

February 1, 2000

U.S. Nuclear Regulatory Commission
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Subject: **Docket Nos. 50-361 and 50-362**
Response to a Noncited Violation in Inspection Report 99-16
San Onofre Nuclear Generating Station, Units 2 and 3

Reference: Letter, Ms. Linda J. Smith (USNRC) to Mr. Harold Ray (SCE),
dated January 7, 2000

Gentleman:

The referenced letter transmitted the results of NRC Inspection Report No. 50-361/99-16 and 50-362/99-16, conducted October 31 through December 11, 1999, at the San Onofre Nuclear Generating Station, Units 2 and 3. The enclosure to the referenced letter described a Severity Level IV noncited violation (NCV 9916-01), involving a procedural violation for failing to adequately lock one valve in each unit.

As described in the inspection report, the NRC inspectors concluded that the subject valves were not locked based on their determination that an individual could have defeated the locking devices and manipulated the valves without the valves showing evidence of tampering. In reaching this conclusion, the inspectors relied on the staff's interpretation of NRC guidance documented in Part 9900 of the NRC Inspection Manual.

Southern California Edison (SCE) has assessed the as-found condition of the subject valves with regard to locked valve program requirements and the basis for those requirements, and determined that the valve locking devices satisfied all applicable program and procedural requirements for locked valves. SCE, therefore, has concluded that, since the locking devices on the subject valves complied with all applicable regulatory requirements, that no violation occurred.

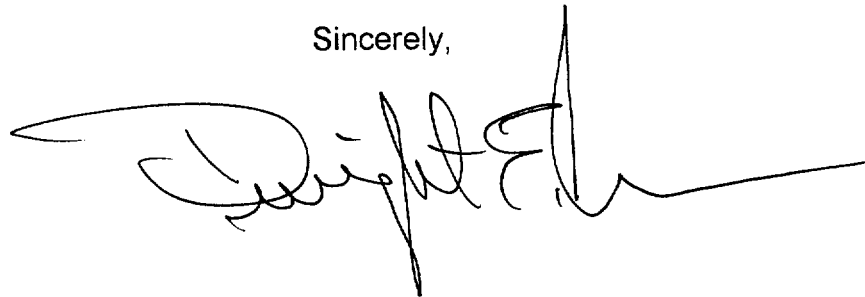
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The staff's interpretation, on the other hand, implies that valve locking devices must be tamper proof, tamper resistant or at least tamper indicating. We can find no regulatory basis for such a requirement. In fact, SCE can find no regulatory basis to support the staff's underlying presumption that valve locking devices must be designed to protect against individuals with malicious intent. (There are, of course, programs for preventing and defending against potential acts of radiological sabotage addressed in 10 CFR 73, "Physical Protection of Plants and Materials," but those are not applicable to this NCV.)

SCE has reviewed the applicable Part 9900 guidance, and believes that the Inspection Manual is not a regulatory requirement and is, clearly, an inappropriate vehicle to create a new regulatory requirement or base an enforcement action. Since SCE is neither aware of any regulatory requirement or commitment for our locked valve program to protect against malicious acts, nor can we identify a requirement for the program to be tamper proof, tamper resistant or even tamper indicating, we can not identify a basis to accept the violation. Even though SCE has implemented responsive compensatory measures by including the subject valves in a monthly verification of valve position, we remain concerned that future interpretations of similar kind could impose new requirements on SONGS. The enclosure to this letter provides further elaboration on the basis for SCE's denial of NCV 9916-01.

If you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Dwight E. Sloan". The signature is fluid and cursive, with a long horizontal stroke at the end.

Enclosure: As stated

cc: E. W. Merschoff, Regional Administrator, NRC Region IV
J. A. Sloan, NRC Senior Resident Inspector, San Onofre Units 2 and 3
L. M. Raghavan, NRC Project Manager, San Onofre Units 2 and 3
L. J. Smith, Acting Chief, Branch E, Division of Reactor Projects

RESPONSE TO A NONCITED VIOLATION IN
NRC INSPECTION REPORT 50-361/99-16;50-362/99-16 (NCV 9916-01)

The enclosure to Ms. L.J. Smith's letter dated January 7, 2000, states in part:

"Technical Specification 5.5.1.1.a requires that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, Appendix A, recommends procedures for equipment control.

"Procedure SO23-0-17, "Locking of Important to Safety Critical Valves and Breakers," Revision 13, step 6.1.3, requires, in part that manually-operated valves listed in Attachments 1-10 shall be locked in the specified position and should be locked using positive locking devices. Further, Procedure SO23-0-17 requires that locking devices should be positioned in a manner that will prevent valve operation and that the valve locking device should restrict valve movement as much as practical. Attachment 5 lists Valve HCV6457 as locked open.

"Contrary to the above, On October 28, 1999, Procedure SO23-0-17 was not implemented, in that, in both Units 2 and 3, Valve HCV6457 was open but not locked. A locking device was installed; however, the locking device was insufficient to prevent valve manipulation or provide evidence of unauthorized valve manipulation, because the locking device did not prevent removal of the operating chains that restrained the valves. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy (NCV 361/9916-01; 362/9916-01)."

BACKGROUND

NRC Inspection Report (IR) 99-16 noted that Valves 2(3)HCV6457, a Saltwater Cooling Heat Exchanger outlet valve installed on both Units, were not adequately locked. These manual valves are normally operated by a chain-fall connected to the valve handwheel. The chain-fall on each valve was locked with a lock and cable, in order to prevent an individual from using the chain-fall to operate the valves. The NRC inspectors determined that the valves were physically restrained from moving when the locks and cables were in place. However, the inspectors judged that there was sufficient slack in the chain-fall, such that an individual could climb up on nearby equipment, lift the chain-fall off of the handwheel, manually manipulate the valve, and then replace the chain-fall without the valve showing evidence of tampering. The inspectors concluded the valves were not adequately locked, and determined this was a violation of procedure SO23-0-17, "Locking of Important To Safety Critical Valves and Breakers," and consequently, a violation of Technical Specification (TS) 5.5.1.1.a.

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As a compensatory measure, Southern California Edison (SCE) is verifying the position of these valves on a monthly basis and thus does not need to take credit for the locking devices. The inspectors indicated that a monthly verification of correct valve position is an acceptable corrective action.

REGULATORY BASIS FOR VIOLATION (IR 99-16)

NRC IR 99-16 stated this was a violation of TS 5.5.1.1.a, based on the following:

TS 5.5.1.1 states,

"Written procedures shall be established, implemented, and maintained covering the following activities:

The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;"

Regulatory Guide 1.33, Revision 2, Appendix A, Section 1.c, recommends an Administrative Procedure for "Equipment Control (e.g., locking and tagging)."

SO23-0-17, "Locking of Important To Safety Critical Valves and Breakers," is one of SCE's equipment control procedures.

SO23-0-17, Step 6.1.3, states, "The manually operated and HCV valves listed in Attachments 1 - 10 and breakers in Attachment 11 shall be locked in the specified position and..."

SO23-0-17, Attachment 5, specifies that HCV6457 must be locked in the "open" position.

For assessing the adequacy of the locking device installed on 2(3)HCV6457, IR 99-16 references NRC Inspection Manual, Part 9900, Technical Guidance, "STANDARD TECHNICAL SPECIFICATIONS SURVEILLANCE SECTIONS - LOCKED OR OTHERWISE SECURED COMPONENTS." The following are relevant excerpts from Part 9900:

"The STS surveillance section generically requires that certain systems be demonstrated operable at least once per XX days by verifying that each valve (manual, power-operated, or automatic) in the flow path (or servicing safety-related equipment) that is not locked, sealed, or otherwise secured in position, is in its correct position. Likewise, the TS or SAR often refer to a valve as being locked open or locked closed.

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"To be locked, according to Webster's New World Dictionary, is to be "fastened by means of a lock." A lock is defined in the same reference as: "(1) a mechanical device furnished with a bolt and usually a spring, for fastening a door, strongbox, etc., by means of a key or combination," or "(2) anything that fastens something else and prevents it from opening, turning, etc."

"The position IE inspectors should take regarding the locking of a component in position is as follows:

"1. Manually-Operated Valves

The valve should be physically restrained from moving. The methodology by which the restraint is removed should be under administrative control. A key or combination lock is the preferred methodology, but the use of a 'sealing' technique which will provide evidence of unauthorized manipulation is acceptable (e.g., cable secured by means of a lead seal)."

The NRC inspectors determined that Valves 2(3)HCV6457 were not locked. The basis for this conclusion was that the locking device, a lock and cable, was insufficient to prevent valve manipulation or provide evidence of unauthorized valve manipulation, because the locks did not prevent removal of the valve operating chain. Consequently, the inspectors, with assistance from the staff, concluded Valves 2(3)HCV6457 did not satisfy the Part 9900 guidance for assessing "locked valves," and therefore, the valve was not locked as required by procedure SO23-0-17. It is noted that the compensatory measure taken to resolve this issue, which the inspectors indicated was acceptable for a permanent corrective action, is to verify the valves are in the correct position every 31 days.

BASIS FOR DISPUTING THE VIOLATION

SCE reviewed the applicable SONGS' Technical Specifications (TS) and procedural requirements for locked valves, as well as available NRC requirements and/or guidance regarding locked valves.

SONGS Technical Specifications

TS 3.7.8.1 for the Salt Water Cooling (SWC) System specifies the following:

"Verify each SWC manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position."

The surveillance frequency is 31 days.

The TS Design Basis for this surveillance requirement states:

"Verifying the correct alignment for manual, power operated, and automatic valves in the SWC flow path ensures that the proper flow paths exist for SWC operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since they are verified to be in the correct position prior to locking, sealing, or securing. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This Surveillance does not require any testing or valve manipulation; rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position.

"The 31 day frequency is based on engineering judgement, is consistent with the procedural controls governing valve operation, and ensures correct valve positions."

Valves 2(3)HCV6457 were locked in the correct position, and therefore, the surveillance requirement specified in TS 3.7.8.1 did not apply.

SONGS Procedural Requirements

SONGS Operations' Procedure SO23-0-17 "Locking of Important to Safety Critical Valves and Breakers," delineates the requirements for SONGS' locked valve program. Section 6.1.3.2, states in part:

"Locking devices should be positioned in a manner that will prevent valve operation. It is recognized that a small amount of valve movement is possible even when locked, however, the locking device should restrict valve movement as much as practical."

SO23-0-17 requires that Valves 2(3)HCV6457 be locked in the "Open" position with a designated padlock using installed positive locking devices. These valves were locked in the "Open" position with a positive locking device (a cable) and the specified padlock. As stated in IR 99-16, "The inspectors noted that Valves 2HCV6457 and 3HCV6457 were physically restrained from moving when the locks and chains were in place." The locking device was installed such that, if an individual inadvertently tried to manipulate the valve (e.g., an operator was unknowingly working on the wrong valve), the lock would have prevented valve manipulation. An individual would have to intentionally defeat the locking device to manipulate the valve (i.e., sabotage). It should be noted that SONGS' locked valve program is not intended to prevent or provide indication of malicious actions by individuals (although for many of the locking devices that might be a consequence). The locking device installed on HCV6457 satisfied all applicable programmatic and procedural requirements.

NRC Regulatory Guidance

SCE performed a review of documented NRC guidance on requirements for locked valves. The guidance in Part 9900 of the NRC Inspection Manual was the only documented guidance identified during SCE's review. SCE performed a review of Part 9900 with the following conclusions:

With regard to locked manual valves, Part 9900 specifies that the valve should be physically restrained from moving. As stated in IR 99-16, "The inspectors noted that Valves 2HCV6457 and 3HCV6457 were physically restrained from moving when the locks and chains were in place." The inspectors' basis for the violation is that an individual could defeat the locking device and manipulate the valve, without the valve showing evidence of tampering. Part 9900 does not address the adequacy of locking devices in preventing acts committed by individuals with malicious intent.

Nowhere in Part 9900 is it specified that a locking device must be tamper proof and/or tamper indicating; rather, Part 9900 allows the use of a key or combination lock (preferred locking methodology) or the use of a sealing technique which will provide evidence of unauthorized manipulation. The locking devices on Valves 2(3)HCV6457 utilized a key lock.

The guidance in Part 9900 of the Inspection Manual indicates locking or sealing devices are not necessary if the valve is periodically verified to be in its correct position. This acceptable alternative to installing a locking device (i.e., periodic verification of correct valve position) does not address a threat involving malicious intent. That is, a periodic verification of correct valve position does not preclude an individual with malicious intent from manipulating the valve, nor does it provide evidence to ensure that such an act would be recognized in a reasonable timely manner.

SCE notes that the guidance in the NRC Inspection Manual, regardless of the date of the guidance, is not a regulatory requirement, and should not be used to create new regulatory requirements. Basing an enforcement action on an interpretation of an NRC guidance document, as opposed to explicit regulatory requirements or specific license commitments, creates a precedent that results in an unclear and unpredictable regulatory environment.

In summary, a review of available NRC guidance regarding valve locking devices did not identify a regulatory basis to support the NRC's proposed violation. SCE did not identify a regulatory requirement that locked valve programs must address potential acts involving malicious intent. The NRC Inspection Manual does not impose

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regulatory requirements, but instead specifies acceptable means by which licensees can satisfy existing regulatory requirements. In this case, the Inspection Manual specifies a lock as the preferred method, and specifies a tamper indicating seal as an acceptable alternative, but it does not prescribe both.

SUMMARY AND CONCLUSION

The NRC inspectors determined that one valve on each unit was not locked, and concluded this is a Severity Level IV Non-Cited Violation of TS 5.5.1.1.a for failing to satisfy the locked valve procedural requirements. This violation is based on the presumption that an individual, clearly with malicious intent, could defeat the locking device installed on Valves 2(3)HCV6457, manipulate the valve, and reinstall the locking device, without the valve showing any evidence of tampering. As part of the basis for this violation, the inspectors referenced guidance contained in Part 9900 of the NRC Inspection Manual. In the particular case of Valves 2(3)HCV6457, it is noted that the valves were never operated in the manner postulated by the inspectors; the inspectors reached this conclusion based on their observation of the apparent slack in the chain fall.

In assessing this violation, SCE concludes the following:

The objective of the locked valve program is to ensure certain valves not included in a TS periodic surveillance are in the correct position, and are not inadvertently operated. In this regard, the locking devices serve as an impediment to inadvertent valve operation, but are not designed to address an act of malicious intent. The locking devices installed on 2(3)HCV6457 satisfied this objective. In contrast, the violation described in IR 99-16 is based on an individual with malicious intent defeating the locking device and committing an act of sabotage. SCE could not identify a regulatory requirement or commitment that locked valve programs must address potential acts committed by individuals with malicious intent.

The locked valve program is not intended to prevent or provide indication of malicious actions by individuals (although for many of the locking devices utilized in the locked valve program, that may be a consequence). SONGS' programs for preventing and defending against potential acts of radiological sabotage are addressed in its commitment to 10 CFR 73, "Physical Protection of Plants and Materials."

The NRC accepted solution (i.e., periodically verifying the valve is in its correct position) does not address the inspectors' concern with the locking device installed on Valves 2(3)HCV6457, in that it will not prevent an individual with malicious intent from mispositioning the valve, nor does it provide reasonable timely indication that tampering may have occurred.

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The inspectors' basis for the violation is derived from an interpretation of guidance in Part 9900 of the NRC Inspection Manual. The NRC Inspection Manual is not a regulatory requirement, and should not be used to create regulatory requirements.

Consequently, SCE concludes that on October 28, 1999, Unit 2 and 3 Valves HCV6457 were properly locked in accordance with the applicable procedure requirements, and, therefore, a violation did not occur.