

May 16, 2006

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

**Subject: Docket Nos. 50-361 and 50-362  
ISI-3-23 Request to Use ASME Code Case N-746  
San Onofre Nuclear Generating Station (SONGS) Units 2 and 3**

Dear Sir or Madam:

Pursuant to 10 CFR 50.55a(a)(3)(i), Southern California Edison Company (SCE) is submitting this request to allow the use of American Society of Mechanical Engineers (ASME) Code Case N-746, approved by the ASME on 01/05/06. Use of Code Case N-746 will allow SCE to use Unified Numbering System N08367 (UNS N08367) bolting material conforming to the requirements of SB-691 on replacement Salt Water Cooling Pumps.

The new replacement salt water cooling pumps are being fabricated from UNS N08367 material, which is an approved material for ASME Section III pressure boundary components. However, the UNS N08367 material conforming to the requirements of SB-691 is not listed in Table 3, ASME Section II, Part D, Subpart 1 for use as a bolting material. The bolting materials that are currently listed in Table 3 are not recommended for this application based on salt-water corrosion resistance and galvanic compatibility with the pressure boundary parts. Details of the 10 CFR 50.55a request are enclosed

SCE requests approval of ISI-3-23 by January 2007, which coincides with the current expected delivery date of the new pumps.

A047

No commitments are being made in this letter. If you have any questions, please contact Mr. Jack Rainsberry at (949) 368-7420.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Rainsberry", is centered below the word "Sincerely,".

cc: B. S. Mallett, Regional Administrator, NRC Region IV  
N. Kalyanam, NRC Project Manager, San Onofre Units 2 and 3  
C. C. Osterholtz, NRC Senior Resident Inspector, San Onofre Units 2 and 3

Enclosure: 10 CFR 50.55a(a)(3)(i) Request for Alternative to a 10 CFR 50.55a(e),  
Quality Group C Components ASME Section III

## 10 CFR 50.55a Request Number ISI-3-23

---

### Background Information

The San Onofre Generating Station (SONGS) has eight (8) salt water cooling pumps that supply cooling water from the ocean to the component cooling water heat exchangers. The existing pumps are ASME Section III, Division 1, Class 3 constructed from 316L stainless steel material and require periodic overhauls to maintain reliability due to corrosion from the saltwater. The pumps will be replaced with the corrosion resistant Unified Numbering System N08367 (UNS N08367). This material is included in the ASME Section III material specification for pressure boundary parts in various forms. The material is not listed in the ASME bolting material specification. However, Code Case N-746 approves the use of UNS No. N08367 conforming to the requirements of SB-691 for bolting applications.

It has been determined that use of this UNS N08367 bolting material is superior for the intended service to the existing bolting materials currently approved in Table 3 for ASME Section III use. The UNS N08367 bolting material provides superior corrosion resistance in saltwater service and galvanic compatibility with the pump pressure boundary parts. As discussed in this relief request, this proposed alternative would provide an acceptable level of quality and safety and would therefore meet the requirements of 10 CFR 50.55a(a)(3)(i).

### 10 CFR 50.55a Request Number ISI-3-23

#### Proposed Alternative

#### In Accordance with 10 CFR 50.55a(a)(3)(i)

#### Alternative Provides Acceptable Level of Quality and Safety

#### Group C Components, ASME Section III

### I. ASME Code Component(s) Affected

SONGS Units:           2 and 3  
Description:           Salt Water Cooling Pumps, 4 per Unit.  
Code Class:            3

### II. Applicable Code Edition and Addenda

The construction code for the SONGS Units 2 and 3 replacement salt water cooling pumps is the ASME Boiler and Pressure Vessel Code, Section III, 1998 Edition through 2000 Addenda.

**III. Applicable Code Requirements**

Sub-article ND-2128(a) ASME Section III 1998 Edition through 2000 Addenda states: "Material for bolts and studs shall conform to the requirements of one of the specifications listed in Table 3, ASME Section II, Part D, Subpart 1. Material for nuts shall conform to SA-194 or to the requirements of one of the specifications for nuts or bolting listed in Table 3 of ASME Section II, Part D, Subpart 1."

**IV. Reason For Request**

New salt water cooling pumps are being fabricated from UNS N08367 material to replace the existing 316L stainless steel pumps. The pressure boundary parts will be UNS N08367 material as allowed by ASME Section III. It is desired to use pressure boundary bolting of the same chemical composition as the pressure parts, namely N08367. However, N08367 material is not listed in the bolting table (Table 3, ASME Section II, Part D) specified in ASME Section III, ND-2128.

For this application, the use of this UNS N08367 bolting material is superior to the existing bolting materials in Table 3, ASME Section II, Part D. The current bolting materials available in the Table 3 do not provide the superior corrosion resistance of UNS N08367 material in saltwater service and galvanic compatibility with the pressure boundary parts.

**V. Proposed Alternative and Basis for Use**

Pursuant to 10 CFR 50.55a(a)(3)(i), Southern California Edison (SCE) proposes to implement Code Case N-746 and use alternative pressure boundary bolting material (UNS N08367) for use on ASME Section III, Division 1, Class 3 salt water cooling pumps. The pumps fall under 10CFR50.55a(e), Quality Group C Components meeting the requirements for Class 3 components in the ASME Boiler and Pressure Vessel Code. Specifically, SCE is requesting approval to use Code Case N-746. This proposed alternative would provide an acceptable level of quality and safety and thus would meet the requirements of 10 CFR 50.55a(a)(3).

The pumps are being replaced with UNS N08367 material because of its superior corrosion resistance for saltwater service. The UNS N08367 material is already approved for use as pressure boundary components in various product forms such as plate (SB-688), forgings (SB-462 and SB-564), welded pipe and tube (SB-675, 804 and 676), seamless pipe and tube (SB-690); and rod, bar and wire (SB-691).

There is a precedent for application of rod material for use as bolting. A review of Table 3, ASME Section II, Part D, shows three nickel-alloy specifications that cover rods: Ni-Cr-Fe-Mo, Fe-Ni-Cr-Co (SB-572), Ni-Mo-Cr, Ni-Cr-Mo (SB-574), and Ni-Cr-Fe rods (SB-581), listed as bolting. This precedent supports the approval of Code Case N-746.

**VI. Duration of Proposed Alternative**

SCE requests that the 10 CFR 50.55a(a)(3)(i) relief for the alternative bolting material for the salt water cooling pumps be granted for SONGS Units 2 and 3 for the third Ten-Year Interval which began on August 18, 2003, and is scheduled to end on August 17, 2013.

**VII. Conclusion**

10 CFR 50.55a(a)(3)(i) states:

“Proposed alternatives to the requirements of paragraphs (c), (d), (e), (f), (g), and (h) of this section or portions thereof may be used when authorized by the Director of the Office of Nuclear Reactor Regulation. The applicant shall demonstrate that:

(i) The proposed alternatives would provide an acceptable level of quality and safety, or...”

The proposed alternative discussed in this relief request would provide an acceptable level of quality and safety, as the alternative bolting material satisfies the rules of ASME Section III requirements, and provides superior corrosion resistance. In addition, SB-691 (N08367 material) has been previously approved and used for ASME Section III pressure boundary components. Therefore, SCE requests that the proposed alternative be authorized pursuant to 10 CFR 50.55a(a)(3)(i).

SCE requests NRC approval of the proposed relief request to support fabrication and installation of the SONGS replacement salt water cooling pumps.