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May 4, 1984

Director, Office of Nuclear Reactor Regulation
Attention: D. M. Crutchfield, Chief
Operating Reactors Branch No. 5
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Subject: Docket No. 50-206
Risk Based Categorization of SEP Issues
San Onofre Nuclear Generating Station
Unit 1

Reference: Letter, D. M. Crutchfield, NRC, to R. Dietch, SCE, dated October 28, 1983

The referenced letter provided an NRC contractors report on the "Risk-Based Categorization of San Onofre SEP Issues." SCE has reviewed this report for factual correctness of the assumptions used in the analysis resulting in the comments of the enclosure.

If you have any questions regarding this information, please let me know.

Very truly yours,

FK Ulrey for MOMedford

Enclosure

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Enclosure

COMMENTS ON "RISK BASED CATEGORIZATION OF SAN ONOFRE SEP ISSUES"

Introduction

A report describing the NRC sponsored risk based evaluation of the SEP open items was provided by letter dated October 28, 1983. The report has been reviewed resulting in the following comments. The review was limited to the technical accuracy of the assumptions made in the evaluation. No attempt was made to support or refute any of the conclusions reached in the report.

Comments

Topic III-10.A, page 18. It is stated in the second paragraph that "during plant cooldown condition or other abnormal conditions both heat exchangers and all three pumps have to be in operation to be able to meet the required cooling load." This refers to the component cooling water system which is used as an intermediate system between the primary and saltwater systems. This statement is not true. During periods of normal or post accident cooldown all three pumps and both heat exchangers are not required, but are used to expedite heat removal. The use of one heat exchanger and one pump is all that is normally required for cooldown. Further information on the operation of these valves in an accident scenario was provided by letter dated October 17, 1983 from R. W. Krieger, SCE, to D. M. Crutchfield, NRC, regarding this topic.

Topic V-10.A, page 28. Paragraph 1 states that San Onofre Unit 1 does not meet current criteria regarding monitoring of the primary coolant for impurities. As indicated in our January 19, 1984 letter from M. O. Medford to D. M. Crutchfield, SCE implements procedures for the control of primary plant chemistry that satisfy NRC criteria as specified in the Standard Technical Specifications.

Topic V-11.A, page 33. Paragraph 1 indicates that the RHR system does not have interlocks for inboard isolation valves. While this is true, it is important to note that the RHR system is entirely located within containment and that the system includes a relief valve (RV-206) with a low pressure relief setting.

Topic V-11.B, page 44. Paragraph 1 indicates that the error of commission in inadvertently opening the RHR MOV's above system design pressure is 3.0×10^{-3}. It is not clear whether this probability is for inadvertently opening one valve or 2 valves.

Topic VI-4, page 50. The isolation configuration illustrated at the top of the page indicates that the system is "closed" inside containment and is not an ESF. The next drawing indicates the GDC requirements are for an automatic valve inside and outside containment. The actual requirements for this type of line are specified in GDC 57 as requiring "at least one containment isolation valve which shall be either automatic, or locked closed, or capable of remote manual operation. The valve shall be outside containment and located as close to the containment practical." This configuration is illustrated correctly by the first illustration but not the second. On page 51, the top illustration is the same as that on page 50.

Topic VI-7.B, page 61. The procedure EOP 3.1-4 does not exist at San Onofre Unit 1. The current procedure is Emergency Operating Instruction SO1-1.1-6. As part of the emergency operating procedures, the charging pumps are not shut off.

Topic VI-7.C.2, page 73. It should be clarified under Section 2, NRC Recommendation, that the recommended modifications are SCE's. Items 2, 3 and 4 were deferred to the Integrated Assessment and Item 1 was completed.

Topic VIII-3.B, page 109. The description of the control room indications is not completely accurate. A description of the indications for each DC source was listed in an attachment to our March 30, 1984 letter from M. O. Medford to D. M. Crutchfield. In addition, the testing requirements mentioned in the last paragraph of page 110 are not clear. Further information on this was also provided in our March 30, 1984 letter.

Topic IX-3, page xv. It is stated in the second paragraph that "if one of the tsunami gates fails, there is only about 3 minutes before the water temperature in the CCWS increases above the design temperature." This is not correct. If the inlet tsunami stop gate or inlet motor operated gate valve were to inadvertently fail closed, the saltwater pumps would continue to take suction and drain the available water in the structure. It is only after the water was drained and the pumps lose suction that the CCWS temperature would begin to increase. If the outlet tsunami or motor operated gate valve were to fail there would be no effect as the intake would continue to supply cooling water. The discharge for the saltwater cooling water from the CCWS is released downstream of the tsunami and motor operated gate valves. It should also be noted that the non-safety related auxiliary saltwater cooling pump suction and discharge are located on the ocean side of the stop gates and tsunami gates and would be available to supply the Component Cooling Water System.

On page 121, the top paragraph states that it is conservative to assume that failure of any pump or heat exchanger in the Component Cooling Water System is limiting to the system's safety function. This is not true for the purpose of determining the percentage contribution of passive failures. In the second paragraph of the same page it should be noted that a non-safety related auxiliary saltwater cooling pump is available even if the tsunami and/or stop gates fail closed. In the third paragraph, the scenario is described as one in which the tsunami gate valves fail. This is not a clear statement. At San Onofre Unit 1, there are tsunami stop gates and motor operated gate valves. The gate valves (there are four) are used for manipulating flow in order to heat treat the intake/outlet structure during power operation. The valves are not used during periods of maximum heat load on the Component Cooling Water System which occurs when going onto residual heat removal just after shutdown. The gate valves would not be manipulated at this time as there is not sufficient heat to heat treat the intake/outlet. The tsunami gates are

not used except in the event of a tsunami and are now, under a separate topic, being reevaluated for their need even at that time. Therefore, the probabilities associated with these scenarios should be reevaluated.

On page 130, the simplified schematic should be modified to include the outlet gate valve, tsunami gate and the interconnecting piping with the intake (and associated valves). In addition, the POV's on the SWCS pumps are being converted to manual and check valves are being installed.

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