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August 14, 1984

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

Gentlemen:

Subject: Docket No. 50-206
Post-Accident Sampling Capability
San Onofre Nuclear Generating Station
Unit 1

References: 1. Letter, M. O. Medford, SCE, to D. M. Crutchfield, NRC, Post-Accident Sampling Capability, May 1, 1984

2. Letter, M. O. Medford, SCE, to D. M. Crutchfield, NRC, Alternate Post-Accident Sampling, June 28, 1984

In Reference 1 we requested a revision to the Order Confirming Commitments for San Onofre Unit 1 dated March 14, 1983, to allow deferral of the Post-Accident Sampling System (PASS) to the Cycle IX refueling outage. Subsequently, Reference 2 provided, as an enclosure, the procedure for alternate post-accident parameter sampling methods at San Onofre Unit 1. In recent discussions with SCE, members of your staff and I&E Region V requested that we provide more information regarding the current alternate PASS methods at San Onofre Unit 1 and current completion schedules for the procurement of PASS components, PASS construction, PASS operating procedure development, and PASS operator training. It was also agreed that SCE would provide further justification for PASS deferral to the Cycle IX refueling outage. To this end the following information is provided.

PASS capability was first recommended in NUREG-0578, TMI-2 Lessons Learned, and was required by D. G. Eisenhut's letter to All Operating Nuclear Power Plants dated September 13, 1979. The requirements for PASS were divided into two implementation schedules. Category A requirements were to be implemented by January 1, 1980 and Category B by January 1, 1981. The requirements for PASS were as follows:

Requirement	Category
Design Review Complete	A
Preparation of Revised Procedures	A
Implement Plant Modifications	B
Description of Proposed Modifications	A

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The Category "B" requirement to install a PASS was further clarified in NUREG-0737, issued October 31, 1980, and the implementation date was revised to be January 1, 1982.

SCE responded to the NUREG-0578 requirements in letters dated October 17, 1979, November 21, 1979, December 14, 1979, and January 17, 1980, by stating that the station procedures were being revised to allow the sampling of a pressurized RCS sample from the existing sample station without adherence to NRC dose and time criteria. The procedures were to contain suitable precautions, based upon station and containment radiation levels, to prevent obtaining a pressurized sample if excessive control room radiation levels or personnel exposure would result. We stated that these procedures should be adequate until the completion of a new sample station. Your letter of May 2, 1980 stated that we had not provided information regarding our conceptual design of modifications to meet the Category "B" requirements for this item. Accordingly, we responded by providing the initial description of the new PASS by letter dated July 9, 1980 and informed you that the final installation would not be completed until resolution of the Systematic Evaluation Program (SEP).

Notwithstanding our intention to defer the PASS modification until completion of SEP, as indicated in Enclosure 1, we initiated efforts to procure and install a Combustion Engineering (CE) skid mounted PASS for San Onofre Unit 1. The PASS was scheduled to be completed during the outage which began on February 27, 1982, and was originally scheduled to end approximately June, 1982. To this end, construction was initiated and the major PASS components installed in 1981 and 1982. However, in late 1982 the increasing costs of the backfits to San Onofre Unit 1 became a major concern. In response to that concern we then initiated efforts to develop a plan for returning San Onofre Unit 1 to service and managing future modifications. This effort resulted in a San Onofre Unit 1 project work slowdown and then an essential shutdown from late 1982 until February, 1984 when final resolution of the return to service plan was reached.

As part of the plan for return to service it was our intention to continue work on TMI Category B items as specified in the Confirmatory Order dated March 14, 1983. To this end, all of the TMI Category B items discussed in the March 14, 1983 Order will be able to be completed, with the exception of PASS, prior to return to power from the current outage. In the case of the PASS, notwithstanding the project shutdown, work continued through 1983 and the beginning of 1984 on a limited basis (i.e. 1-3 persons). The restricted effort was due to the uncertainty of San Onofre Unit 1 return to service. Additional reasons for the restricted effort on the PASS are as follows:

1) The uncertain status of San Onofre Unit 1 startup, combined with the numerous PASS startup problems that were being discovered on both the Unit 1 PASS and the Unit 2/3 PASS resulted in the conclusion that Unit 1 PASS startup effort was best deferred until the resolution of all startup problems was achieved on the Unit 2/3 PASS. The resolution of these startup problems, many of which involved PASS design changes, could then be implemented on the Unit 1 PASS.

2) During the startup of the Unit 2/3 PASS, due to procurement lead time conflicts, many of the Unit 1 PASS components were utilized when unrepairable component failures were encountered.

3) The startup of the Unit 2/3 PASS could only take place during Mode 1, 2 or 3 operation. Therefore, the demonstration of Unit 1 PASS operability in the current, extended Mode 5 outage was not possible.

In March, 1984, when it was determined that San Onofre Unit 1 would be returned to service, an assessment of the current status of the PASS, based upon our experience in the startup of the San Onofre Unit 2/3 PASS, determined that the PASS startup scope was not consistent with the return to service schedule. This matter was discussed with your staff and Reference 1 requested a delay in the implementation of PASS at San Onofre Unit 1 until the Cycle IX refueling outage. The justification for this delay was that the schedule necessary to provide an operational PASS Program at San Onofre Unit 1 conflicted with the scheduled return to service date of October 1, 1984. However, to meet the PASS startup schedule provided in Reference 1, on June 18, 1984 three CE engineers and one CE designer arrived at San Onofre Unit 1 to assist the existing SCE PASS startup team of 2 engineers and 4 technicians in the completion and startup of the PASS. Since that time, a majority of the existing PASS components have been disassembled (if necessary), reworked and subjected to component testing to assure operability. A PASS startup scope has been developed, including the identification of the replacement components, preoperational procedures, and necessary pre-startup modifications. Accordingly, the current projected schedule for an operable PASS, from the standpoint of hardware only, is provided as Enclosure 2 to this letter. As seen in Enclosure 2, it is the need for parts procurement which causes an uncontrollable delay in the construction of PASS. The majority of the preoperational tests necessary during PASS startup cannot be performed until the PASS is in its final design configuration. It should be noted that this schedule assumes no major startup malfunctions which would cause significant PASS startup delays. If such is the case, we will promptly notify you of the problem and its affect on the remaining schedule.

Based upon comments from the NRC reviewers, we have reexamined our ability to provide additional post-accident sampling capability in the near future. Accordingly, our review of the PASS modifications determined that the undiluted grab sample modification, currently deferred to the Cycle IX refueling outage by the Integrated Living Schedule, can be completed on an earlier schedule. The installation of the undiluted grab sample facility will be completed and operable by January 7, 1985. The grab sample cask will be shared with San Onofre Units 2/3 and shipped to an offsite facility for post-accident analysis. The procedures to support the taking of a grab sample, any onsite pre-shipment storage necessary, and shipment to an offsite facility will also be completed by January 7, 1985. However, it should be recognized that the undiluted grab sample modification will utilize a portion of the PASS hardware which will be involved in construction/startup activities during the spring of 1985. Therefore, it may be necessary to take the grab sample facility out of service in order to perform construction or startup activities. It is anticipated that these out of service intervals will be of a short duration and will have a minor impact on the availability of the grab sample facility.

Until final completion of the PASS, we will utilize, if necessary, the alternate post-accident parameter sampling provided to you as an Enclosure to Reference 2. The procedure is provided again as Enclosure 3 to this letter. A detailed justification of these methods is provided as Enclosure 4 to this letter. Additionally, as indicated in Reference 1, we are currently developing a core damage assessment procedure which has a completion schedule of September 14, 1984. The formatted, typed version of the core damage assessment procedure should be officially issued and distributed by October 1, 1984. It should be noted that the two instruments utilized for the alternate methods of PASS were installed in response to NUREG-0737 post-TMI requirements. They provide sufficient range of measurement to assess post-accident conditions and, in the case of the containment hydrogen monitor, the ability to monitor a previously unavailable parameter. Therefore, due to the implementation of other post-TMI requirements, we are better able to assess the extent of an accident and mitigate the consequences.

The procedures for the operation, surveillance, and maintenance of the PASS to provide for full PASS operability (as defined in Enclosure 5) are currently in the development stage. Due to the similarity of the San Onofre Unit 1 PASS to the San Onofre Unit 2/3 PASS we have only to revise the established San Onofre Unit 2/3 PASS operating procedures to reflect design differences in the primary plant configuration and any PASS design differences between Unit 1 and Unit 2/3. However, these revisions cannot be totally completed until after the turnover of the PASS hardware from startup personnel to station chemistry personnel. The PASS can then be utilized by station personnel to checkout and verify the San Onofre Unit 1 PASS operating procedures. Thus, the procedures are expected to be ready approximately 4 weeks after the PASS turnover to the station. The training of personnel for the purposes of providing qualified PASS operators should commence approximately 4 weeks after PASS turnover to the station and is estimated to take an additional 8 weeks after procedure completion. The schedule is based upon the need to train PASS operators while maintaining sufficient coverage of the chemistry staff on shift to meet San Onofre Unit 1 technical specification requirements. All of the above schedule estimates assume PASS operability for the procedure checkout and training periods and that San Onofre Unit 1 is in Modes 1, 2 or 3 so that the PASS can be utilized.

As discussed above, we have pursued and are pursuing the installation of a PASS at San Onofre Unit 1. The progress towards that goal was restricted from September, 1982 through Spring, 1984 due to the lack of a return to service plan for San Onofre Unit 1, numerous startup problems and the use of PASS components for the startup of the San Onofre Unit 2/3 PASS. After the resolution of the return to service plan, it was determined that the PASS could not to be completed in time for the scheduled October, 1984 startup of San Onofre Unit 1. Accordingly, Reference 1 requested a revision to the Order Confirming Commitments dated March 14, 1983, to allow the startup from the current outage without an operable PASS (as defined by Enclosure 5). The justification for the deferral of PASS operability at San Onofre Unit 1 to the Cycle IX refueling outage is based upon the following points, and is consistent with the justification presented in the Order Confirming Commitments dated March 14, 1983.

1) We have established alternate post-accident parameter sampling methods for the interim period. These methods, which are based upon information from instrumentation that was not previously available and the analysis of an undiluted RCS grab sample (available January 7, 1985), provide assurance that a determination of core damage can be made if necessary.

2) The PASS was identified in NUREG-0578 to assure that remedial actions are taken to mitigate the consequences of a TMI-2 type accident. It is our position that the alternate PASS methods when considered with the upgraded RO and SRO training to recognize an accident provide essentially the same assurance.

3) The PASS modification, when compared to the modifications required prior to return to service and others incorporated into the Integrated Living Schedule, is not classified by the ranking methodology as having high safety significance.

4) We have been and are proceeding with efforts to complete the PASS on a schedule much earlier than the Cycle IX refueling outage.

If you have any questions concerning this matter, please let us know.

Very truly yours,

M. O. Medford

Enclosures

cc: J. B. Martin, Region V Administrator
A. E. Chaffee, USNRC Senior Resident Inspector
C. Grimes, NRR SEP Branch Chief
E. McKenna, NRR Project Manager

ENCLOSURE 1

POST-ACCIDENT SAMPLING SYSTEM
SAN ONOFRE UNIT 1

ACTIONS TO DATE

ACTION	DATE
Purchase Order Issued to CE	June, 1980
Construction of PASS Pit Initiated	January, 1981
Final Construction to Receive PASS Skid into PASS Pit	August, 1981
CE PASS Skid Delivery to Site	September, 1981
CE PASS Skid into Pit	January, 1982
CE/SCE Punch List Initiated to Track Numerous Startup Problems	July, 1982
Many Unit 1 Parts Utilized by San Onofre Unit 2/3 for Startup of a Similar CE PASS Unit	September, 1982 through January, 1983
Minimum Startup Effort and Improvements; Preservation of PASS Due to Uncertainty Regarding San Onofre Unit 1 Return-to-Service Date	May, 1983 through June, 1984

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ENCLOSURE 2

POST-ACCIDENT SAMPLING SYSTEM
SAN ONOFRE UNIT 1

ACTIONS TO COMPLETE PASS

ACTION	SCHEDULED DATE
CE Startup Assistance Onsite to Establish Startup Scope	June 18, 1984
Final Engineering of Design Changes	July 30, 1984 through October 22, 1984
Issue Remainder of Material Purchase Orders	August 20, 1984
Installation of PASS Modifications and New Components	October 15, 1984 through March 1, 1985
Component Testing	July 30, 1985 through January 18, 1985
Initiation of Functional Startup Tests	March 1, 1985
Completion of Pre-Operational Startup Tests	May 31, 1985
Initiation of PASS Turnover to Station Personnel	June 1, 1985
Completion of Turnover and Station Acceptance of PASS Hardware	June 14, 1985

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