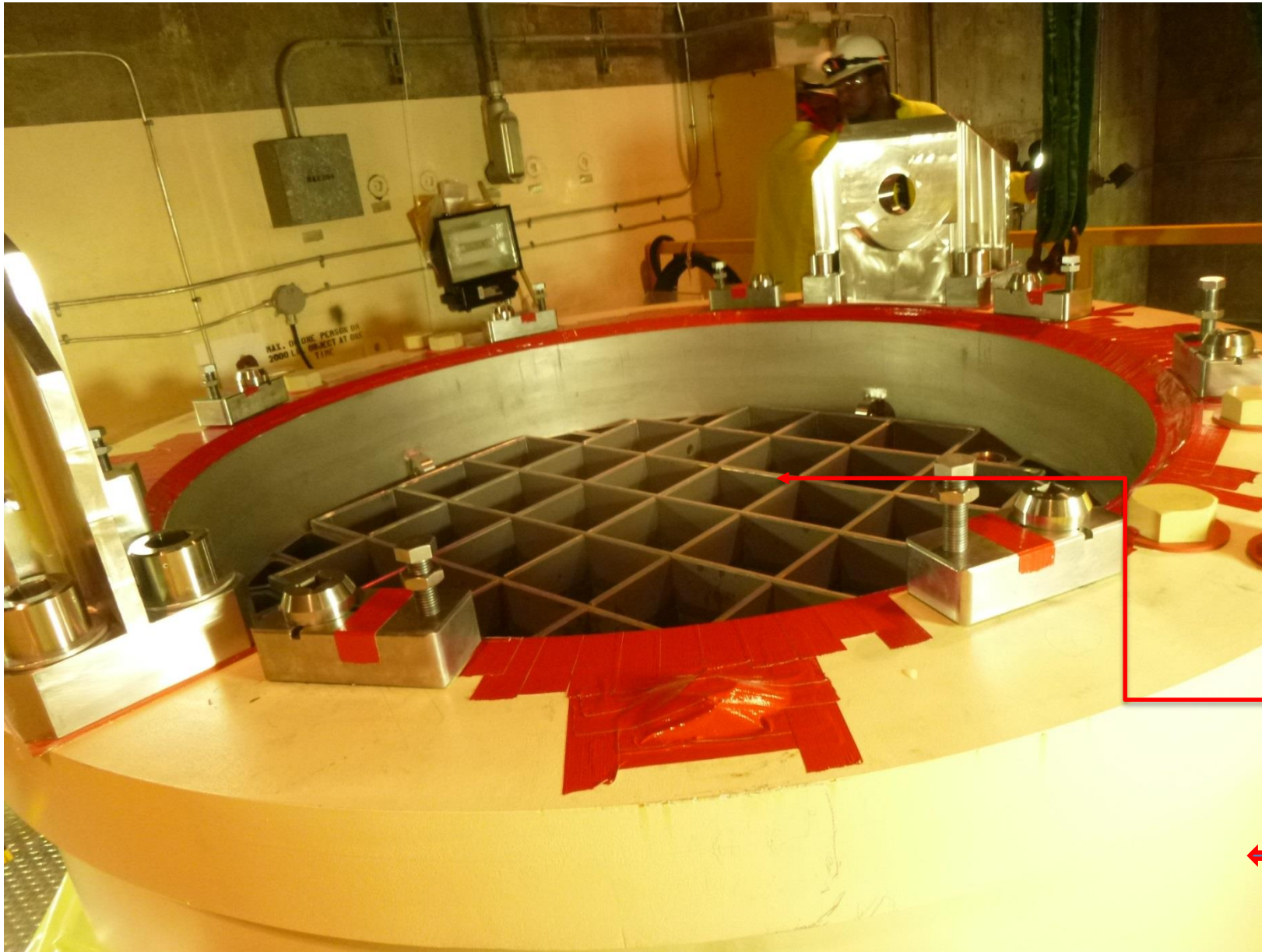


Holtec UMAX



Vertically Ventilated Module (Vault)





Spent Fuel Canister

Holtec MPC

Transfer Cask

Downloading: Shield Cone



Downloading: Transporter



Downloading: Vault Door





Downloading: Alignment



Downloading: Attaching Slings

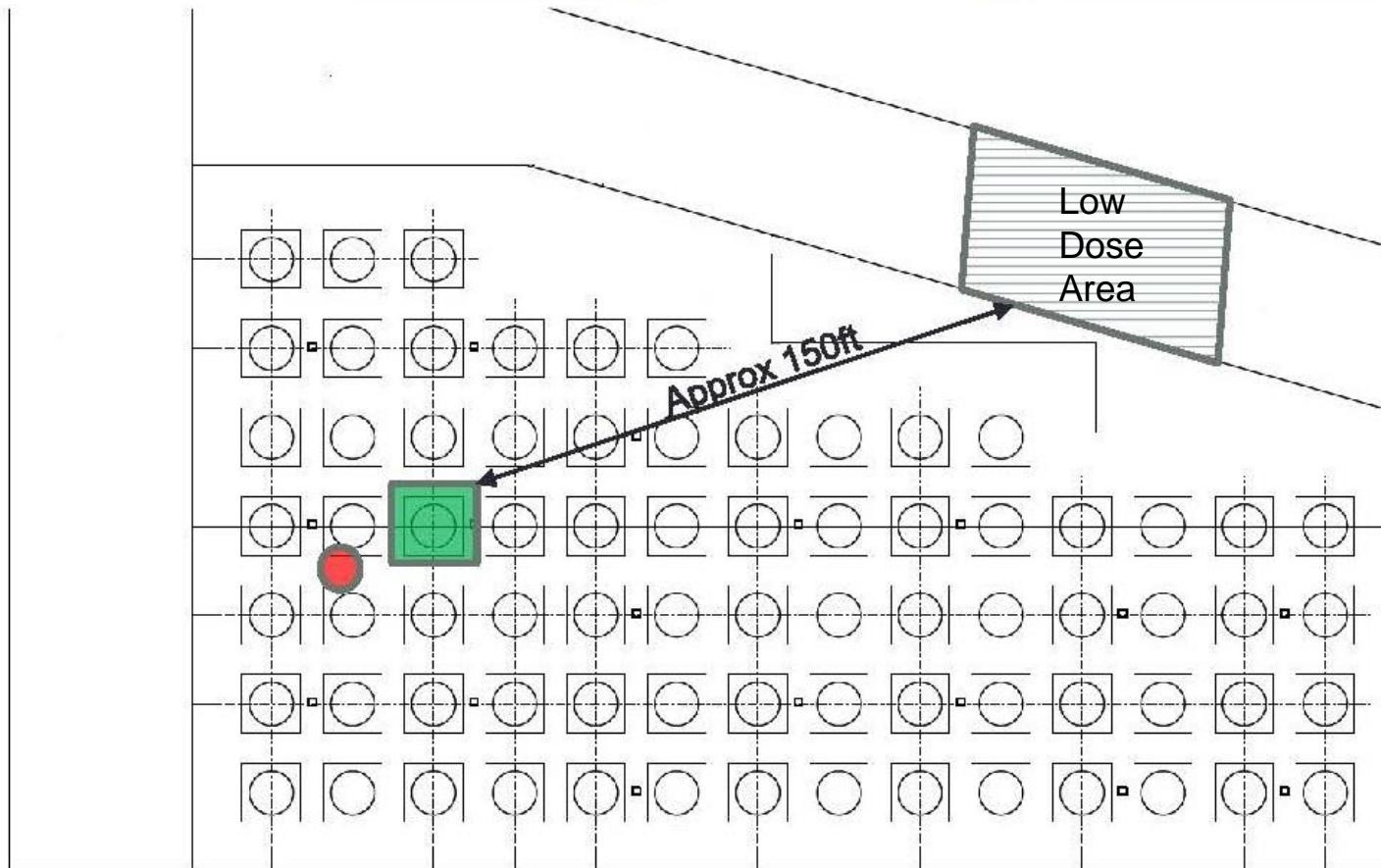


Downloading: Attaching Slings



Downloading Preparations

What Happened on August 3rd?



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What
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What Happened on August 3rd?



What Happened on August 3rd?



Post Event Actions

- Spent Fuel Handling Activities Suspended
- NRC Inspection Activities
- San Onofre Notification to NRC
- Causal Evaluations
- Corrective Actions

Spent Fuel Handling Activities Suspended

- MPC 29 lowered into vault
- San Onofre suspends fuel loading
- MPC 30
 - Inside Transfer Cask
 - Seismically Restrained in Fuel Building

NRC Inspection Activities

- August 6th: NRC Region IV informally notified of Misalignment Event and initiates daily oversight communications
- August 7th: San Onofre commits to NRC review before resuming operations
- August 17th: NRC decides to conduct Special Inspection
- September 10-14: NRC Special Inspection Team onsite
- NRC to perform inspection prior to resumption of fuel loading

NRC Inspection Activities

- 2 Preliminary Escalated Findings
 - Failure to provide redundant drop protection
 - Failure to report
- 3 Preliminary Severity Level IV Violations
 - Procedures
 - Corrective actions
 - Training
- Management Oversight Weaknesses

Causal Evaluations

- San Onofre Apparent Cause Evaluation
- Holtec Root Cause Analysis
- Common Cause Evaluation

Root Causes

- San Onofre Management failed to provide
 - Adequate procedures
 - Adequate training to support procedure
 - Adequate oversight

Corrective Actions

- Training Requirements
- Procedure Enhancements
- Equipment Enhancements
- Oversight Improvements

Event Significance

- No Actual Drop of Canister
- No Radiological Release
- Load Drop Analysis (if canister fell)

Next Steps

- Issue NRC Inspection Report
- NRC Inspection of Causal Analyses
- NRC Inspection of Corrective Actions

Summary

- Could have been prevented
- Weaknesses in management oversight
- Multiple failed barriers
- Increased NRC oversight

Questions

