U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-361/89-32 and 50-362/89-32

Docket Nos. 50-361 and 50-362

License Nos. NPF-10 and NPF-15

Licensee: Southern California Edison Company
Irvine Operations Center
23 Parker
Irvine, California 92718

Facility Name: San Onofre Nuclear Generating Stations Units 2 and 3

Inspection at: San Clemente, California

Inspection Conducted: December 4 - 7, 1989

Inspectors: T. Meadows, Licensing Examiner/Reactor Inspector
T. D'Angelo, Senior Resident Inspector, Rancho Seco

Approved by: _____ 12/22/89
L. Miller, Chief
Operations Section
Date Signed

Inspection Summary:

Inspection During the Period December 4 - 7, 1989 (Report Nos. 50-361/89-32 and 50-362/89-32)

Areas Inspected:

The first task of this unannounced inspection was to ascertain whether the licensee had improved the administration of its comprehensive configuration control program including the elements of defining and disseminating design based information, implementing a site system engineering program, and strengthening corporate engineering control and oversight of site activities. This included oversight requirements pursuant to Generic Letter (GL) 85-06, "QA Guidance for Anticipated Transients without Scram (ATWS) Equipment that is not Safety Related."

The second task was to determine weather the licensee was in compliance with the Anticipated Transients Without Scram (ATWS) rule, 10 CFR Part 50.62, regarding the installation of a recent modification package, 1989 ATWS/Diverse Scram System (ATWS/DSS, DCP-6553).

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Inspection Procedure Nos. 30703, 37700, and 25020 were used as guidance for the inspection.

No violations or deviations were identified during this inspection. The licensee's oversight configuration control system was evaluated as adequate. The licensee's ATWS/DSS system modification appears to be in compliance with 10 CFR Part 50.62 and Generic Letter GL-85-06.

DETAILS

1. Persons Contacted

*R. Krieger, Operations Manager
*D. Nunn, Manager, Nuclear Engineering & Construction
*B. Katz, Manager, Site Support Services
*M. Cabrera, Systems Engineer, Nuclear Engineering Safety & Licensing
*P. Schofield, Systems Engineer, Station Technical
*M. Short, Project Manager, Design Bases
*D. Bevig, Supervisor, Onsite Nuclear Licensing
*R. Waldo, Supervisor, Computer Engineering
*R. Plappert, Supervisor, Technical Support & Compliance
*R. Onge, Supervisor, Nuclear Engineering Design
*T. Elkins, Supervisor, Nuclear Engineering & Construction
*C. Brandt, Engineer, Quality Assurance, Site
*D. Herbst, Manager, Quality Assurance, Site
*D. Stonecipher, Supervisor, Quality Control, Site
*M. Speer, Supervisor, Onsite Nuclear Licensing
*F. Chiu, Assistant Technical Manager
D. Niebruegge, Supervisor, Station Technical
P. Haralson, Supervisor, Station Technical
J. Reeder, Nuclear Training Manager
D. Shull, Manager, Nuclear Oversight
C. Elliott, Instructor, Nuclear Training
H. Ray, Vice President, Nuclear Engineering Safety & Licensing (NES&L)

* Denotes those personnel in attendance at the exit meeting on December 8, 1989

2. Design Changes and Modifications (37700)/Compliance with ATWS rule 10 CFR 50.62 (TI 2500/20 Rev 1) (25020) (Open)

The inspectors assessed the licensee's administration of the configuration control program including the elements of defining and disseminating design based information, implementing a site system engineering program, and strengthening corporate engineering control and oversight of site activities.

The inspectors focused on a recent system modification package, 1989 ATWS/Diverse Scram System (ATWS/DSS, DCP-6553). The inspectors investigated the effectiveness of the licensee's oversight controls applied to design, procurement, installation, and testing for ATWS equipment, pursuant to Generic Letter (GL) 85-06, "QA Guidance For ATWS Equipment That is Not Safety Related". The inspectors assessed the operational reliability of the licensee's ATWS equipment.

10 CFR Part 50.62 requires each pressurized water reactor (PWR) to have equipment that is diverse from the reactor trip system, to automatically initiate the auxiliary feedwater system and initiate a turbine trip. Additionally, the rule requires PWRs manufactured by Combustion Engineering to have a diverse scram system (ATWS/DSS), which is also independent of the reactor trip system.

The licensee had completed installation in Unit 2 of the design change package (ATWS/DSS, DCP-6553) for the ATWS/DSS portion of this rule, consistent with their commitment completion schedule. Installation in Unit 3 is scheduled during the next refueling outage. This was verified by the inspectors by onsite review of the associated licensee program documentation, which included the initial CE Owners' Group Task 494 Functional Design Specifications, the initial DCP-6553 design engineering work, the pre-operational and installation procedures, and associated Field Interim Design Change Notices (FIDCN) necessary to actually install the system. The inspectors also physically traced the system in Unit 2 from the "sensor output" (four independent pressure transmitters tied into class O-II pressurizer instrument lines) to the "final actuation device" (independent RPS motor generator contactor tripping devices). This included the visual inspection of all electrical cable runs, independent power supplies, and the master control multiplexer unit (ATWAS/DSS Panel L-675). The inspectors also verified adequate operational interface and surveillance accountability by investigating the control room's system interface, specifically the systems monitored by the Critical Function Monitoring System (CFMS) and the associated annunciator window response (ATWS/DSS TROUBLE, 50A-55).

The required pre-operational system functional testing and operational surveillance testing procedures were validated for the inspectors by actual demonstration by the cognizant system engineers and procedural review. However, the inspectors noted that annunciator reflash capability, to warn of possible compound system failures, was not yet installed. The licensee management committed to install this capability by April of 1990.

The inspectors further investigated the licensee's oversight system by reviewing the licensee's internal tracking and verification process associated with this modification. This included a review of all of the internal QA Surveillance reports and Problem Review Reports (PRR's) generated for the ATWS/DSS modification. The inspectors also verified that all of the associated operating procedures and operator training materials were updated to reflect this system modification.

Previous inspections identified a divergence between corporate engineering management and site engineering management and oversight. This situation caused incomplete design reviews for new system modifications and insufficient corporate attention to system installation and adherence to original design commitments. The licensee responded to this problem with a management reorganization, including a restructuring of engineering administration and oversight. The ATWS/DSS modification process focused on by the inspectors reflected the application of both the "old" and "new" administration. For instance, the modification required an excessive

number of field changes before it was actually installed, due to the lack of corporate oversight in the original design development under the old system. However, the inspectors found that the actual implementation of the final DCP, once it came on site, was timely and professional, with adequate oversight. This was accomplished under the revised administrative procedures.

The inspectors also observed an improved working relationship between the licensee's corporate engineering and site engineering staffs. The staff engineers interviewed from both of these groups exhibited a good integrated systems "as built" technical knowledge. This was indicative of a functional comprehensive configuration control and oversight program.

The improvement in this functional area was noteworthy; however, the recent oversight procedures implemented by the licensee's Nuclear Engineering, Safety and Licensing Department have yet to be fully tested by a major new system modification. The success of these new programs should be evidenced by a reduction in the number of field changes required to implement future system modifications, continued timely resolution of Proposed Facility Changes (PFC's) and Problem Review Reports (PRR's), and effectiveness of licensee oversight organization in identifying situations that could challenge plant availability, safety, or compliance.

No violations or deviations were identified during this inspection. The licensee's oversight configuration control system was evaluated as adequate. The licensee's ATWS/DSS system modification appears to be in compliance with 10 CFR Part 50.62 and Generic Letter GL-85-06, however, the item remains open since the installation of the required diverse auxiliary feed and turbine trip systems have not been implemented.

3. Exit Meeting (30703)

The inspectors, including the Senior Resident Inspector, met with the licensee management representatives denoted in paragraph (1) on December 8, 1989. The inspection findings were discussed. The inspectors observed that future system modifications, that are fully accountable under the new NES&L oversight system, should have fewer required field changes. Cooperation between corporate and site engineering should be maintained. The licensee representatives acknowledged the inspectors' findings, including the commitment to install a reflash capability for the "ATWS/DSS Trouble" annunciator by April of 1990.