U. S. NUCLEAR REGULATORY COMMISSION

REGION V

- Report No: 50-312/87-13
- Docket No. 50-312
- License No. DPR-54
- Licensee: Sacramento Municipal Utility District P. O. Box 15830 Sacramento, California 95813

Facility Name: Rancho Seco Unit 1

Accompanying Personnel: D. Baxter, INEL

Inspection at: Herald, California (Rancho Seco Site)

Inspection conducted:

Inspectors:

Senior Inspec Res ident Inspector lean Perez. Resident Inspector avia ereira Pereira, Regional Inspector les Qua Regional Inspector 0 cm K. Ivey, Resident Inspector, Palo

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Summary:

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Approved By:

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Inspection between April 18 and May 29, 1987 (Report 50-312/87-13)

Areas Inspected: This routine inspection by the Resident Inspectors and by Regional Inspectors, involved the areas of operational safety verification, maintenance, surveillance, and followup items. During this inspection, Inspection Procedures 25573, 30702, 30703, 37701, 37703, 39702, 61726, 62702,

Miller, Chief, Reactor Projects Section II

62703, 71707, 71710, 72701, 90713, 92700, 92701, 92702, 92703, 93702, 92712, and 94703 were used.

<u>Results</u>: In the areas inspected, three violations were identified: Failure to use an approved replacement filter element (Severity Level V), failure to inspect the replacement filter work area for cleanliness (Severity Level V), and failure to use an appropriate liquid penetrant test procedure for a spent fuel pool liner inspection (Severity Level IV).

1. Persons Contacted

- a. Licensee Personnel
 - C. Andognini, Chief Executive Officer, Nuclear
 - *W. Bibb, Deputy Restart Implementation Manager
 - G. Coward, Assistant General Manager, Technical and Administrative Services
 - *B. Day, Nuclear Plant Manager
 - J. McColligan, Director, Plant Support
 - J. Vinquist, Acting Licensing Manager
 - D. Army, Nuclear Maintenance Manager
 - *B. Croley, Nuclear Plant Manager
 - G. Cranston, Nuclear Engineering Manager
 - *J. Grimes, Planning Supervisor
 - W. Kemper, Nuclear Operations Manager
 - J. Shetler, Director, Administrative Services
 - T. Tucker, Nuclear Operations Superintendent
 - L. Fossom, Deputy Implementation Manager
 - *R. Colombo, Regulatory Compliance Superintendent
 - *J. Field, Nuclear Technical Support Superintendent
 - S. Crunk, Incident Analysis Group Supervisor
 - F. Kellie, Radiation Protection Superintendent
 - *1S. Knight, Quality Assurance Manager
 - C. Stephenson, Senior Regulatory Compliance Engineer
 - B. Daniels, Supervisor, Electrical Engineering
 - R. Wichert, Instrumentation and Control Maintenance Superintendent
 - J. Irwin, Supervisor, Instrumentation and Control Maintenance
 - C. Linkhart, Electrical Maintenance Superintendent
 - R. Cherba, Quality Engineering Supervisor
 - T. Shewski, Quality Engineer
 - J. Robertson, Licensing Engineer
 - *F. Hauck, Licensing Engineer
 - *R. Lawrence,
 - *J. Delezenski, Nuclear Licensing Analyst
 - *W. Koepke, Quality Control Manager

Other licensee employees contacted included technicians, operators, mechanics, security and office personnel.

*Attended the Exit Meeting on May 29, 1987. ¹Management Analysis Company (MAC) Personnel

2. Operational Safety Verification

The inspectors reviewed control room operations which included access control, staffing, observation of decay heat removal system alignment, and review of control room logs. Discussions with the shift supervisors and operators indicated understanding by these personnel of the reasons for annunciator indications, abnormal plant conditions and maintenance work in progress. The inspectors also verified, by observation of valve and switch position indications, that emergency systems were properly aligned for the cold shutdown condition of the facility. This included verification of incore thermocouple operability during a dual train decay heat system outage.

Tours of the auxiliary, reactor, and turbine buildings, including exterior areas, were made to assess equipment conditions and plant conditions. Also the tours were made to assess the effectiveness of radiological controls and adherence to regulatory requirements. The inspectors also observed plant housekeeping and cleanliness, looked for potential fire and safety hazards, and observed security and safeguards practices.

The following activities were followed up by the inspector:

- Loss of S1A inverter causing the loss of Safety Features Activation System (SFAS) channel and Reactor Protection System (RPS) trip. No abnormal system response was observed.
- b. Unexplained wire cutting in the 480 volt west switchgear room on April 27, 1987, affecting SFAS valve SFV-25003, "A" train Borated Water Storage Tank (BWST) suction to High Pressure Injection/Low Pressure Injection (HPI/LPI) header. This occurrence is still under review and will be further documented in subsequent inspection reports.
- c. Dual train decay heat system outage (continuous through inspection period).

In discussions with licensee management, the inspector expressed concern during the common decay heat system train outage about the use of the plant 4 KV bus for load testing. The inspector was concerned that the testing might jeopardize the availability of both redundant electrical trains during the common decay heat system outage. Licensee representatives explained that adequate isolation and protection was established during the conduct of the testing to preclude impact on the reliability of electrical power during the outage. The inspector concluded this explanation was satisfactory.

- d. Geological review by NRR consultant of foothills fault region on May 7, 1987. No conclusions were reached by the inspector during this review.
- e. Health Physics Drill on May 7, 1987. During this drill, the inspector observed as many as twenty-six people in the control room. These people were involved with Emergency Feedwater Isolation and Control (EFIC) installation, operator requalification testing, and the drill. The inspector brought to the plant manager's attention that the amount of people present in the control room needed to be better controlled, and that a crowded control could make the operators duties of monitoring the plant very difficult. The plant manager agreed with these observations and stated that appropriate

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steps will be taken to prevent this type of overcrowding from occurring in the future.

3. Monthly Maintenance Observation

Maintenance activities for the systems and components listed below were observed and reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides, industry codes or standards, and the Technical Specifications (TSs).

The following items were considered during this review: The limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing or calibration was performed prior to returning components or systems to service; activities were accomplished by qualified personnel; radiological controls were implemented; and fire prevention controls were implemented.

a. Transamerica Delaval Diesel (TDI) Load Testing

On May 6, 1987, the inspector observed a brace on the "A" and "B" TDI diesel generators. Licensee personnel explained that the brace had been temporarily added during acceptance testing to reduce unacceptable turbocharger vibration during TDI operation. However, the analysis of the effect of the brace on the turbocharger during operation could not be retrieved by the licensee or the vendor during this inspection.

The inspector was concerned that acceptance testing was being conducted without the diesel generators being in their final configuration prior to turnover to operations. Furthermore, the inspector questioned the licensee as to the reportability of the turbocharger vibration problem under 10 CFR 21. The licensee acknowledged the inspector's concerns and indicated that both issues would be addressed in the evaluation of the permanent brace to be installed prior to turnover to operations.

b. QCI-12 Prioritization Review

As part of the licensee's Performance Improvement Program, QCI-12, entitled Plant Performance and Management Improvement Program, was established to investigate, validate, approve, implement and close recommendations for performance improvement. As part of the validation phase, the Recommendation, Review and Resolution Board (RRRB) forwards validated recommendations for specific systems to the Systems Engineer to determine its priority using the following criteria:

Priority 1 - Restart

Actions to be initiated and completed prior to restart on completion of the Restart Test Program to,

- (1) assure plant remains in post-trip window,
- (2) assure compliance with TSs, and
- (3) minimize the need for operator action outside the control room within the first 10 minutes of an event.

Priority 2 - Near Term

Actions to be promptly initiated but not necessarily completed prior to restart to,

- (1) enhance ability to remain in post-trip window,
- (2) reduce reactor trips,
- (3) reduce challenges to safety systems,
- (4) produce near-term programmatic benefits.

Priority 3 - Long Term

Actions not to be initiated prior to restart to,

- (1) improve reliability.
- (2) improve availability,
- (3) major programmatic enhancements.

The Performance Analysis Group (PAG) reviews, and approves the priority for scheduled implementation of each item.

The Implementation Group assigns a Work Request priority designator of "006" for Work Requests to be completed prior to restart and "000" for non-restart Work Requests. All Priority 1 items resulting from the QCI-12 process are designated as 006 Work Requests. Work requests written subsequent to the QCI-12 process are evaluated by Implementation to establish the restart priority.

The inspector reviewed the status of the current backlog of corrective maintenance Work Requests (CMWRs) to determine the prioritization criteria which the licensee established for working off the backlog prior to restart. The inspector found that a total of approximately 4000 work requests were currently open including not only individual deficiencies requiring corrective maintenance, but also associated support activities, preventative maintenance, modifications and general facility work activities. Of the 4000 Work Requests, the licensee estimated that 2000 Work Requests were corrective maintenance activities, with 1150 of them prioritized for completion prior to restart. The licensee currently reviews the remaining 850 non-priority Work Requests for performance within the clearance boundary established for scheduled priority work and includes the feasible non-priority Work Requests within the work schedule.

The inspector determined that the licensee was unable to specifically identify which non-priority Work Requests would not be completed prior to restart. Furthermore, the criteria for selection of non-priority work requests for work off prior to restart was not proceduralized with either the licensee's QCI-12 process or AP.3. As a result, the inspector was unable to evaluate the appropriateness of the non-restart Work Request backlog.

The inspector brought these weaknesses to the attention of licensee management who acknowledged the need for additional clarification and identification of the CMWRs backlog.

This issue will be addressed in future inspections of the licensee's maintenance activities prior to restart.

c. Concentrated Boric Acid Storage Tank (CBAST)

On April 22, 1987, the inspectors were informed of the draining of 19,000 gallons of liquid from the CBAST. The leakage appears to have occurred from the drain of the CBAST filter which had been connected by temporary plastic tubing to the floor drain near the filter. The floor drain drained into the radwaste sump and the water from the sump was then pumped to the spent regenerative tank.

The inspector reviewed the auxiliary operators' logs for the period of April 13, 1987, to April 21, 1987, for the CBAST level. The inspector identified missing information on the CBAST level for one shift on April 13, 1987, and one shift of April 21, 1987, and could not locate the entire log for the day of April 17, 1987. It was identified that the CBAST level on April 16, 1987 was 11.48 ft on the first entry and 11.44 ft on the last of the three entries. No information was available for April 17, 1987, and on the first entry for April 18, 1987, the CBAST level had dropped to 11.00 ft. The level continued to drop until April 22, 1987, when Operations had a drain valve, BWS-056, closed and stopped the apparent leak pathway. For a period of approximately five days the operations staff was apparently unaware of the draining of the CBAST, even though the staff had taken, on each shift, recordings of the CBAST level. It was evident that the CBAST level recordings were not being compared to previous readings, expected values, and were not trended.

The inspector's investigation into the draining of water from the CBAST tank did not identify whether or not there was a continuous draining of water from the CBAST tank through the CBAST filter drain into the radwaste system. However, the licensee did identify the CBAST draining problem from the trending of the liquid waste sump pump operating times. The licensee has begun an Incident Analysis Group (IAG) investigation of the incident. The licensee committed to make the inspector aware of their findings and the inspector will review the licensee's corrective actions during the followup of the violations discussed below.

The licensee identified that the only work performed on the CBAST during this period was a CBAST filter replacement and the installation of a temporary cleanup demineralizer. In reviewing the Work Request for these two items, two apparent violations of work control procedures were identified: Work Request #125548, "CBAST Filter F-711," directed work to change out the filter element from the CBAST filter. The filter is identified as a Quality Assurance (QA) Class 1 piece of equipment and the Work Request form was marked QA Class 1.

10 CFR 50, Appendix B, Criterion VIII, "Identification and Control of Materials, Parts, and Components," states, in part: "Measures shall be established for the identification and control of materials, parts, and components....These identification and control measures shall be designed to prevent the use of incorrect or defective material, parts, and components."

In addition, QA Procedure 6, Revision 3, "QC Inspection," states, in part: "Class 1, EQ and commercial grade items shall be released from the warehouse only if they have 'SMUD ACCEPT' tag unless otherwise exempted per paragraph 5.6." Paragraph 5.6 states that the Quality Manager shall issue a list of items which are exempt from the "SMUD ACCEPT" tag policy.

AP.605, Revision 12, "General Warehousing," states, in part 3.5.2.1: "Any item released from the warehouse for Class 1 and EQ use shall have a SMUD Accept Tag (shown in QAP-16) installed by QC. <u>Note:</u> "Exempt Items, as determined by QA, are excluded from this requirement."

On April 9, 1987, under Work Request #125548, the replacement filter element was issued out of the warehouse without a SMUD ACCEPT tag. After the filter element had been issued, it appears licensee discussions occurred on whether it was acceptable to install the filter element, without the SMUD ACCEPT tag, into the CBAST filter housing. The work request continuation form for Work Request #125548 documents a telecon from a maintenance engineer authorizing to "...use a filter element not Green Tagged for CBAST filter per telecon 4/11/87."

Administrative procedure, AP.605, "General Warehousing," Revision 3, Section 3.5.5, "Items Without SMUD ACCEPT Tag and Not Inspected Using RIDR (Receipt Inspection Data Report)," states, in part: "Procurement Engineer shall prepare a RIDR....The Item shall then be receipt inspected....If the item is acceptable, QC shall put SMUD ACCEPT Tag on the item....If the item is unacceptable, QC shall place a Hold Tag (in accordance with QAP-16) on all items inspected on the RIDR. Warehouse is responsible to keep the item in quarantine until the item is removed from Rancho Seco or until means are established to segregate the items from those designated for Class 1 or EQ use...."

QA procedure, QAP 17, "Nonconforming Material Control," Revision 5, Section 4.4, "Conditional Release," states, in part: "An item identified as nonconforming by NCR may be conditionally released for installation and testing, provided it is stipulated that the item may not be put in service prior to closure of the NCR." Contrary to the above, on April 9, 1987, under Work Request #125548, replacement filter element (stock code number #005617) was issued without a SMUD ACCEPT tag and on April 11, 1987, the replacement filter element, stock code #005617 for the CBAST filter F-711 was installed without the appropriate SMUD ACCEPT tag, a RIDR or an NCR. This is an apparent violation (87-13-01).

The inspector also observed Technical Specifications Section 6.8, "Procedures," requires, in part: "Written procedures shal be established, implemented and maintained covering the activities referenced below:

"a. The applicable procedures recommended in Appendix "A' of Regulatory Guide 1.33, November 1972."

Regulatory Guide 1.33, November 1972 requires, in part: "(. Procedures for Performing Maintenance. 1. Maintenance which can affect the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures."

In addition, Plant Maintenance procedure M.114, "Maintenance Cleanliness Control," Section 3.0, "Limitations and Precautions," require, in part that: "3.1 This procedure shall be used when opening any portion of the following systems...BWS (Borated Water System)....Use of this procedure is not required for activities such as replacing filter elements...provided that the component and area cleanliness and the replacement part/parts cleanliness as detailed by the Cognizant Engineer is verified by an authorized Inspector's signature on the Work Request."

Contrary to the above, Work Request #125548 was written for replacement of a filter element in the BWS system and the additional provisions of procedure M.114 were not implemented which required inspections for area cleanliness and an authorized inspector's signature on the Work Request. This is an apparent violation (87-13-02).

d. Control of Maintenance Tools, Wooden Support

On April 13, 1987, the inspector identified a wooden support bracing the nitrogen supply line to the Condensate Storage Tank. No markings or tags existed on the support and no apparent work was observed in progress.

The inspector brought the support to the attention of various licensee managers and requested an explanation of why the support was installed and what administrative controls were associated with it. No licensee representatives were able to clearly explain the origin of the support. The support was later removed.

After further inspection, the inspector located a Work Request #119506 which replaced a nitrogen supply pressure regulator on the nitrogen line. This work was performed on March 5, 1987. Licensee personnel stated that on this job, the maintenance crew placed the support under the nitrogen line during the work activity and did not remove the support when the work was completed. The job was inspected by the licensee on March 6, 1987, and that inspection also failed to identify the support for removal. The inspector discussed the principle that if the work required the installation of temporary supports, the work control package should have a method to identify the items for removal after the job is completed. Licensee representatives acknowledged these comments at the Exit Interview.

The inspector also identified some drawing discrepancies in the isometric drawing 35890-2-HE for the nitrogen supply line. These discrepancies made it difficult to correctly delineate the Class 1 and Class 2 portions of the piping line. However, the Master Equipment List (MEL) did correctly identify the quality classification. The licensee committed to clarify the plant drawing.

e. Nondestructive Testing Records Review (Spent Fuel Pool)

The inspector reviewed work associated with the licensee's examination of welds of the spent fuel pool liner. This work was part of the licensee's effort to locate and identify areas of leakage in the spent fuel pool liner.

Work Request #131557 was written for Mechanical Maintenance to "support QC for the PT (liquid penetrant test) of the spent fuel pool liner welds above the water level." The Work Request was written for the equipment identification of SFC-3, meaning spent fuel cooling system, Quality Class 3. However, the inspector identified that the liner was actually classified as QA Class 1 as denoted on SMUD Drawing C-613. The liner was not identified on the licensee's MEL which is normally referred to by the licensee for equipment identification and classification.

A liquid penetrant test (LPT) was performed by the licensee on March 26, 1987, on accessible welds of the spent fuel pool liner. Work Request #131557 was written only for craft support of the LPT and not to control the test.

The inspector noted that the licensee procedure, NDEI #8, "Liquid Penetrant Examination Requirements," established the method and criteria for liquid penetrant examinations. However, no work control document was written that referenced the NDEI #8 procedure or that referenced the qualitative or quantitative criteria to be used for the LPT process.

10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," states, in part: "Measures shall be established to assure that special processes, including ... nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements."

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QA Policy Section IX, Revision O, "Control of Special Process," states in part: "Appropriate procedural methods shall be prescribed and implemented to assure that special processes, equipment and personnel are controlled and accomplished by qualified personnel and procedures."

Contrary to the above, the liquid penetrant test, a special process, performed on the Spent Fuel Pool Liner was not controlled by a work document or procedure which included the appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished or other special requirements. This is an apparent violation (87-13-03).

The inspector also reviewed QA Surveillance #859 which stated in the summary section that the PT examination of the liner was performed per NDEI #8, "for information only." The inspector observed that the weld would have been rejected if the NDEI #8 acceptance criteria had been applied. However, the QA surveillance concluded that the process was performed "in an acceptable manner." The inspector brought to the attention of the licensee the need to be more thorough in their surveillances.

4. Monthly Surveillance Observation

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Technical Specification (TS) required surveillance tests were observed and reviewed to ascertain that they were conducted in accordance with these requirements.

The following items were considered during this review: Testing was in accordance with adequate procedures; test instrumentation was calibrated; limiting conditions for operation were met; removal and restoration of the affected components were accomplished; test results confirmed with TS and procedure requirements and were reviewed by personnel other than the individual directing the test; the reactor operator, technician or engineer performing the test recorded the data and the data were in agreement with observations made by the inspector, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

Portions of the following tests were observed by the inspectors and D. Baxter, NRC consultant:

STP-1057 B - Component Cooling Water Performance Test
STP-1009 A - New Diesel Generator GEA2 Engine Integrated System
Phase 2 Testing

The following test outlines were reviewed by D. Baxter, NRC consultant, and the inspectors:

STP. 1064 A, B, C	Waste Water Disposal	System Operational Test
RT-RCS-002	Refueling Outage RCP	Failure (Undercurrent) Relay
	Test	
STP.983	Plant Phone Appendix	R Upgrade

STP. 433	Post Accident Sampling System RCS Sample Functional Test
SP-485A/SP-485B	Refueling Interval Control Room/Technical Support Center Essential Filtering System Train "A"/Train "B" Surveillance
STP.1033B	DHS Pump P-261B Performance
STP. 1033A	DHS Pump P-261A Performance
STP.1065 Rev 1	Flow Path Verification of the Waste Water System Piping Modifications
STP.984	UHF Radio Modification
STP.1020	Main Feed Pump Protection Test
STP.666	EFIC Cold Functional Test
STP. 778	Integrated Control System Functional Test

Special Test Procedures

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The following STPs were reviewed by the inspectors and D. Baxter, NRC consultant:

STP.1074A Rev 1 STP.977	Demonstration of Alternate Decay Heat Removal Methods 4160 VAC Bus 4A Isolation Control Switch Test
STP.978	4160 VAC Bus 4A2 Isolation Control Switch Test
STP. 792	"A" HPI Pump Lube Oil Modification Test
STP. 432	Post Accident Sampling System Gaseous Functional Test
STP. 787A	SFAS Analog Channel "A" Module Removal Interlock Verification
STP.1071	Post Tie-In Functional Test of the Diesel Driven Air Compressor with a Gradual Loss of IAS
STP.979	480 VAC Bus 3A2 Isolation Control Switch Test
STP.980	4160 VAC Bus 4A2 Load Shedding Isolation Control Switch Test
STP.1075	Diesel Driven Air Compressor Fire Suppression Sys. Functional Test
STP.981	4160 VAC Bus 4A Load Shedding Isolation Control Switch Test
STP.1049	HV-26007 Differential Pressure Stroke Test
STP.1050	HV-26008 Differential Pressure Stroke Test
STP.1027	Auxiliary Feedwater System SRS to AFW Suction Flow Test
STP.970	Diesel Generator (G-886A) Synchronization Check Relay Functional Test
STP.1032	Nuclear Service Cooling Water (NSCW) Component Flow Verification
STP. 787B	SFAS Analog Channel "B" Module Removal Interlock Verification
STP. 787C	SFAS Analog Channel "C" Module Removal Interlock Verification
STP. 1040	Turbine Bypass Valve Cold Functional Test
STP.790	RPS Module Removal Interlock Verification

No violations or deviations from NRC requirements were identified.

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5. Review of Problem Statement Prioritization (Open)

Action Plan Prioritization Review

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The inspector reviewed the licensee's "Action Plan for Performance Improvement" and the System Status Report (SSR) for the Nuclear Service Cooling Water System and sampled approximately thirty problem statements contained within those documents for acceptability as a post-restart item. The inspector's criteria for acceptability as a post-restart item was whether all regulatory requirements related to the item would be met even if the item were not performed prior to restart.

The Action Plan used three priorities for classification of items. The priorities were implemented as follows: Priority 1 is a restart item, Priority 2 is a near-term item, and Priority 3 is a long-term item. The licensee has committed in the Action plan to complete all Priority 1 items prior to restart. The inspector reviewed various Priority 2 and 3 items identified in the licensee's Action Plan and SSR.

- a. The licensee had difficulty in providing a package that encompassed the item. For example:
 - (1) Some items had no QCI-12 reference number, (4B.9.2.3, 4B.12.2.1, 4B.12.3.1, 4C.1.f.1.d)
 - (2) Some of the QCI-12 referenced items provided by the licensee for the Action Plan items did not correlate. (4B.12.3.3 was not applicable to QCI-12 #20.04.52, 4C.2.a.1.c.3 was not applicable to 15.0426.A.)
 - (3) Some of the Action Plan items appeared to involve many QCI-12 items as references. (4.8.2.3.1 was referenced to QCI-12 #(S) 20.0112, 20.0127, 20.0351, 20.0393, 20.0411, 21.0050.C, 21.0082, 21.0089, 21.0182, 26.0688, and 26.0689.)

These problems made it difficult to audit the priority classifications, and to determine what actions will eventually be needed to close the item.

b. The inspector reviewed Action Plan Item #4c.12.2.1, titled: "Engineering is to review design philosophy for suction valve interlocks and alarms on critical pumps and identify appropriate modifications, QCI-12 #15.0070," a Priority 1 item. The inspector concluded this item was properly prioritized.

This item, however, contained an apparent typographical error in that the PAG minutes of 86-047 had assigned a priority of 2 but the QCI Tracking System improperly recorded the priority for this item as 1. This discrepancy had already been identified by the licensee and corrected on the data base.

The inspector's concern with the typographical error is that within the licensee's tracking system, identified problem statements are grouped together based on problem subject. In this review, Item #15.0070 (discussed above), which is called a "Valid Item." is the lead item of the group which also includes the following items: #'s 15.0071, 15.0072 and 16.0002.B which are called "Valid Covered Item." The tracking system would then track the group of items (15.0070, 15.0071, 15.0072 and 16.0002.B) by the Valid Item, #15.0070, i.e., these items were "covered" by Item 15.0070.

All of these items dealt with the loss of the makeup pump during the December 16, 1985 event when water supply was secured, and with assuring uninterrupted water supply to the makeup pump.

The inspector noted that, in this case, when the lead item of the group was changed from Priority 1 to 2, when the typographic error was identified and corrected, all other items associated with the lead item were similarly changed (in effect). The lead item, which was now a Priority 2 became a post-restart item along with its associated higher priority items. When these grouped items are recalled from the tracking system, the lead item which is a Priority 2 would not be required to be completed prior to restart. The associated items involved here were all classified as Priority 1.

The licensee had identified this anomaly concurrently with the inspector and has discussed the need for a program to review and correct errors which may exist in the QCI-12 Tracking System. The licensee stated at the May 29, 1987 exit meeting that this program, called the True Up Program, was in the process of being implemented. The inspector will continue to monitor the program.

c. The inspector reviewed Action Plan item 4.B.10.2.2, "Implement Vendor Data Program, enhancements identified to achieve the program objectives (Priority 2) QCI-12 #21.0267," and referenced QCI-12 item (21.0267). The inspector first found that 21.0267 was a Priority 3 item even though the Action Plan item was listed as Priority 2. The licensee was unable to identify the cause for this inequality.

The licensee's input for QCI-12 #21.0267 consisted of various licensee personnel interviews, during the interview process of the QCI-12 programs. A review of the interviews indicated an insufficient vendor material control program which could possibly provide inappropriate information for maintenance and surveillance procedures and therefore potentially affect the operability of various plant components and systems.

The licensee was requested to provide their justification for determining that this item does not have to be completed prior to restart.

d. In discussions with the licensee, the inspector identified that there remain approximately 850 items that have been identified but have not gone through the PAG review process. Of these there were approximately 100 proposed Priority 1 items. The inspector determined that the licensee had not yet developed a process that would enable a valid Priority 1 item to be included in the written

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system status reports which are used for, among other uses, the development of the system functional tests.

Nuclear Service Cooling Water System (NSCW) Status Report Review

The inspector noted that the NSCW system status report identified eight problems, of which one was to be corrected prior to restart, one was determined invalid, one was considered a Priority 2 item and the remaining five were Priority 3. The item that was determined to be Priority 1 entailed fifteen Work Requests that were to be completed prior to startup. The Priority 2 item dealt with three Work Requests identified on the open Work Request list that were considered Priority 2, and one Priority 3 item dealt with fourteen Priority 3 Work Requests. The priority classification of Work Requests is reviewed in Section 3 of this report. The remaining Priority 3 items appeared to be appropriately classified.

The inspector was concerned that NCR 5-3709 (dispositioned in 1984) had not been closed and had been classified as Priority 3 (long-term resolution). The inspector questioned a QA representative who agreed to determine why the NCR had not been closed. This will be inspected in a future inspection.

6. NRC Open Items

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Deviations

86-07-10 (Closed) "Control Cable Shielding Not Protected At Underground End"

The remaining issue for closeout of this deviation was a licensee reinspection walkdown and rework, as necessary, of suspect cables identified by the Bechtel Power Corporation. The licensee's Quality Control (QC) and Electrical Maintenance personnel completed walkdowns of the 188 cables identified by Bechtel and discovered nine instances where ground shield terminations were uninsulated. The licensee initiated work requests to rework the terminations and expected completion within a month. Based on the licensee's walkdowns and initiation of corrective actions, this item is closed. 86-07-10

Enforcement Items

83-34-03 (Closed) "Failure to Follow Abnormal Tag Procedure"

This violation was for the improper closeout of two abnormal tags. In response, the licensee reinstructed maintenance personnel on the requirements of AP.26 "Abnormal Tag Procedure" and verified the status of all abnormal tags existing at that time. Subsequently, the licensee revised AP.26 to include monthly reviews by responsible departments to ensure the up-to-date status of all abnormal tags. The inspector reviewed AP.26 and, on a sample basis, abnormal tag reports, monthly review reports, and abnormal tags in the field. The inspector concluded that this item was resolved and closed. However, the inspector noted that there were 133 abnormal tags issued for over one year that were still in use and that some had been issued as far back as 1982. At the exit meeting, the inspector raised this concern to the licensee and questioned the temporary nature of the tags. The licensee responded that they have improved the abnormal tag procedure to include supervisory reviews of the tags and are currently in the process of reviewing the outstanding tags with a goal of significantly reducing the number of tags by restart.

86-30-05 (Closed) "Failure to Maintain Radiograph Records"

The licensee used a radiograph taken for "Information Only" as a basis for determining Decay Heat Removal (DHR) pipe thickness and did not retain these records as required by their OA program.

As a result of this occurrence, the licensee revised Nuclear Engineering Procedure, NEP 4106, section 5.2, to add the requirement that all input data for engineering calculations be from approved district procedures and that documents stamped "Information Only" shall not be used in developing calculations. This procedural change should prevent a recurrence of this problem as the approved procedures would ensure that required data be retained. This item is closed.

86-30-06 (Closed) "Improper Method of Determining Pipe Thickness"

The licensee agreed that the method of radiography that they used to determine the DHR pipe thickness was not proper and stated in a letter to the NRC dated November 26, 1986 that in the future they would use only approved and qualified procedures employing ASME accepted techniques for the determination of pipe wall thickness. The licensee also reviewed 200 of 3659 NCRs written during the past 5 years to determine if a radiograph had been used to determine pipe adequacy. No additional examples were found. This item is closed.

Followup Items

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85-04-02 (Open) "Licensee Review and Verification of Past Commitments and Design Implementation"

This item was previously reviewed in IE report number 50-312/86-38. The remaining open issue was the implementation of a procedure to identify and assure completion of all prior commitments made by the licensee.

The licensee was in the process of creating a Commitment Management Program which included a procedure to followup on past commitments. Completion of the procedure was scheduled for July 1987. This item will remain open pending NRC review of the completed procedure.

85-36-01 (Closed) "Fire Protection Administrative Procedures"

The licensee, in August of 1985 for the 10 CFR 50, Appendix R inspection, had available copies of revised fire protection program administrative procedures which had not completed the review process. The inspector noted that these procedures had not been approved on January 16, 1986.

The inspector reviewed a sampling of the revised fire protection administrative procedures consisting of AP.29, AP.63, AP.18, AP.34A and AP.60. The procedure revisions were all effective in the May - June timeframe of 1986. The inspector, while reviewing these procedures, noted no deviations from the guidelines given in the Standard Review Plan (SRP) Section 9.5.1. This item is closed.

86-13-02 (Open) "Lack of Proper Corrective Actions When Identified Valves Not on P&IDs"

One of the corrective actions the licensee performed due to the October 2, 1985, cooldown event was to walkdown sixteen important to safety and non-safety-related systems and identify any configuration discrepancies; for instance, valves in the as-built systems but not on the Piping and Installation Diagrams (P&IDs) for the systems. Subsequently, the licensee identified discrepancies which were not found during the walkdowns. This item was initiated to follow the licensee's actions in response to the identified discrepancies and remained open pending the licensee's review of the new discrepancies; a more generic review of the actions taken subsequent to the sixteen system walkdowns, and verification that the findings have been incorporated into the configuration control system.

In response to this item, the licensee initiated a program to walkdown selected important secondary systems for valve inconsistencies. This program was defined in procedure AP.73, "System, Print, Valve Lineup Verification Program," and included thirteen of the sixteen systems identified in the October 2, 1985, "Action Plan." Discrepancies identified under this program were documented by nonconformance reports (NCRs) to incorporate the findings into the configuration control system. This program included the depiction of root valves and instrument isolation valves on the P&IDs, which previously were not included. The licensee utilized the system walkdown effort to add these valves to the system lineups. At the time of this inspection the licensee had completed the walkdowns but had not incorporated all of the findings into the P&IDs and procedures.

The remaining three systems identified in the "Action Plan," but not covered by the AP.73 program, were included in a separate system verification program to be completed by the licensee. This program is defined in procedure AP.93, "System Status and Investigation Reports," which includes system walkdowns to ensure conformance to design drawings.

From discussions with licensee personnel, review of controlling procedures and associated documentation, and review of the licensee progress to date, the inspector concluded the following:

- The licensee reviewed the discrepancies involved with this item and completed corrective actions; including revisions to the P&IDs;
- The licensee has established programs to ensure that any discrepancies, which were not identified during the original sixteen system walkdowns, are identified and incorporated into the configuration control system; and

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This item will remain open pending verification that the findings from the walkdowns have been incorporated into the P&IDs and applicable procedures. The licensee has planned to complete the AP.73 program prior to restart.

Generic Letters

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85-06 (Closed) "Quality Assurance Guidance for ATWS Equipment That is not Safety-Related"

On June 1, 1984, the Commission approved publication of a Final Rule, 10 CFR 50.62, regarding the reduction of risk from anticipated transients without scram (ATWS) events for light-water cooled nuclear power plants. Section 50.62(d) required that each licensee develop and submit a proposed schedule for meeting the requirements of the rule with 180 days after issuance of QA guidance. Scheduled implementation was to be no later that the second refueling outage after July 26, 1984. On February 24, 1987, the NRC extended the deadline for implementation to no later than the third refueling outage after July 26, 1984. This Generic Letter (GL) was issued April 16, 1985 to provide the QA guidance for non-safety-related equipment encompassed by the rule.

The licensee provided their initial response on September 30, 1985, and stated that the modifications could be completed by the cycle 9 outage which is the third refueling outage after July 26, 1984. This schedule was consistent with the new NRC implementation date. The licensee's design for the ATWS modifications was to be based on the Babcock and Wilcox (B&W) Owners Group ATWS Standing Committee generic design basis which was undergoing NRC review for acceptance. The licensee committed to submit the plant specific design description within six months after completion of the NRC review.

The inspector verified that the licensee's review and response to this GL was adequate and timely. Therefore, this item is closed.

Information Notices

IN-85-23 (Closed) "Inadequate Post Modification and Post Maintenance Testing

The Information Notice addresses inadequate component testing after modification or maintenance. As a part of the restart effort, the licensee has established the System Review and Test Program. This program includes a multi-discipline, multi-level review of testing by individuals experienced in different aspects of testing. A major objective of this program is to develop and implement a test program to adequately demonstrate system and component functions important to the safe operation of the plant. This program appears to address the concerns identified by the Information Notice. This item is closed.

IN-85-91 (Closed) "EDG Load Sequencers"

The licensee received this Notice and conducted an analysis to determine if they were susceptible to the same type concern described in the

Notice, i.e., that a single failure could result in ESF loads being applied as a single block to the EDG's vice being sequenced onto the Diesel Bus as designed. This event could cause loss of both EDGs. The licensee determined that under some circumstance, this event is possible at their facility. Upon determining that a design problem existed the licensee issued LER 87-08 on February 13, 1987. This LER identifies the problems identified and the solutions proposed by the licensee. Since the licensee has completed evaluation of the Notice and corrective actions are to be tracked by the LER, this item is closed.

IN-86-25 (Closed) "Fastener Traceability"

The Information Notice and Supplement 1 to the Notice describe traceability problems with bolting materials which have been discovered at other nuclear power plants. Supplement 1 to the Notice specifically identifies a problem with SAE J429 GR 8 and 8.2 bolting. The licensee did not discover, during their records search, that they had ever stocked these materials. The original Notice discusses the need to conduct receipt inspections and to maintain QA traceability records. The licensee program does this as part of their QA program. This item is closed.

Temporary Instructions

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TI 2500/19 (Closed) "Inspection for Unresolved Safety Issue A-26, Low-Temperature Over Pressure Transient"

The purpose of this inspection was to verify that the licensee has an effective mitigation system for the low-temperature overpressure transient conditions in accordance with their commitments concerning Unresolved Safety Issue (USI) A-26.

The background of USI A-26 is that a technical issue was identified concerning the safety margin-to-failure for pressurized water reactors (PWR) should they be subject to severe pressure transients while at a relatively low temperature. The majority of the transients that occurred were during startup and shutdown operations when the reactor coolant system (RCS) was in a water-solid condition (i.e., no steam bubble present in the pressurizer to act as a surge volume). During such conditions, the RCS is susceptible to a rapid increase in system pressure through thermal expansion of the RCS water or through injection of water into the systems without adequate relief capacity or discharge flow path to control the pressure increase.

Plants receiving an operating license before March 14, 1978, committed to design reviews, procedure changes, equipment modifications, operator training, and surveillance using a combination of operator personnel and automatic equipment.

The Rancho Seco's Low-Temperature Overpressure (LTOP) system design consists of both an active and passive subsystem. The active subsystem utilizes the ElectroMatic Operated Valve (EMOV) which provided overpressure protection during normal plant operation. The EMOV actuation circuitry has been modified to provide a second setpoint (500 psig) that is used during low-temperature operations. The low setpoint is manually enabled at 350°F by positioning a key-operated switch in the Reactor Control Room. An alarm will sound in the Reactor Control Room if the reactor coolant pressure falls below 450 psig and the key-operated switch is not selected for low-temperature operation. After selection of low-temperature operation, additional alarms will occur if either Seal Injection Flow is greater than 42 gpm or makeup flow is greater that 135 gpm; if HPI valves are open; and if the EMOV block valve HV-21505 is closed.

The passive subsystem is based on the plant design and operating philosophy that precludes the plant from being in a water solid condition (except for system hydro tests). The Rancho Seco RCS always operates with a steam or gas space in the pressurizer; the steam bubble is replaced with nitrogen during plant cooldown when system oressure is reduced. The requirements for a maximum pressurizer level provides for a sufficient vapor space in the pressurizer to retard the rate of increase of RCS pressure, as compared to a water solid system for all mass and heat input transients. In this manner, the operator will have time to recognize that a pressure transient is in progress and take action to mitigate the incident. For the above reasons the pressurizer water level will be maintained at or below 220 inches at system pressures above 100 psig.

In conjunction with the enablement of LTOP at 350°F and the subsequent restriction on pressurizer level, analysis has shown that the HPI system is not needed when RCS temperature falls below 350°F. The requirement for a maximum makeup tank level limits the mass input available from the tank should the makeup valve fail open.

When the LTOP system is required to be in service, only one of the two HPI pumps or the makeup pump will be allowed to operate. Rancho Seco normally operates with the makeup pump supplying makeup and seal injection by procedure and by TS. However, in the unlikely event degradation of the makeup pump should occur while using the the LTOP system, it would be necessary to start one of the HPI pumps before stopping the makeup pump. However, because the operator is aware of the LTOP conditions, it is expected that this brief transition stage would not significantly increase the level of the pressurizer and the probability of an overpressurization incident.

Separate power supplies are provided for the EMOV circuitry and LTOP drains which alert the operator of an overpressurization event so that a single power source failure will not disable the EMOV and the LTOP alarms. These alarms are high pressurizer level, high-high pressurizer level, and high makeup tank water level. The alarms assure that the operator is alerted so he can take action to terminate an event even if the EMOV is disabled.

The inspector reviewed the design of Ranche Seco's LTOP system and verified that the system is designed to protect the vessel given a single failure in addition to a failure that initiated the pressure transient. The LTOP system has separate power supplies which prevents a single power source failure from disabling the EMOV and the LTOP alarms. The LTOP

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system is designed to prevent exceeding 10 CFR 50, Appendix G limits for the reactor pressure vessel during plant cooldown or startup, and is not vulnerable to an event that causes a pressure transient and a failure of equipment needed to terminate the transient. The inspector reviewed the licensee's evaluation discussion and correspondence between the licensee and the NRC which finally supported the conclusion that 500 psig was an acceptable setpoint. This conclusion was documented in the NRC letter to the licensee dated February 25, 1985.

The inspector reviewed the Administrative Controls and Procedures for the LTOP system and determined the following items:

- a. The licensee's procedures allow the plant to be operated only with a steam or nitrogen blanket in the pressurizer at all times except for hydrostatic tests. This effectively minimizes the time in a water solid condition. This is stated in the Operating Procedure A.3, "Pressurizer and Pressurizer Relief Tank System," in paragraph 3.1.10.
- b. The licensee's procedures restrict the number of HPI pumps to no more than one when the RCS is in the LTOP condition. Operating Procedure B.4, "Plant Shutdown and Cooldown," paragraph 5.28 provides RCS overpressure protection by tagging out the HPI pumps and their associated isolation valves.
- c. Licensee operators are alerted since an alarm will sound in the Control Room if the LTOP system is not enabled or if the PORV isolation valve is not open when the RCS pressure drops below 500 psig.
- d. Amendment 82 to the TSs provides justification that the plant-installed system is in accordance with the plant license.

The inspector reviewed the training and equipment modifications concerning LTOP and determined the following:

- a. All operators as of the time of this inspection had received training concerning LTOP event causes, the operation and maintenance of the system that investigates the event and the consequences of inadvertent actuation. The inspector interviewed the instructors, examined their lesson plans, and interviewed operators. No problems were discovered.
- b. Permanent modifications and procedural changes have been made that result in a system that provides mitigation for RCS LTOP events. A permanent second setpoint of 500 psig has been installed on the EMOV Relief Valve, PSV-21511, and procedural changes have been added to Operations Procedure B.4 to establish RCS overpressure at 350°F and tag out two out of three HPI pumps, as well as shutting the isolation valves to the HPI pumps.

The inspector reviewed the surveillance activities associated with the LTOP system and determined that the EMOV operability test is to be performed via special procedure SP.90, "Special Frequency LTOP

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Operability Test," which was just being issued at this time of inspection. This test will verify EMOV operability prior to cooling the RCS below 350°F per the TSs Table 4.1-2, item 15. Special procedure SP 200.20 provided EMOV position indicator calibration once each refueling interval.

The inspectors' concluded, based on this review, that Rancho Seco has an effective mitigation system for LTOP transient conditions in accordance with their commitments concerning USI A-26. TI 2500/19 is closed.

Part 21

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85-20-P (Closed) "GE AK and AKP Circuit Breakers"

The licensee, after receiving the Part 21 Report, revised maintenance procedure, EM 175, "Control Rod Drive Low Voltage Power Circuit Maintenance," to include steps to check for and remedy the items listed in the report beginning in December of 1985. All breakers on site have been checked for their defects. This item is closed.

Licensee Event Report (LER)

LERs 85-01-L2 and 85-01-L3 (Closed) "H2 Monitor System Containment Isolation Valves Found Open for 7 Days"

Revision 3 to this LER identified that revision 1, which was closed in inspection report 50/312/86-38, was misnumbered and should have been Revision 2. Therefore, LER 85-01-L2 is closed.

The inspector reviewed revision 3 and verified that the changes were non-technical in nature and did not change the status or significance of the event. LER 85-01-L3 is closed.

LERs 85-22-LO and 85-22-L1 (Closed) "Open Pressurizer Valve"

The inspector reviewed licensee Operating Procedure A-11, Revision 21, and verified that 1) Personnel are required to verify that enclosure 8.1, "Normal Valve Line-Up," is complete prior to sampling, 2) A-11 has been rewritten and includes specific valves to be manipulated by operators and chemists for each sample taken, 3) A-11 now requires the control room to log process sample start and stop times, and 4) A-11 now requires valves to be returned to their normal position and the breaker be racked out and verified after completion of sampling.

The licensee also issued Special Order 87-1 to remind Operations personnel of the requirements and importance of logging valve status. Licensee Special Order 86-29 was issued to instruct operators of the importance of each shift turning over important evolutions to oncoming crews.

The licensee has completed their corrective actions to prevent recurrence of this event. The inspector concluded that these corrective actions adequately addressed this LER. These items are closed.

85-32-01 (Closed), LER 85-22 "Root Cause Analysis"

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The inspector reviewed LER 85-22 and revisions 1 and 2. The inspector then reviewed the root cause evaluation performed by the licensee. The evaluation appeared adequate to identify the problems which caused the event and the recommended corrective measures appeared to be adequate to preclude a recurrence of the event. This item is closed.

LERs 85-07-L0, 85-07-L1 and 85-07-L2 (Closed) "4160 KV Bus Undervoltage Relay Setpoints

The inspector reviewed the licensee's root cause evaluation for the improper relay settings. The evaluation appeared to be adequate to determine the cause of the event. The licensee is making some electrical circuit modifications to prevent a recurrence of this problem. Included in these is a modification to supplement existing inverse relay ITE 27 with an in-line backup ITE 27N which is a definite time relay. This modification is being made to provide a second level of protection and enhance system reliability. The licensee also determined that the definite time relay will make unnecessary their proposal to increase surveillance frequency of the ITE 27 relays.

The licensee is tracking this addification on the restart items list and is requiring that it be completed prior to plant restart. The modifications not yet completed are in ECN-R-1045. This item is closed.

LER 86-14-L1 (Closed) "Decay Heat Pump Casing Drain Line Elbow Weld Leak"

Revision 0 to this LER was closed in Inspection Report 50-312/86-07. The inspector reviewed this revision versus the original issuance and verified that there were no significant changes to the event description.

This issuance, however, provided a more detailed analysis of the event and a summary of the failure analysis performed on the event. This information was reviewed in the closeout of revision 0. LER 86-14-L1 is closed.

LER 86-15-LO (Closed) "RM-80 Printed Circuit Board Workmanship"

The licensee reported that during cold shutdown conditions on September 21, 1985, two trace solder pads were dislodged from a printed circuit board during repair of the Radiation Monitor Computer (RM-80) communication board for radiation monitor R-15050. The glued-on solder pads were dislodged when they were touched with a hot soldering iron. Glue attachment of the solder pads is normal technique in the licensee's General Atomics (GA) circuit boards and is more heat sensitive than would be expected with a plated attachment.

This finding was considered a voluntary LER because the pads in question were used as filler only and were not in any circuit on the board. The licensee issued the LER to notify the NRC and other utilities of the potential for glued-on solder pads on GA Radiation Monitor circuit boards to become detached. Additionally, the licensee determined that this radiation monitor was not a basic component as defined in 10 CFR Part 21 and, therefore, this incident was not reportable pursuant to that Part.

The inspector verified that the licensee had addressed the work related aspects of this incident. Instrument and Control (I&C) Technicians were advised of this problem and training sessions were given to the technicians on the appropriate methods and precautions for soldering processes. In addition, the licensee was working on an Electrical Standard methods' document and precautions for this incident were to be added to it. This LER is closed.

The inspector noted, however, that the licensee had not been in contact with the vendor (GA) about the generic aspects of this item. The inspector was concerned that other GA monitors in use at the plant could be basic components as defined by 10 CFR Part 21 and, therefore, this item could be reportable. This item remained open pending NRC review of its reportability in accordance with 10 CFR Part 21. (Open Item 87-13-04).

LERs 86-21-LO (Closed) and 86-21-L1 (Open) "Failure to Implement Inservice Testing of Certain Safety-Related Valves"

The inspector reviewed this LER and verified that it was issued in a timely manner and included the required information. Revision 1 was issued, as committed by the licensee, to supplement the original information. The revision included 5 additional valves that were identified during the licensee's corrective actions. The corrective actions are in progress and the licensee has committed to complete them prior to restart. The inspector verified that the revision included all information from the original LER and provided the additional information that they committed to provide. Therefore, LER 86-21-LO is clied. LER 86-21-L1 will remain open to followup on the licensee's corrective action implementation.

LER 86-30 (Open) "Decay Heat System Isolation Juring Transformer Switch"

The licensee reported that during cold shutdown conditions on December 8, 1986, a loss of the 4A bus power, attendant diesel generator start, and DHS isolation occurred during the transfer of the source transformer. The cause was attributed to a procedure deficiency along with less than adequate job preparation by the performing operator.

The inspector noted that the licensee's corrective actions appeared to address the concerns of the LER. However, these actions were not complete at the time of this inspection and only one action was scheduled for completion by restart. The inspector noted that, in the LER, the licensee committed to revise procedure A.58, "4.16 KV Electrical System," prior to January 17, 1987. At the time of this inspection, the procedure revision was still in draft form.

At the exit meeting, the inspector discussed the importance of meeting commitment dates and noted that this item was similar to events detailed in Inspection Report 50-312/87-11. This item remains open pending the completion of licensee corrective actions and subsequent NRC inspection.

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Special Reports

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83-31-X0 (Closed) "CBAST Boron Concentration"

On August 22, 1983, the licensee took a boron sample from the CBAST which exceeded the TS level of 8500 ppm. The plant operators then added 1750 gallons of demineralized water to the CBAST. The resultant boron concentration was 7914 ppm. It was expected that it would take 3450 gallons of water to lower the concentration to 8000 ppm. Upon further evaluation the licensee determined that the init.al boron concentration never exceeded 8451 ppm but resulted from inadequate mixing, hence the TS limit was not exceeded. In the LER the licensee did identify that there was an excessive amount of time from discovery of the out-of-specification sample until the plant control room operators were cognizant of the possible out-of-specification chemistry sample. The licensee revised AP.306, Section VIII, to require that chemists report immediately to the control room any out-of-specification sample, and when a TS or process standard out-of-specification condition exists, to require an Out-of-Specification Notice be initiated. This action appeared to be adequate to prevent a recurrence of this event. This item is closed.

84-03-X0 (Closed) "Defective Switch Jaws"

While performing testing of protective and control relays (EM.144), the licensee identified five relays, Westinghouse type MG-6 Relay mounted in an FT-22 case, with identically defective switch jaws. The licensee then examined all Flexitest switch installations on site and found a total of 9 identical defects out of 235 installations. The licensee then discussed the problem with the Westinghouse Coral Springs QA Department. Westinghouse revealed that this problem had been previously identified, that the cause had been determined and that the problem was related to only those relays with a 1969 production date. The licensee has since replaced all relay with defective jaws and 1969 production dates. This item is closed.

84-04-X0 (Closed) "Electromatic Relief Valve Leaking"

On August 7, 1984, Electromagnetic Relief Valve PSV-21511 had enough seat leakage to cause a Pressurizer Safety Valve Open alarm. RCS pressure at this time was 221 psi. Correspondence with the manufacturer indicated that this leakage could be caused by pilot valve spring fatigue. The licensee replaced the pilot valve springs with springs from the manufacturer which have a higher spring rating and should not leak until RCS pressure drops to about 50 psi. This item is closed.

Region V Items

RV-E-13 (Closed) "Examine Operator Reference to Strip Charts vs. Safety Parameter Display System (SPDS) for Steam Generator Level"

This item was previously reviewed in IE report numbers 50-312/86-07 and 87-08. The remaining open issue was to determine to what extent the SPDS operating manual contained incorrect information. The issue arose from

an observation that the SPDS operating manual description of a steam generator level algorithm was in error. The licensee received the algorithm from a vendor in 1984 and the description was in error at that time. The error was not discovered by the licensee at the time of the algorithm implementation.

In February, 1987, the licensee notified the vendor of the manual error and initiated a change to be completed as part of other SPDS changes for modifications. At the time of this inspection, the manual change was in draft form pending management reviews. To assure that other errors did not exist in the manual, the licensee contracted to have an independent verification performed on the manual contents. This review was in progress at the time of the inspection. The licensee has committed to complete the SPDS validation and verification and a detailed acceptance test on the modifications prior to restart.

Based on the licensee's actions and the commitments for verification, this item is closed.

7. Management Changes

On May 4, 1987, the SMUD Board announced the replacement of John Ward, Deputy General Manager, Nuclear, by G. Carl Andognini as the Chief Executive Officer, Nuclear.

8. Exit Meeting

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The inspector met with licensee representatives (noted in Paragraph 1) at various times during the report period and formally on May 29, 1987. The scope and findings of the inspection activities described in this report were summarized at the meeting. Licensee representatives acknowledged the inspector's findings and violations identified.