



Doug Bauder  
Chief Nuclear Officer and  
Vice President, Decommissioning

EA-18-155

April 23, 2019

Director, Office of Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUBJECT: Docket Nos. 50-206, 50-361, 50-362 and 72-41  
Reply to a Notice of Violation, EA-18-155, and  
Statement of Method of Payment  
San Onofre Nuclear Generating Station (SONGS),  
Units 1, 2, 3, and ISFSI**

- REFERENCES:
1. Letter from Mr. Troy Pruett (NRC) to Doug Bauder (SCE) dated November 28, 2018, Subject: NRC Special Inspection Report 050-00206/2018-005, 050-00361/2018-005, 050-00362/2018-005, and 072-00041/2018-001 and Notice of Violation, (ADAMS Accession No. ML18332A357)
  2. Southern California Edison Company; San Onofre Nuclear Generating Station, Pre-Decisional Enforcement Conference Slides, dated January 24, 2019 (ADAMS Accession No. ML19023A033)
  3. Letter from Scott A. Morris (NRC) to Doug Bauder (SCE) dated March 25, 2019, Subject: Notice of Violation and Proposed Imposition of Civil Penalty - \$116,000 and NRC Special Inspection Report 050-00206/2018-005, 050-00361/2018-005, 050-00362/2018-005, 072-00041/2018-001 (ADAMS Accession No. ML19080A208)

Dear Sir or Madam

Reference 1 transmitted the results of NRC Special Inspection Report Numbers 050-00206/2018-005, 050-00361/2018-005, 050-00362/2018-005, and 072-00041/2018-001 to Southern California Edison (SCE). The inspection was conducted on-site from September 10, 2018 to September 14, 2018 for the San Onofre Nuclear Generating Station (SONGS). The inspection was in response to the misalignment of a loaded spent fuel storage canister as it was being downloaded into the storage vault at SONGS. Reference 1 discussed two apparent violations that were under consideration for escalated enforcement and provided SCE options for responding. SCE selected a Pre-Decisional Enforcement Conference which was held on January 24, 2019 (Reference 2).

Reference 3 issued a Notice of Violation resulting from the two issues discussed in Reference 1 and a Proposed Imposition of Civil Penalty to SCE. Reference 3 required SCE to reply to

DEPI  
IEDI  
IED8  
NMSSZ6  
RGN-IV  
NMSS  
NRC/OE

the violations in writing within 30 days. Reference 3 also required SCE to provide a statement indicating when and by what method payment was made or to protest the imposition of the civil penalty in whole or in part.

The enclosure to this letter provides SCE's acceptance of and reply to the Notice of Violation provided in Reference 3.

In addition, SCE has chosen to pay the proposed Civil Penalty of \$116,000 and will not contest the Civil Penalty in whole or in part. SCE made the required payment to the NRC via wire payment on March 29, 2019.

There are no new regulatory commitments in this letter or the Enclosure.

If you have any questions or require additional information, please contact me or Mr. Albert Bates, at (949) 368-6945.

Executed on 4/23/19

Sincerely,

A handwritten signature in black ink, appearing to be the initials 'MR' followed by a flourish.

Enclosure: Reply to Notice of Violation EA-18-155

cc: Document Control Desk  
S. Morris, Regional Administrator, NRC Region IV  
M. Vaaler, NRC Project Manager, SONGS Units 1, 2 and 3

**ENCLOSURE**

Reply to Notice of Violation

EA-18-155

## Reply to Notice of Violation

EA-18-155

### BACKGROUND AND EVENT SUMMARY

On January 22<sup>nd</sup>, 2018, the San Onofre Nuclear Generating Station (SONGS) began a fuel transfer campaign from the Units 2 and 3 spent fuel pools to a Holtec HI-STORM UMAX Independent Spent Fuel Storage Installation (ISFSI). The campaign will ultimately result in the transfer of 73 canisters to the ISFSI.

On Friday, August 3, 2018, at approximately 12:45 PDT, workers at SONGS were lowering Multi-Purpose Canister (MPC) number 29 into a Cavity Enclosure Container (CEC) within the Independent Spent Fuel Storage Installation (ISFSI). Workers used a Vertical Cask Transporter (VCT) to perform the download operation. As the MPC was lowered, it came to rest on top of the shield ring and against the inner wall of the transfer cask. The VCT slings went slack indicating the MPC was hung up.

The VCT operator could not see the MPC as it was being lowered within the transfer cask. The spotter assigned to observe the MPC did not recognize the slack sling condition. The Cask Loading Supervisor (CLS), Rigger-in-Charge (RIC) and the Southern California Edison (SCE) ISFSI Project Oversight Specialist were located 150 feet away in a low radiation dose area and did not have a visible way to monitor the lowering of the MPC into the CEC.

With the MPC supported by the shield ring, the crane and rigging no longer supported it. Dose rate measurements taken near the VCT indicated that the MPC had not been lowered to its fully downloaded condition. Actions were taken immediately to raise the VCT, regaining support of the MPC by the VCT. The MPC was then safely lowered past the shield ring and into storage at 14:14 PDT.

At that time, MPC number 30 was being prepared for transfer to dry storage in the SONGS Unit 3 Fuel Handling Building. The MPC was seismically restrained in the Unit 3 Fuel Handling Building and then closure welding was completed. Since that time, SONGS has suspended all fuel movement pending completion of cause evaluations and required corrective actions. SCE will not re-start fuel transfer operations until the NRC has reviewed SCE's corrective actions and SCE management is satisfied full readiness has been achieved to ensure safe and effective fuel transfer operations.

This event was informally communicated to NRC Region IV on Monday, August 6, 2018. A late report was made to the NRC Headquarters Operations Center on Friday, September 14, 2018 in accordance with 10 CFR 72.75(d)(1).

Following the event, Holtec completed a root cause evaluation in accordance with its corrective action program to determine causes and appropriate corrective actions to prevent recurrence. SCE reviewed and accepted Holtec's root cause evaluation. In addition, SCE completed an Apparent Cause Evaluation to examine how SCE's oversight failed to prevent the event and a Common Cause Evaluation to examine issues related to fuel transfer in the

areas of administration, and problem identification and resolution. SCE's Apparent Cause Evaluation and Common Cause Evaluation also resulted in corrective actions to prevent recurrence of these problems. SCE also completed a Root Cause Evaluation to determine the causes of the late report to the NRC Headquarters Operations Center.

On March 25, 2019, the NRC issued a Notice of Violation (NOV) and Proposed Imposition of Civil Penalty numbered EA-18-155 and requested a reply within 30 days. The reply to the Notice of Violation appears below.

#### **DESCRIPTION OF VIOLATION 18-155-A**

10 CFR 72.172(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, including Amendment 2 of Certificate of Compliance 072-01040. Certificate of Compliance 072-01040, Amendment 2, Condition 4, "HEAVY LOADS REQUIREMENTS," requires, in part, that lifting operations outside of 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, in part, 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 redundant drop protection features which prevent uncontrolled lowering of the load.

Contrary to the above, on August 3, 2018, the licensee failed to ensure that the redundant drop protection features were available to prevent uncontrolled lowering of the load during multi-purpose canister transfer operations. 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 time-frame, the canister rested on a shield ring unsupported by the redundant downloading slings at approximately 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.

#### **SCE REPLY TO VIOLATION 18-155-A**

##### **1. Reason for the Violation**

The Root Cause Evaluation identified a Root Cause that Holtec Management failed to recognize the complexity and risks associated with fuel transfer operation while using a relatively new system design (UMAX) when performing a long duration campaign and thus did not implement necessary program improvements. Contributing causes included:

- Inadequate procedure content
- Inadequate design review process
- Poor communication protocols
- A Continuous Learning Environment not established for use of Operating Experience
- Inadequate training program

The Apparent Cause Evaluation identified an Apparent Cause of SCE failing to establish a rigorous oversight process. Contributing causes included:

- Project Management Observations not routinely performed
- A low threshold for Corrective Action Program entries not enforced

## 2. Corrective Actions Taken and Results Achieved

Corrective actions related to procedure content and control, training and qualifications, and the use of the Corrective Action Program (CAP) were described in detail in SCE's reply to a Notice of Violation dated December 26, 2018 (ADAMS Accession No. ML18362A148). In addition, corrective actions related to each of the causes identified in item 1, above, are described in SCE's presentation for the January 24, 2019 Pre-Decisional Enforcement Conference (ADAMS Accession No. ML19023A033), slides 39 – 47.

Finally, as an additional corrective action from the Apparent Cause Evaluation, SCE has taken action to require enhanced load monitoring equipment, including load monitoring shackles with remote indication and alarms, cameras and monitors installed to observe downloading remotely, and a tag-line indicator installed on the MPC for physical verification of downloading.

## 3. Corrective Actions That Will Be Taken

None.

## 4. Date When Full Compliance Will Be Achieved

Full compliance was achieved on August 3, 2018, when the VCT regained support of the MPC.

## DESCRIPTION OF VIOLATION 18-155-B

10 CFR 72.75(d)(1) requires, in part, that each licensee shall notify the NRC within 24 hours after the discovery of an event involving spent fuel in which important-to-safety equipment is disabled or fails to function as designed when: (i) the equipment is required by Certificate of Compliance to be available and operable to mitigate the consequences of an accident; and (ii) no redundant equipment was available and operable to perform the required safety function.

Contrary to the above, from August 6 to September 14, 2018, the licensee failed to notify the NRC within the required time period after the discovery of an event involving spent fuel in which important-to-safety equipment was disabled or failed to function as designed when: (i) the equipment was required by Certificate of Compliance to be available and operable to mitigate the consequences of an accident; and (ii) no redundant equipment was available and operable to perform the required safety function.

Specifically, the licensee failed to notify the NRC within the required time period after an event that occurred on August 3, 2018, in which the licensee inadvertently disabled the redundant important-to-safety downloading slings while lowering spent fuel canister 29 into the storage vault, which resulted in the canister resting on a shield ring unsupported by the redundant downloading slings at approximately 18 feet above the fully seated position for approximately 45 minutes. These slings are required by Certificate of Compliance 072-01040, Amendment

2, Condition 4, and Technical Specification 5.2.c.3 to be available and operable during canister transfer operations, and no redundant equipment was available and operable to perform the required safety function.

## **SCE REPLY TO VIOLATION 18-155-B**

### **1. Reason for the Violation**

The Root Cause Evaluation on Reportability identified a root cause that management failed to recognize the transition to fuel transfer operations as requiring the integration, familiarization, and application of 10CFR72.75 reporting requirements into plant processes. Contributing causes included:

- Lack of procedural guidance related to Part 72 reporting
- Lack of a conservative bias for reporting

### **2. Corrective Actions Taken and Results Achieved**

Corrective actions related to each of the causes identified in item 1, above, are described in SCE's presentation for the January 24, 2019 Pre-Decisional Enforcement Conference (ADAMS Accession No. ML19023A033), slides 60 – 67.

### **3. Corrective Actions That Will Be Taken**

None.

### **4. Date When Full Compliance Will Be Achieved**

Full compliance was achieved on September 14, 2018, when the required report was submitted.