

Southern California Edison Company

P. O. BOX 800

2244 WALNUT GROVE AVENUE

ROSEMEAD, CALIFORNIA 91770

KENNETH P. BASKIN
VICE PRESIDENT

August 14, 1987

TELEPHONE
818-302-1401

RECEIVED
NRC
AUG 17 P 1:23
REGION V

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Subject: Docket No. 50-206
Reply to a Notice of Violation
San Onofre Nuclear Generating Station, Unit 1

Reference: Letter, Mr. J. B. Martin (NRC) to Mr. Kenneth P. Baskin (SCE);
Subject, NRC Team Inspection of San Onofre Nuclear Generating
Station Unit 1; dated July 17, 1987

By letter referenced above, SCE received NRC Inspection Report No. 50-206/87-05 which documented the results of the special team inspection conducted by Mr. R. C. Sorenson during the period June 1 through June 12, 1987. As a result of this inspection, a Notice of Violation (NOV) was issued. The enclosure to this letter provides the Southern California Edison (SCE) Company's response to the NOV as required by 10 CFR 2.201.

In addition, the referenced letter requested that SCE specifically address the broader aspects represented by this NOV and include in its response these actions taken or planned to resolve the issue. As discussed between Messrs. D. F. Kirsch (USNRC) and W. G. Zintl (SCE) on August 5, 1987, in order to provide a complete response it was agreed that SCE would provide under separate cover its assessment of this issue by September 17, 1987.

If you have any further questions or require additional information, please contact me.

Sincerely,

Kenneth P. Baskin

Enclosure

cc: Mr. J. B. Martin (USNRC Regional Administrator, Region V)
Mr. F. R. Huey (USNRC Senior Resident Inspector)

~~8708190349~~
882

ENCLOSURE

Response to the Notice of Violation contained in Appendix A of Mr. J. B. Martin's letter dated July 17, 1987.

ITEM I

Appendix A of Mr. Martin's letter states in part:

"Section 4.4.D.2.d of the Station Technical Specifications denotes the requirement to demonstrate each 125 volt battery bank operable as follows: 'at least once per 18 months, during shutdown, by verifying that the battery capacity is adequate to supply and maintain in operable status all of the actual or simulated emergency loads for the design duty cycle when the battery is subjected to a battery service test.

"Contrary to the above, 125 volt battery number one was not demonstrated operable during the service tests conducted on May 7, 1986 and May 22, 1987, since the battery was discharged at a load profile below the design duty cycle, as specified in the revisions to design calculation DC-1604.

"This is a severity Level IV Violation (Supplement I)."

RESPONSE

1. Reasons for the Violation

In July 1984, the existing 125 volt battery number one was replaced. As part of the startup test, the battery was subjected to a service test using the load profile generated by a design calculation. Subsequent to battery number one's installation, the load profile for the battery was altered on two occasions by revising Design Calculation DC-1604.

The first revision occurred as a result of Proposed Facility Change (PFC) number 1-86-3400.13, dated April 10, 1986, which added Inverter 4A. The additional load was incorporated via DC-1604 Revision 1. The second revision to the calculation was completed by E&C on September 15, 1986, which incorporated the results of field measurements of inverter loads associated with battery number one.

Both Revisions 1 and 2 to DC-1604 should have resulted in changes to the surveillance procedure which implements the Technical Specification required 18-month service test; however, neither did so. The specific facts and circumstances regarding these two revisions to DC-1604 are as follows:

DC-1604 Revision 1

SCE has procedural controls for the preparation, review, approval and implementation of PFCs. The SCE design control program requires, among many things, an assessment as to whether the PFC affects Technical Specifications. Other portions of the program direct the routing of the PFC to appropriate Station divisions to permit assessment of the PFC for impact on their procedures.

In accordance with the SCE design control program, during the processing of PFC 1-86-3400.13, the SCE engineering departments assessed the PFC to determine if it necessitated a change to the Technical Specifications. For PFC 1-86-3400.13, SCE correctly determined that Technical Specification surveillance requirements (Technical Specification Section 4.8.2) were not affected, stating within the PFC that there was "...no impact on the existing Technical Specifications, limiting conditions for operation or surveillance requirements".

The PFC was then routed to the Station for final approval. Following PFC approval, the PFC package was sent to the Configuration Control Section at the Station to make the initial determination of which Station procedures were affected by this change. Subsequent to this determination, Station organizations that were designated as not affected were notified to confirm this assessment. The Station assessment concluded the PFC had no impact on surveillance procedures. The PFC stated that an inverter load had been added to battery number one, and that the calculation had been revised accordingly; however, the PFC did not include a copy of the design calculation, nor did it state that the load profile had changed.

Station personnel did not recognize that surveillance procedures were affected because: (1) the wording used in the PFC to describe "...no impact on... Technical Specification... surveillance requirements" was misinterpreted to mean that no surveillance procedures were affected; (2) the PFC description did not state that the load profile had changed as a result of the PFC; and (3) the new load profile was not provided in the PFC nor in separate correspondence to the Station.

DC-1604 Revision 2

When changes are made to design calculations, SCE procedures require that a copy be sent to the Corporate Document Management (CDM) Department for filing, however, these procedures do not require that the Station be notified of these changes or that a copy be sent to the Station Technical Division. As a result, when DC-1604 Revision 2 was issued, Station personnel were not made aware of the revision. Consequently, on May 22, 1987, the surveillance was performed using an incorrect load profile.

2. Corrective Steps Taken to Avoid Further Noncompliance and the Results Achieved

The surveillance procedure for the number one battery was revised to include the correct load profile. The number one battery was successfully retested on June 21, 1987, prior to resuming Mode 4 operation, using this revised surveillance procedure.

A preliminary review was conducted to determine if other surveillances are subject to errors of this type. The review indicates that batteries are unusual in that the surveillance test acceptance criterion relies solely upon a design calculation.

3. Corrective Steps that Will Be Taken

SCE design control procedures will be revised by September 30, 1987, to require: (1) for battery related PFCs, a statement within the PFC specifically stating whether the battery load profile has been affected; (2) the PFC to contain the revised load profile; (3) the distribution of revised battery design calculations to the Station; (4) information displayed within battery load calculations be clearly labeled and defined; and (5) the results and conclusions section of the calculation include or make reference to the load profile to be used during an IEEE-450 service test.

To provide further assurance that the correct load profile is used, Station procedures will be revised prior to the next battery service test to require that prior to each battery test for Unit 1, 2 or 3, the Station cognizant engineer will confirm: (1) the battery load calculation revision in effect during the previous test; (2) the current revision of the battery load calculation; and (3) that the load profile in the maintenance procedure is correct.

By October 30, 1987, SCE will determine if any other technical specification surveillance has acceptance criteria found in a design calculation as opposed to being contained in the Technical Specification. If such a condition is identified, the controls described above for the battery calculations will be applied to calculations for these surveillances.

4. Date When Full Compliance Will Be Achieved

Full compliance was achieved on June 21, 1987, when the 125 volt battery number one was successfully tested to the proper load profile.

ITEM II

Appendix A of Mr. Martin's letter states in part:

"Technical Specifications, Section 6.11, 'Radiation Protection Program', reads:

'Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.'

"Health Physics Procedure SO123-VII-7.4, paragraph 6.1.2.6, 'Radioactive Materials Container', requires that:

'Each container having radioactive material in excess of the amounts specified in Appendix C of 10 CFR 20 shall bear a durable, clearly visible label bearing the radiation caution symbol and the words:

'CAUTION, RADIOACTIVE MATERIAL'
OR
'DANGER, RADIOACTIVE MATERIAL'

'It shall also provide sufficient information to permit individuals handling or using the containers or working in the vicinity thereof to take precautions to avoid or minimize exposures.

"Contrary to the above, on June 3, 1987, eight 3'x3'x5' boxes which bore only the radiation caution symbol and the words, 'Caution, Radioactive Material,' were found in the housekeeping area outside door R3-60. No other information was provided on the boxes. The monitored radiation dose rate was 48 mrem per hour at the surface with the dose rates being between 5-10 mrem in the general area.

"This is a severity Level V Violation (Supplement IV)."

RESPONSE

1. Reasons for the Violation

As a result of reactor coolant pump (RCP) seal work during the Unit 3 outage, contaminated RCP seals and other associated contaminated materials were removed from containment. The RCP seals were placed in steel transport containers. The containers were individually bagged and labeled with the radiation symbol, a statement of contents and dose rate information. The steel transport containers were then temporarily stored in two areas for final packaging: the 63 ft. elevation Hot Machine Shop; and the 37 ft. elevation staging hallway.

On May 24, 1987, in the Hot Machine Shop, the steel transport containers were placed into four 3'x3'x5' wooden storage boxes. The HP Technician covering this activity initiated action for labeling of these four boxes. The boxes were properly labeled with "Caution Radioactive Material" stickers and a rope barrier was erected surrounding the boxes. A placard marked "Radiation Area" with appropriate area radiation level information was attached to the barrier to permit individuals in the area to take precautions to avoid or minimize exposure.

On June 2, 1987, HP personnel were assisting in the crating of the steel transport containers on the 37 ft. elevation. A different HP technician was assigned to provide HP coverage for the placement of the steel transport containers into four additional 3'x3'x5' wooden storage boxes which bore the radiation symbol and the words "Caution, Radioactive Material". Concurrently, the four boxes from the Hot Machine Shop were moved to this location.

All eight boxes were then staged in the radioactive material storage area outside door R3-60. This radiologically controlled area is posted "Caution, Radioactive Materials" and "Radiation Area", and access to the area is controlled by Radiation Exposure Permit. However, dose rate information was not posted.

The HP Technician's supervisor had instructed the technician to provide HP coverage for the crating of the steel containers, to monitor area radiation levels, and to survey the bag and box exteriors for loose contamination. The HP Supervisor did not specifically instruct the HP technician that his job assignment include labeling of the eight boxes. The HP Technician believed that Radioactive Material Control (RMC) personnel, who are responsible for the storage area outside door R3-60, would survey the boxes and affix labeling as necessary. SCE believes that RMC personnel would have, upon discovery of the missing label information, performed that task as a result of a routine radiation survey scheduled for the afternoon of June 3, 1987.

Therefore, SCE has concluded that the reason for the violation was personnel error, in that the HP Technician was not instructed by his supervisor that his assigned job include labeling the eight wooden boxes.

2. Corrective Steps Taken to Avoid Further Noncompliance and the Results Achieved

On June 3, 1987, the eight subject boxes were surveyed and properly labeled. Special tours of Units 1, 2 and 3 revealed no other instances of incomplete labeling.

The responsible HP Supervisor was counselled regarding his obligation to assure that all technicians in his group comply fully with HP division procedures and to fully explain the individual's work assignment(s). HP supervision has been instructed to be very precise in designating which tasks, such as labeling, are part of work assignments.

All appropriate HP personnel have been reminded that prompt and accurate labeling of containers is a vital component of their job.

The "Contract HP Technician Qualification Manual" has been revised to ensure that training in the labeling process, relating to the item above, will be adequately communicated to the individual. The revised manual is currently in use.

3. Corrective Steps that Will Be Taken

As a result of this event, SCE reviewed the practice of using numerous labels to satisfy regulatory requirements. It was concluded that labels used at the site will be designed such that they meet the requirements of 10 CFR 20.203(f). Such labeling will help to ensure consistent application of 10 CFR 20.203(f). Guidance will be incorporated into existing Station procedures regarding the proper use of the new labels. All HP personnel will be instructed in this guidance. The new criteria and procedural guidance will be in place by October 1, 1987.

4. Date When Full Compliance Will Be Achieved

Full compliance was achieved on June 3, 1987, when the boxes were relabeled.

10-10-87
10-10-87
10-10-87

Southern California Edison Company

P. O. BOX 800

2244 WALNUT GROVE AVENUE

ROSEMEAD, CALIFORNIA 91770

KENNETH P. BASKIN
VICE PRESIDENT

TELEPHONE
818-302-1401

August 14, 1987

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Subject: Docket No. 50-206
Reply to a Notice of Violation
San Onofre Nuclear Generating Station, Unit 1

Reference: Letter, Mr. J. B. Martin (NRC) to Mr. Kenneth P. Baskin (SCE);
Subject, NRC Team Inspection of San Onofre Nuclear Generating
Station Unit 1; dated July 17, 1987

By letter referenced above, SCE received NRC Inspection Report No. 50-206/87-05 which documented the results of the special team inspection conducted by Mr. R. C. Sorenson during the period June 1 through June 12, 1987. As a result of this inspection, a Notice of Violation (NOV) was issued. The enclosure to this letter provides the Southern California Edison (SCE) Company's response to the NOV as required by 10 CFR 2.201.

In addition, the referenced letter requested that SCE specifically address the broader aspects represented by this NOV and include in its response these actions taken or planned to resolve the issue. As discussed between Messrs. D. F. Kirsch (USNRC) and W. G. Zintl (SCE) on August 5, 1987, in order to provide a complete response it was agreed that SCE would provide under separate cover its assessment of this issue by September 17, 1987.

If you have any further questions or require additional information, please contact me.

Sincerely,



Enclosure

cc: Mr. J. B. Martin (USNRC Regional Administrator, Region V)
Mr. F. R. Huey (USNRC Senior Resident Inspector)

8708190349 870814
PDR ADDCK 05000206
Q PDR

IEC
11

ENCLOSURE

Response to the Notice of Violation contained in Appendix A of Mr. J. B. Martin's letter dated July 17, 1987.

ITEM I

Appendix A of Mr. Martin's letter states in part:

"Section 4.4.D.2.d of the Station Technical Specifications denotes the requirement to demonstrate each 125 volt battery bank operable as follows: 'at least once per 18 months, during shutdown, by verifying that the battery capacity is adequate to supply and maintain in operable status all of the actual or simulated emergency loads for the design duty cycle when the battery is subjected to a battery service test.

"Contrary to the above, 125 volt battery number one was not demonstrated operable during the service tests conducted on May 7, 1986 and May 22, 1987, since the battery was discharged at a load profile below the design duty cycle, as specified in the revisions to design calculation DC-1604.

"This is a severity Level IV Violation (Supplement I)."

RESPONSE

1. Reasons for the Violation

In July 1984, the existing 125 volt battery number one was replaced. As part of the startup test, the battery was subjected to a service test using the load profile generated by a design calculation. Subsequent to battery number one's installation, the load profile for the battery was altered on two occasions by revising Design Calculation DC-1604.

The first revision occurred as a result of Proposed Facility Change (PFC) number 1-86-3400.13, dated April 10, 1986, which added Inverter 4A. The additional load was incorporated via DC-1604 Revision 1. The second revision to the calculation was completed by E&C on September 15, 1986, which incorporated the results of field measurements of inverter loads associated with battery number one.

Both Revisions 1 and 2 to DC-1604 should have resulted in changes to the surveillance procedure which implements the Technical Specification required 18-month service test; however, neither did so. The specific facts and circumstances regarding these two revisions to DC-1604 are as follows:

DC-1604 Revision 1

SCE has procedural controls for the preparation, review, approval and implementation of PFCs. The SCE design control program requires, among many things, an assessment as to whether the PFC affects Technical Specifications. Other portions of the program direct the routing of the PFC to appropriate Station divisions to permit assessment of the PFC for impact on their procedures.

In accordance with the SCE design control program, during the processing of PFC 1-86-3400.13, the SCE engineering departments assessed the PFC to determine if it necessitated a change to the Technical Specifications. For PFC 1-86-3400.13, SCE correctly determined that Technical Specification surveillance requirements (Technical Specification Section 4.8.2) were not affected, stating within the PFC that there was "...no impact on the existing Technical Specifications, limiting conditions for operation or surveillance requirements".

The PFC was then routed to the Station for final approval. Following PFC approval, the PFC package was sent to the Configuration Control Section at the Station to make the initial determination of which Station procedures were affected by this change. Subsequent to this determination, Station organizations that were designated as not affected were notified to confirm this assessment. The Station assessment concluded the PFC had no impact on surveillance procedures. The PFC stated that an inverter load had been added to battery number one, and that the calculation had been revised accordingly; however, the PFC did not include a copy of the design calculation, nor did it state that the load profile had changed.

Station personnel did not recognize that surveillance procedures were affected because: (1) the wording used in the PFC to describe "... no impact on... Technical Specification... surveillance requirements" was misinterpreted to mean that no surveillance procedures were affected; (2) the PFC description did not state that the load profile had changed as a result of the PFC; and (3) the new load profile was not provided in the PFC nor in separate correspondence to the Station.

DC-1604 Revision 2

When changes are made to design calculations, SCE procedures require that a copy be sent to the Corporate Document Management (CDM) Department for filing, however, these procedures do not require that the Station be notified of these changes or that a copy be sent to the Station Technical Division. As a result, when DC-1604 Revision 2 was issued, Station personnel were not made aware of the revision. Consequently, on May 22, 1987, the surveillance was performed using an incorrect load profile.

2. Corrective Steps Taken to Avoid Further Noncompliance and the Results Achieved

The surveillance procedure for the number one battery was revised to include the correct load profile. The number one battery was successfully retested on June 21, 1987, prior to resuming Mode 4 operation, using this revised surveillance procedure.

A preliminary review was conducted to determine if other surveillances are subject to errors of this type. The review indicates that batteries are unusual in that the surveillance test acceptance criterion relies solely upon a design calculation.

3. Corrective Steps that Will Be Taken

SCE design control procedures will be revised by September 30, 1987, to require: (1) for battery related PFCs, a statement within the PFC specifically stating whether the battery load profile has been affected; (2) the PFC to contain the revised load profile; (3) the distribution of revised battery design calculations to the Station; (4) information displayed within battery load calculations be clearly labeled and defined; and (5) the results and conclusions section of the calculation include or make reference to the load profile to be used during an IEEE-450 service test.

To provide further assurance that the correct load profile is used, Station procedures will be revised prior to the next battery service test to require that prior to each battery test for Unit 1, 2 or 3, the Station cognizant engineer will confirm: (1) the battery load calculation revision in effect during the previous test; (2) the current revision of the battery load calculation; and (3) that the load profile in the maintenance procedure is correct.

By October 30, 1987, SCE will determine if any other technical specification surveillance has acceptance criteria found in a design calculation as opposed to being contained in the Technical Specification. If such a condition is identified, the controls described above for the battery calculations will be applied to calculations for these surveillances.

4. Date When Full Compliance Will Be Achieved

Full compliance was achieved on June 21, 1987, when the 125 volt battery number one was successfully tested to the proper load profile.

ITEM II

Appendix A of Mr. Martin's letter states in part:

"Technical Specifications, Section 6.11, 'Radiation Protection Program', reads:

'Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.'

"Health Physics Procedure S0123-VII-7.4, paragraph 6.1.2.6, 'Radioactive Materials Container', requires that:

'Each container having radioactive material in excess of the amounts specified in Appendix C of 10 CFR 20 shall bear a durable, clearly visible label bearing the radiation caution symbol and the words:

'CAUTION, RADIOACTIVE MATERIAL'
OR
'DANGER, RADIOACTIVE MATERIAL'

'It shall also provide sufficient information to permit individuals handling or using the containers or working in the vicinity thereof to take precautions to avoid or minimize exposures.

"Contrary to the above, on June 3, 1987, eight 3'x3'x5' boxes which bore only the radiation caution symbol and the words, 'Caution, Radioactive Material,' were found in the housekeeping area outside door R3-60. No other information was provided on the boxes. The monitored radiation dose rate was 48 mrem per hour at the surface with the dose rates being between 5-10 mrem in the general area.

"This is a severity Level V Violation (Supplement IV)."

RESPONSE

1. Reasons for the Violation

As a result of reactor coolant pump (RCP) seal work during the Unit 3 outage, contaminated RCP seals and other associated contaminated materials were removed from containment. The RCP seals were placed in steel transport containers. The containers were individually bagged and labeled with the radiation symbol, a statement of contents and dose rate information. The steel transport containers were then temporarily stored in two areas for final packaging: the 63 ft. elevation Hot Machine Shop; and the 37 ft. elevation staging hallway.

On May 24, 1987, in the Hot Machine Shop, the steel transport containers were placed into four 3'x3'x5' wooden storage boxes. The HP Technician covering this activity initiated action for labeling of these four boxes. The boxes were properly labeled with "Caution Radioactive Material" stickers and a rope barrier was erected surrounding the boxes. A placard marked "Radiation Area" with appropriate area radiation level information was attached to the barrier to permit individuals in the area to take precautions to avoid or minimize exposure.

On June 2, 1987, HP personnel were assisting in the crating of the steel transport containers on the 37 ft. elevation. A different HP technician was assigned to provide HP coverage for the placement of the steel transport containers into four additional 3'x3'x5' wooden storage boxes which bore the radiation symbol and the words "Caution, Radioactive Material". Concurrently, the four boxes from the Hot Machine Shop were moved to this location.

All eight boxes were then staged in the radioactive material storage area outside door R3-60. This radiologically controlled area is posted "Caution, Radioactive Materials" and "Radiation Area", and access to the area is controlled by Radiation Exposure Permit. However, dose rate information was not posted.

The HP Technician's supervisor had instructed the technician to provide HP coverage for the crating of the steel containers, to monitor area radiation levels, and to survey the bag and box exteriors for loose contamination. The HP Supervisor did not specifically instruct the HP technician that his job assignment include labeling of the eight boxes. The HP Technician believed that Radioactive Material Control (RMC) personnel, who are responsible for the storage area outside door R3-60, would survey the boxes and affix labeling as necessary. SCE believes that RMC personnel would have, upon discovery of the missing label information, performed that task as a result of a routine radiation survey scheduled for the afternoon of June 3, 1987.

Therefore, SCE has concluded that the reason for the violation was personnel error, in that the HP Technician was not instructed by his supervisor that his assigned job include labeling the eight wooden boxes.

2. Corrective Steps Taken to Avoid Further Noncompliance and the Results Achieved

On June 3, 1987, the eight subject boxes were surveyed and properly labeled. Special tours of Units 1, 2 and 3 revealed no other instances of incomplete labeling.

The responsible HP Supervisor was counselled regarding his obligation to assure that all technicians in his group comply fully with HP division procedures and to fully explain the individual's work assignment(s). HP supervision has been instructed to be very precise in designating which tasks, such as labeling, are part of work assignments.

All appropriate HP personnel have been reminded that prompt and accurate labeling of containers is a vital component of their job.

The "Contract HP Technician Qualification Manual" has been revised to ensure that training in the labeling process, relating to the item above, will be adequately communicated to the individual. The revised manual is currently in use.

3. Corrective Steps that Will Be Taken

As a result of this event, SCE reviewed the practice of using numerous labels to satisfy regulatory requirements. It was concluded that labels used at the site will be designed such that they meet the requirements of 10 CFR 20.203(f). Such labeling will help to ensure consistent application of 10 CFR 20.203(f). Guidance will be incorporated into existing Station procedures regarding the proper use of the new labels. All HP personnel will be instructed in this guidance. The new criteria and procedural guidance will be in place by October 1, 1987.

4. Date When Full Compliance Will Be Achieved

Full compliance was achieved on June 3, 1987, when the boxes were relabeled.