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Region I

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Report Nos.: 50-317/89-11
50-318/89-11

Licensee: Baltimore Gas and Electric Company
Post Office Box 1475
Baltimore, Maryland 21203

Facility: Calvert Cliffs Nuclear Power Plant, Units 1 and 2

Inspection at: Lusby, Maryland

Inspection conducted: April 17-27, 1989

Inspector: P. Wilson, Reactor Engineer

Approved by: Lowell E. Tripp
Lowell E. Tripp, Chief
Reactor Projects Section No. 3A

5/18/89
Date

Summary: Inspection Conducted April 17-27, 1989: Inspection Report Nos.
50-317/89-11 and 50-318/89-11

Areas Inspected:

Special inspection of (1) the April 17 and 19, 1989, breaches of Unit 2 refueling containment integrity during core alterations and (2) the April 22, 1988, installation of a temporary modification to the Unit 1 refueling machine that involved an unreviewed safety question.

Results:

Inadequate control of operations and maintenance activities during the Unit 2 refueling outage led to two instances of breaching refueling containment integrity during core alterations. This is an apparent violation (Detail I). A significant weakness in the licensee's procedure controlling temporary modification resulted in a temporary modification to the Unit 1 refueling machine that involved an unreviewed safety question. This is an apparent violation (Detail II). The fact that this modification as well as several other temporary modifications that affected nuclear safety did not receive POSRC review prior to implementation is also an apparent violation (Detail II).

DETAILS

Within this report period, interviews and discussions were conducted with various licensee personnel, including senior control room operators, design engineers, outage planners, and the licensee's management staff.

I. Breach of Containment Boundary Events (93702)

A. Overview

On April 17, 1989, the licensee performed core alterations for a 1 hour and 35 minute period without refueling containment integrity being established. The core alterations consisted of uncoupling control element assemblies (CEA's). A direct vent path was inadvertently established between the containment and the outside environment. An in-containment service water supply header, which provided the vent path, had been drained for maintenance evolutions prior to the start of core alterations. Containment refueling integrity had been established using two fail-open air-operated control valves on the service water system return line from the No. 21 containment air cooler (CAC). Due to an unrelated maintenance activity, the solenoids for the above control valves were deenergized thus causing the valves to open breaching the containment boundary.

On April 19, 1989, the licensee performed core alterations for approximately two hours without containment integrity required during refueling. The core alterations also consisted of uncoupling CEA's. A direct vent path was established between the containment atmosphere and the outside environment via the same drained service water header. Prior to this event, the licensee had established refueling containment integrity downstream of No. 21 CAC using two butterfly valves vice the fail-open control valves. Due to miscommunication between shift personnel, both butterfly valves were inadvertently opened which created the vent path and breached the containment boundary.

B. Vent Path, Description and Requirements

1. Vent Path

Inside containment on the service water header supplying cooling water to and from No. 21 CAC, there are three automatic vent valves (2-SRW-249, 245 and 244). The normal function of these valves is to prevent air binding of the CAC; however, when the CAC is depressurized and drained, each valve provides about an one-eighth inch opening into the service water header. The service water header exits the containment and splits in two parallel lines, a four-inch line and a eight-inch line. Each line

contains a fail-open air-operated control valve (four-inch line 2-CV-1583, eight-inch line 2-CV-1582) and a manually operated butterfly valve (four-inch line 2-SRW-138, eight-inch line 2-SRW-139). The two lines then join into a single header which then combines with other service water headers. A vent valve (2-SRW-470) on the combined service water header had been previously safety tagged open to assist in the draining of No. 21 CAC. In addition, prior to the first breach in containment boundary, one of the butterfly valves (2-SRW-138) had been removed for maintenance, but was replaced prior to the second event. The direct access from the containment to the outside environment during the first event was via the auto vents inside containment, 2-CV-1582 which was open for ongoing work and the opening following removal of 2-SRW-138 or the tagged open vent valve 2-SRW-470. The path for the second event was via the auto vents inside containment, 2-CV-1582 which had been reopened, and the tagged open vent valve 2-SRW-470.

2. Requirements

Technical Specification (TS) limiting condition for operations (LCO) 3.9.4.c specifies that, during core alterations, each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

- a) closed by an isolation valve, blind flange or manual valve, or
- b) be capable of being closed by an operable automatic containment purge valve.

The action statement associated with this LCO requires the immediate suspension of all operations involving core alterations.

The surveillance requirements associated with this LCO required that refueling containment integrity be verified within 72 hours prior to the start of core alterations and at least once per seven days during core alterations.

C. Detailed Description

On April 5, 1989, the licensee isolated and then drained and vented No. 21 CAC and its associated outside containment service water piping. This was done to remove and repair 2-SRW 138 and to inspect the service water piping downstream of the above butterfly valve.

On April 15, 1989, shift operators completed Surveillance Test Procedure (STP) 0-55A-2 "Containment Integrity Verification (Mode 6)" prior to removing the Unit 2 reactor vessel head. Since No. 21 CAC was depressurized, STP 0-55A-2 required that the two fail-open air-operated control valves 2-CV-1582 and 2-CV-1583 be shut.

On April 16, 1989, a safety tagging clearance was approved (No. 29-630) and implemented which removed electrical power from the solenoid to 2-CV-1582. The purpose of the clearance was to allow for environmental qualification work on the valve's position indication equipment. This resulted in the valve opening and thereby providing a direct path between the containment and the outside atmosphere.

On April 17, 1989, at approximately 2:15 p.m., core alterations (CEA uncoupling) were commenced. At approximately 3:50 p.m. following shift turnover, the Unit 2 reactor operator noticed that 2-CV-1582 was open and that the containment had been breached. The shift supervisor then ordered the immediate suspension of CEA uncoupling. The shift operator cleared the tags on the solenoid to 2-CV-1582, reenergized the solenoid, and then shut the valve to reestablish penetration integrity.

The licensee started an investigation of the event and suspended all core alterations until corrective measures were in place to prevent recurrence. The licensee determined that on April 17, 1989, two other unrelated maintenance activities took place which also breached the containment boundary, but core alterations were not in progress at the time. Control room operators were not aware that these two activities were in progress.

The first activity was the performance of local leak rate testing on the Unit 2 containment penetration No. 9 in accordance with STP-M-571-2. From 4:30 p.m. to 4:45 p.m., there was a direct path from the containment to the outside environment. The vent path was via 2-SI-388 through failed check valve 2-SI-340 and into the west penetration room through 2-SI-387 which had been left open following removal of a leak rate machine.

The second activity, which took place the evening of April 17, 1989, was the removal of two steam generator relief valves from the No. 21 steam generator which had its manway covers removed. The licensee's Tagging Authority (separate group within the Operation's Department) approved a maintenance order to remove 2-MS-3993-RV and 2-MS-3995-RV. Since the steam generator manways were open, the removal of these valves provided a direct path from the containment to the outside environment.

On April 18, 1989, the licensee implemented corrective actions to prevent recurrence. This action consisted of placing caution tags on all containment boundary valves to prevent inadvertent opening. The resident inspector pointed out to the licensee shift supervisor that the licensee's long standing practice of relying on valves with fail-open features (loss of air or power) for containment refueling integrity was unacceptable since it was apparently inconsistent with Technical Specification 3.9.4.c.1 requirements. The licensee modified STP-0-55A-2 to change refueling integrity boundaries to valves without fail-open features. In particular, the boundary valves associated with the containment air coolers were changed to the manual butterfly valves downstream from the fail-open air operated control valves.

On April 18, 1989, in order to reverify refueling containment integrity, the licensee performed the revised STP-0-55A-2. The tagging authority reissued the safety tag clearance for the xenonoid to 2-CV-1582 which resulted in the valve being opened.

On April 19, 1989, on the midnight shift, plant operators began to caution tag all the valves required for refueling containment integrity. On day shift, an off-shift crew was brought in to assist in the tagging process. The caution tag clearance, prepared and controlled by the control room operators, required that if a CAC was depressurized, its associated downstream butterfly valve be shut. The only indication available to the operators that a CAC was drained were control room flow indicators which had been removed. Therefore, the operators took a conservative approach and shut the butterfly valves to all CAC's.

After the caution tagging was completed, the shift supervisor questioned the isolation of all filled and pressurized CAC's since the station's Abnormal Operating Procedure (AOP) - 6D "Fuel Handling Incident" required that all available CAC's be placed in service if an accident should occur. He, therefore, ordered the control room supervisor to reopen the butterfly valves on the available CAC's. The control room supervisor, in turn, ordered some of the operators from the extra crew to remove the caution tags and open the butterfly valves on the available CAC's. The plant operators then mistakenly removed the caution tags and opened the butterfly valves associated with the No. 21 CAC. Therefore, a direct path between the containment atmosphere and the outside environment was established.

At 4:25 p.m. on April 19, 1989, CEA uncoupling was recommenced. At 6:35 p.m., CEA uncoupling was stopped due to a concern over a failed local leak rate test on an unrelated containment penetration check valve. At 00:01 a.m. on April 20, 1989, the shift operators discovered the breach in the containment boundary through No. 21 CAC.

In both instances of breach of refueling containment integrity, the licensee made the proper notifications to the NRC.

D. Inspector Findings

There were several different contributors or weaknesses in the licensee's conduct of operations and maintenance which led to these two events.

1. The controls for preventing a breach in refueling containment integrity prior to the first event were inappropriate in that the licensee had an inadequate program in place to prevent inadvertent opening of a containment penetration after integrity had been established using STP-0-55A-2. The use of fail-open valves as a containment boundary and the performance of local leak rate testing on boundary valves during core alterations were also considered to be weaknesses.
2. There were several weaknesses in licensee's safety tagging clearance program.
 - a. The licensee's Tagging Authority was neither aware nor required to be aware that refueling containment integrity had been established. The Tagging Authority, with the April 16, 1989 shift supervisor's approval, issued the clearance (29-630) which resulted in the first breach in refueling containment integrity.
 - b. The shift supervisor was required to approve all safety tagging clearances. However, his subordinate, the control room supervisor, was the individual required to approve the removal of safety tagging clearances. Therefore, depending on the activity level in the control room, the shift supervisor may not have been informed that a system/subsystem/component had been returned to service. During an interview, one shift supervisor said that, during a major refueling outage, he is informed when equipment has been returned to service or is available about 50 percent of the time.
 - c. The Tagging Authority issued a computer printout to the shift supervisor every 24 hours which listed all equipment which had been removed and returned to service. With the large number of safety tagging clearances being issued and cleared, the printout was no longer current within a few hours after it was issued to the control room. One shift supervisor stated he considered the printout obsolete when he received it.

- d. The Tagging Authority was authorized to approve maintenance orders (i.e., give permission to start the maintenance activity). If the proposed work was to be performed within a previously established boundary (i.e., already tagged for other maintenance), a supplementary safety tagging clearance was issued which did not require shift supervisor approval. Therefore, the shift supervisor was not always cognizant of what maintenance activities were in progress. The breach of containment boundary through the opening left by the removal of steam generator relief valves (see Section I.C) was a result of the above practice.
3. There were weaknesses identified in the licensee's control of outage activities.
 - a. Unscheduled maintenance activities were performed which affected the containment boundary. The environmental qualification work performed on control valve 2-CV-1582 had been scheduled early in the outage when refueling containment integrity was not required. The work was not performed when scheduled and was to be rescheduled when integrity was not required. However, the work was authorized even though it was not scheduled to be performed. The removal of the steam generator relief valves is another example of performing unscheduled work.
 - b. The inspector determined from interviews with the licensee's outage management and the shift supervisor on duty just prior to the second event, that there was pressure from outage management to complete the containment boundary caution tagging evolution because of concerns over a contractor's work schedule.
4. Due to the method that safety tagging clearances were controlled and the lack of control of outage activities, shift supervisors did not appear to have a high degree of confidence that they were completely aware of the status of plant systems. This appears to have led to a general mistrust of the information systems available to them in the control room. The shift supervisor who authorized safety tagging clearance (24-661) causing the first breach in containment boundary, stated he thought that No. 21 CAC was in service and that 2-CV-1582 was already open. He thought this despite his shift turnover information sheet which had listed No. 21 CAC out of service for several days. Other shift supervisors interviewed expressed the same lack of confidence.

5. There appears to be weaknesses in operator communications. Prior to the second event, the guidance given to the extra operators to remove the caution tags and unisolate the available CACs was inadequate in that they mistakenly unisolated the No. 21 CAC. This breached the containment boundary.
6. The extra operators brought in to assist in caution tagging the containment boundary valves had not been made aware of the previous breach in containment. Therefore, they were not sensitive to the importance of their assignment.
7. The shift crew that opened the butterfly valves associated with the No. 21 CAC (2-SRW 138 and 139) did not follow the requirements of Calvert Cliffs Instruction (CCI) 112 "Safety Tagging" in that the removal of the caution tags from these valves was not performed using the formal tagout modification process required by the instruction. The formal modification process would have required written shift supervisor approval prior to the caution tag boundary being changed.
8. During both events, the level of activity in the control room was extremely high. Unit 1 was in the process of heating up following a forced outage and Unit 2 was in a major refueling outage. Although the Technical Specification requirements for minimum control room staffing were met, it appeared that the number of oversight and support personnel utilized to monitor these simultaneously conducted activities was inadequate.
9. Although not a direct contributor to either event, the inspector identified weaknesses in the licensee's process for temporary procedure changes. Calvert Cliffs Technical Specification (TS) 6.8.3.a allows for temporary changes to TS required procedures without prior Plant Onsite Safety Review Committee (POSRC) review provided the intent of the original procedure is not altered. After the first event, STP-0-55A-2 was revised to change containment boundary valves from fail-open valves to valves without this feature. Even though this change apparently involved a change of intent, the revision was implemented after approval by two licensed senior operators without the required POSRC review.

It did not appear that Operation's Department Management recognized what is meant by a change of intent. When the inspector raised this concern with the Operations Department Management, he was told that they did not believe the change involved a change of intent since the original purpose (establishing refueling containment integrity) was not altered. At the time of the inspection, the licensee was evaluating how to define "change of intent".

There also appeared to be a weakness in the method used to track temporary procedure changes to STPs. There was no requirement to document the temporary changes made to a working copy of a STP on the master procedure. Therefore, each time an STP was used, there was no documentation as to what had been revised the last time the procedure was used. There were several temporary changes made to STP 0-55A-2 each time it was used prior to each event. However, some of the changes made to the STP prior to the first event were not carried over to the STP used prior to the second event even though it would appear that the changes should have been. This weakness was previously identified by NRC as early as January 1988 (Inspection Report 88-01).

E. Licensee Corrective Action

After the second loss of refueling containment integrity, the licensee conducted an extensive investigation as to the causes of both events. The investigation included a Human Performance Evaluation System review of the events. The licensee developed a comprehensive corrective action plan and presented it to the inspector during a meeting held on April 26, 1989, at the site. The following are the main corrective actions commitments.

1. Establish precise windows for maintaining containment closure. These windows could include periods when core alterations are not being performed. Commitment date April 25, 1989.
2. At the beginning of each window, Operations will perform STP-0-55A and the core alteration portion of Operation Procedure (OP)-5, Mode 6 Checklist to establish a containment closure baseline. Commitment date April 25, 1989.
3. During containment closure windows, no maintenance or testing will be performed on containment penetration components shown in STP-0-55A. Commitment date April 25, 1989.
4. Details of significant events will be communicated to operating crews and outage management staff in a timely manner. Commitment date April 25, 1989.
5. When modifying a tagout, the modification process contained in CCI 112 will be used by operations crews. Commitment date April 25, 1989.
6. Evaluate the adequacy and administration of Mode 6 Checklist in OP-5 and implement any appropriate changes. Commitment date May 3, 1989.

7. Implement improved methods for communicating shift turnover information (considering improved shift turnover checklist, status boards, etc.). Commitment date May 30, 1989.
8. Evaluate providing shift supervisor with a marked up copy of a print(s) for each clearance. Commitment date May 25, 1989.
9. Prior to establishing containment closure windows, all boundary valves required by STP-0-55A for containment closure will have tags applied to preclude the valves being inadvertently operated. Commitment date April 25, 1989.
10. Evaluate the type of tag to be used for containment closure. Commitment date May 25, 1989.
11. A status board will be maintained in the Tagging Authority office to inform personnel when containment closure is required and other pertinent facts about plant status. Commitment date April 25, 1989.
12. Evaluate permanently revising STP-0-55A so as not to rely on fail open valves. Commitment date May 30, 1989.
13. During outages, the Operation Maintenance Coordination (OMC) organization will review and approve all unscheduled work (non-emergency). Commitment date April 25, 1989.
14. Clarify tagging authority review requirements to specifically include the adequacy of the tagout for existing plant conditions.
 - Interim clarification, Commitment date May 1, 1989
 - CCI 112 Revision, Commitment date May 10, 1989
15. Sensitize operating crews to their responsibilities for adequacy of tagouts. Commitment date May 10, 1989.
16. Determine requirements for equipment availability during core alterations that may be necessary to mitigate the consequences of a fuel handling incident (CACs, charcoal filters, etc.). Commitment date May 30, 1989.
17. Review with OMC organization and shift crews, the licensee's top priorities (safety and quality versus plant availability). Commitment date May 10, 1989.

18. Assure operating crews are informed of reasons for changes to active STPs. Commitment date May 15, 1989.
19. Evaluate the adequacy of staffing in the operations section. Commitment date May 30, 1989.

Just prior to this inspection's exit meeting, the licensee presented the inspector with information that may have mitigated the potential consequences of the two events. This information is presently being evaluated by the NRC.

1. After the second event, the licensee conducted a review of the physical attributes of the service water system automatic vent valves which revealed a ball and screen assembly on the valve discharge. Physical walkdowns, conducted by the licensee, were performed for four automatic vent valves on the drained portions of the service water header. In each case, the presence of the stainless steel ball was confirmed.
2. Further physical inspection showed that the ball valve seats on a chamfered orifice. The orifice has an opening of 0.041 inches.
3. The valve's manufacturer, Hoffman ITT Corporation, was contacted by the licensee to determine if the ball valve would preclude reverse flow. The manufacturer informed the licensee that the vent valves were factory tested for venting operability but not for reverse flow. However, the vendor stated that the purpose of the ball valve was to prevent reverse flow. The licensee tested a new vent valve from stock but could not reproduce the vendor's stated qualifications. Test results varied based on the seating obtained during each attempt. No empirical seating pressure was defined since repeatability was not achieved. In each case, the steel ball covered the orifice, restricting the open channel. The installed automatic vent valves were not tested.

F. Apparent Violations and General Weaknesses Highlighted by Both Events

In summary, the two breaches of refueling containment integrity during core alterations are two instances of a failure to meet Technical Specification 3.9.4.c and constitute an apparent violation (50-318/89-11-01).

The issue of whether there was a violation of Technical Specification 6.8.3.a regarding the manner in which STP-0-55A-2 was revised, remains unresolved until the licensee completes their evaluation and it is reviewed further by the NRC (50-318/89-11-04).

The contributors to both events discussed in Detail I of this report reflect underlying weaknesses in the control of operations and maintenance activities during the Unit 2 outage.

II. Unreviewed Temporary Modification

A. Overview

On April 22, 1988, the licensee installed a temporary modification to the Unit 1 Refueling Machine which increased the probability of a fuel handling accident. The temporary modification consisted of bypassing a limit switch which made it possible to lower a spent fuel assembly onto the upender when the upender was not completely vertical. The modification was installed without a 10 CFR 50.59 evaluation being performed and without prior Plant Onsite Safety Review Committee (POSRC) review. On April 20, 1989, the licensee's Off Site Safety Review Committee (OSSRC) determined that the above modification constituted an unreviewed safety question.

B. System Description and Requirements

1. Refueling Machine Interlock

There are several interlocks associated with the refueling machine and upender in the reactor area. These interlocks restrict movement of the refueling machine to ensure that all conditions to safely transfer fuel are met prior to transferring a fuel assembly from the refueling machine to the upender and vice versa.

One of these interlocks prevents movement of the refueling machine into the upender area unless the upender is fully vertical. Two limit switches must be actuated to satisfy this interlock. One switch, 1LSAVH, is actuated as the upender moves away from the horizontal position but before it reaches the vertical position. This switch is actuated by a carriage which rocks back to its "home" position as the upender is being raised. The second limit switch, 1LSAV, actuates once the upender is completely vertical. This interlock must also be satisfied to illuminate the "upender vertical" light on the refueling machine console.

All refueling equipment is categorized by the licensee as non-safety related.

2. Requirements

The 10 CFR 50.59 allows the licensee to make changes to their licensed facility as described in the Final Safety Analysis Report (FSAR) provided the change or modification does not involve a change to Technical Specifications or an unreviewed safety question.

The regulation also defines what constitutes an unreviewed safety question. One criterion for determining if a proposed change involves an unreviewed safety question is whether the proposed modification increases the probability of an accident previously analyzed in the FSAR.

10 CFR 50.59 also requires licensees to submit a license amendment to the NRC for approval prior to the installation of any change or modification that is determined to involve either a change to Technical Specifications or an unreviewed safety question.

Calvert Cliffs Technical Specification 6.5.1.6.d states that the POSRC shall be responsible for the review of all proposed changes or modifications to plant systems or equipment that affect nuclear safety.

C. Detailed Description

On April 22, 1988, just prior to the start of fuel movement for the last Unit 1 refueling outage, the licensee determined that limit switch 1LSAV had failed. Repair of the limit switch would have required draining the reactor cavity. In order to prevent a delay in the refueling outage, the failed limit switch was bypassed using a jumper. The jumper was installed (Serial No. 1-88-54) in accordance with Calvert Cliffs Instruction (CCI) 117, "Control of Temporary Modifications." The temporary modification was approved by two licensed senior operators as allowed by CCI 117. The licensee then refueled Unit 1 reactor.

On March 10, 1989, an onsite meeting was held between the NRC and members of the licensee's staff to discuss several NRC concerns over the licensee's process for temporary changes to plant equipment (see routine resident Inspection Report 317/89-04; 318/89-04). An outcome from this meeting was a commitment from the licensee to review all installed temporary modifications to determine if the modification should have had prior POSRC review and 50.59 consideration.

The licensee determined that six temporary modifications should have had prior POSRC review and 50.59 evaluations performed. These temporary modifications were as follows:

- 1-88-54 installed April 22, 1988 on Refueling Machine
- 1-87-24 installed February 24, 1987 on Unit 1 Oxygen Analyzer
- 1-87-47 installed May 7, 1987 on Unit 1 Oxygen Analyzer
- 1-88-145 installed August 2, 1988 on Unit 1 #11B Reactor Coolant Pump low lift pump pressure alarm
- 2-89-6 installed February 18, 1989 on Unit 2 to encapsulate a steam leak on a feedwater heater valve
- 2-89-8 installed February 22, 1989 on Unit 2 secondary steam valve.

The licensee subsequently performed a 50.59 evaluation on these six temporary modifications. All but temporary modification 1-88-54 were found not to involve unreviewed safety questions.

The 50.59 evaluation for the temporary modification on the refueling machine concluded that with limit switch bypassed, it was possible to lower a spent fuel assembly onto the upender when the upender was not completely vertical. The evaluation also concluded that without the upender vertical, there was a possibility of damaging a fuel assembly, and therefore the temporary modification increased the probability of a fuel handling accident.

On March 22, 1989, the POSRC reviewed the 50.59 evaluation and concurred with the evaluator's conclusion. The next day the temporary modification was removed.

On April 20, 1989, as required by the licensee's Technical Specification, the Off-Site Safety Review Committee reviewed the 50.59 evaluation and also concurred that the temporary modification had involved an unreviewed safety question.

D. Inspector Findings

The main contributor which led to the installation of a temporary modification which involved an unreviewed safety question was incorrect guidance given in CCI 117. CCI 117 allowed for the installation of temporary modifications without prior POSRC review and 50.59 consideration if the equipment affected was non-nuclear safety related. The refueling machine was listed as non-nuclear safety related equipment.

The licensee took no additional precautions such as adding warning steps to fuel handling procedures, conducting additional training, etc., to alert fuel handlers that the interlock had been bypassed.

Additional concerns on the process used by the licensee for controlling temporary modifications had already been identified in March 1989 and are discussed in Inspection Report 317/89-04; 318/89-04.

E. Licensee Corrective Actions

After the NRC raised several concerns with the process used by the licensee to control temporary modifications on March 10, 1989, the licensee took steps to prevent recurrence. The licensee committed to revise CCI 117. As an interim compensatory measure, the licensee issued a night order on March 13, 1989, which required all proposed temporary modifications be reviewed by POSRC prior to installation.

The revision to CCI 117 was still in the review process at the time of the inspection and therefore the inspector could not ascertain if the licensee's long term corrective actions would be effective.

F. Apparent Violations and Weaknesses

In summary, the failure to meet 10 CFR 50.59 with respect to not obtaining a license amendment prior to installing temporary modification 1-88-54 and the multiple examples of other temporary modifications which were installed without 50.59 consideration is an apparent violation (50-317/89-11-02). Further, there are multiple examples of temporary modifications which affected nuclear safety which did not receive prior POSRC review which is also an apparent violation of Technical Specification 6.5.1.6.d (50-317/89-11-03; 50-318/89-11-03).

CCI 117 contained a significant flaw in that it permitted the installation of temporary modifications without the prior 50.59 consideration and POSRC review for modifications to plant equipment that were described in the FSAR and/or affected nuclear safety.

III. Exit Interview (30703)

Meetings were periodically held with senior facility management to discuss the inspection scope and findings. A summary of findings was presented to the licensee at the end of the inspection.