

## Harris 1

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### Initiating Events



**Significance:** Sep 30, 2000

Identified By: Self Disclosing

Item Type: FIN Finding

#### **INADVERTANT SAFETY INJECTION DURING SHUTDOWN**

An inadvertent safety injection (SI) resulted from two conflicting activities being performed at the same time. A concurrent breakdown in two aspects of the work control process, scheduling and implementation, allowed this event to occur. The SI was not safety significant because the plant was shutdown and none of the critical shutdown safety parameters were affected.

Inspection Report# : [2000003\(pdf\)](#)

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### Mitigating Systems



**Significance:** Sep 30, 2000

Identified By: NRC

Item Type: VIO Violation

#### **FAILURE TO HAVE TWO OPERABLE CHARGING SAFETY INJECTION PUMPS**

A violation of Technical Specification (TS) 3.5.2 Emergency Core Cooling System (ECCS) was identified for having only one operable Charging/Safety Injection Pump (CSIP) for a time in excess of the TS Limiting Condition of Operation action statement requirements. The C CSIP experienced a failed thrust bearing which would have caused the C CSIP to fail when outboard thrust conditions existed while the pump was intermittently in service from May 1999 to January 2000 as one of two redundant CSIPs. By letter dated February 2, 2001, the NRC concluded that this inspection finding was characterized as White (low to moderate safety significance) in accordance with the Significance Determination Process as the incremental increase in core damage frequency for the time period during which the C CSIP was inoperable was  $5.1 \times 10^{-6}$ /year by the licensee's evaluation, and  $9.5 \times 10^{-6}$ /year as evaluated by the NRC. Using Inspection Procedure 95001, the inspector found that the licensee's problem identification and root cause analysis was acceptable although a definitive root cause for the outboard thrust bearing failure could not be determined. The root cause evaluation identified two potential root causes a partial loss of lubrication to the outboard thrust bearing, and an improper filling and venting of the 'C' CSIP. Loss of lubrication was determined to be the most probable root cause. The 'C' CSIP was restored to operable status. The completed and proposed corrective actions, including actions to prevent recurrence, adequately addressed the results of the root cause evaluation. This supplemental inspection was documented in NRC Inspection Report 50-400/01-07.

Inspection Report# : [2001007\(pdf\)](#)



**Significance:** Sep 30, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

#### **TECHNICAL SPECIFICATION VIOLATION DUE TO INOPERABLE EMERGENCY CORE COOLING SYSTEM FLOW PATH**

Two non-cited violations were identified associated with the failure of valve 1RH-25 to open during a surveillance test. 1RH-25 is one of two isolation valves which open to allow flow between the low-head and high-head SI pumps to enable high-pressure recirculation. A non-cited violation was identified for having only one operable ECCS flowpath for longer than the TS allowed out-of-service time, and for entering operational modes 3, 2, and 1 while the TS was not satisfied. A non-cited violation was issued for failure to take corrective action to complete adequate post-modification testing of several motor-operated valves, after identifying the failure to complete adequate post-modification testing as one cause of the failure of valve 1RH-25. The safety significance was low primarily because operators could have opened 1RH-25 manually at the valve location, and they could have opened it soon enough to enable the ECCS to accomplish the corresponding safety function. In addition, one low head SI pump can provide adequate flow to both high head SI pumps with the suction cross-connect valve in its normally open position.

Inspection Report# : [2000003\(pdf\)](#)



**Significance:** Sep 30, 2000

Identified By: NRC

Item Type: VIO Violation

#### **FAILURE TO HAVE TWO OPERABLE CHARGING SAFETY INJECTION PUMPS**

A violation of Technical Specification (TS) 3.5.2 Emergency Core Cooling System (ECCS) was identified for having only one operable Charging/Safety Injection Pump (CSIP) for a time in excess of the TS Limiting Condition of Operation action statement requirements. The C CSIP experienced a failed thrust bearing which would have caused the C CSIP to fail when outboard thrust conditions existed while the pump was intermittently in service from May 1999 to January 2000 as one of two redundant CSIPs. By letter dated February 2, 2001, the NRC concluded that this inspection finding was characterized as White (low to moderate safety significance) in accordance with the Significance Determination Process as the incremental increase in core damage frequency for the time period during which the C CSIP was inoperable was  $5.1 \times 10^{-6}$ /year by the licensee's evaluation, and  $9.5 \times 10^{-6}$ /year as evaluated by the NRC. Using Inspection Procedure 95001, the inspector found that the licensee's problem identification and root cause analysis was acceptable although a definitive root cause for the outboard thrust bearing failure could not be determined. The root cause evaluation identified two potential root causes a partial loss of lubrication to the outboard thrust bearing, and an improper filling and venting of the 'C' CSIP. Loss of lubrication was determined to be the most probable root cause. The 'C' CSIP was restored to operable status. The completed and proposed corrective actions, including actions to prevent recurrence, adequately addressed the results of the root cause evaluation. This supplemental inspection was documented in NRC Inspection Report 50-400/01-07.  
Inspection Report# : [2000003\(pdf\)](#)



**Significance:** Apr 01, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Fire protection wrap/penetration seal interface problems**

A non-cited violation of the fire protection program was identified for failing to maintain adequate procedures for the installation of fire barriers where penetration seals interface with electrical raceway fire barrier wrap. This resulted in six examples where safe shutdown cables did not meet fire protection program requirements. The safety significance was low because for each example identified a diverse safe shutdown function was provided in another fire area to accomplish the same function. Consequently safe shutdown could have been achieved with the available equipment.

Inspection Report# : [2000001\(pdf\)](#)



**Significance:** Apr 01, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to set goals and monitor the steam dump system under the maintenance rule**

A non-cited violation of the maintenance rule (10 CFR 50.65) was identified for failing to set goals and monitor the performance of the steam dump system when functional failures of the low-low reactor coolant system average temperature (Tave) interlock (P-12) to steam dump valves 1MS-109 and 1MS-110 occurred on December 14, 1999. The functional failures showed that the licensee had not demonstrated the performance of the system was being effectively controlled through the performance of appropriate preventive maintenance as required by 10 CFR 50.65(a)(2). Permissive P-12 shuts the steam dump valves when reactor coolant system Tave decreases to 553 F after a reactor trip. The safety significance was low because the main steam isolation valves could be closed if the steam dumps failed to operate.

Inspection Report# : [2000001\(pdf\)](#)



**Significance:** Dec 29, 2001

Identified By: NRC

Item Type: FIN Finding

#### **INACCURATE RISK ASSESSMENT FOR STARTUP TRANSFORMER**

Green. A finding was identified in Inspection Report 50-400/00-04 related to an inaccurate risk assessment for the B Startup Transformer outage that occurred in July 2000. The inadequate risk assessment was due to an error in the risk assessment model. The safety significance has been determined to be very low because compensatory actions were put in place to be able to return the transformer to service in two hours, and because the risk reduction associated with those compensatory actions offset the risk increase caused by the inaccurate risk assessment.

Inspection Report# : [2000004\(pdf\)](#)

Inspection Report# : [2001005\(pdf\)](#)



**Significance:** Dec 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

#### **TWO EXAMPLES OF FAILURE TO IMPLEMENT THE FIRE PROTECTION PROGRAM IN B CABLE SPREADING ROOM TUNNEL**

Green. Two examples of failing to implement the fire protection program were identified in the B cable spreading room (CSRB). The first example involved the failure to have automatic sprinklers in the CSRB tunnel area where multiple safety-related cable trays contain safe shutdown cables. The second example involved a failure to follow the design control program for resolution of unqualified thermolag fire barriers. The safety significance was determined to be very low because of the very low probability of a fire in this area, and because of proceduralized operator recovery actions that would restore off-site power to the one safety bus that potentially would be lost.

Inspection Report# : [2001005\(pdf\)](#)

**Significance:** TBD Dec 12, 2001

Identified By: NRC

Item Type: AV Apparent Violation

**FAILURE TO MAINTAIN THE FIRE AREA SEPARATION BARRIER BETWEEN THE B TRAIN SWITCHGEAR ROOM/AUXILIARY CONTROL PANEL ROOM AND THE A TRAIN CABLE SPREADING ROOM AS A 3-HOUR RATED BARRIER**

Preliminary White. The inspectors identified an apparent violation of the fire protection program required by 10 CFR 50.48 and License Condition 2.F, in that the Thermo-Lag fire barrier assembly which serves as the fire area separation barrier between Fire Area 1-A-SWGR-B [B Train Switchgear Room/Auxiliary Control Panel Room] and Fire Area 1-A-CSR-A [A Train Cable Spreading Room] has an indeterminate fire resistance rating instead of the required three hours. This degraded condition increased plant risk because, if a severe fire occurred in Fire Area 1-A-SWGR-B and breached the Thermo-Lag fire barrier, both trains of post-fire safe shutdown capability could be damaged or lost due to the same fire.

Inspection Report# : [2000009\(pdf\)](#)



**Significance:** G Sep 29, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**INADEQUATE FUSE COORDINATION FOR PORV BLOCK VALVES**

A non-cited violation of the fire protection program required by 10 CFR 50.48 and license condition 2F was identified for failure to incorporate adequate separation, isolation, or barriers to protect redundant safe-shutdown division features for pressurizer power operated relief valves and their associated block valves from the effects of fires in switchgear room A. A deficiency in the procedures for mitigating fires in the switchgear rooms was also identified. The safety significance was very low because of the low probability of the complicated fire scenarios necessary to cause the hypothesized malfunctions to occur.

Inspection Report# : [2001004\(pdf\)](#)



**Significance:** G Jun 30, 2001

Identified By: Licensee

Item Type: NCV NonCited Violation

**INADEQUATE RECEIPT INSPECTION FOR MECHANISM OPERATED CELL SWITCHES.**

The licensee failed to perform adequate receipt and dedication inspections, as required by 10 CFR 50, Appendix B, Criterion VII, for Siemens RLN/RLNF breaker cubicle Mechanism Operated Cell Switches as reported on April 24, 2001 under 10 CFR 21 (Green).

Inspection Report# : [2001003\(pdf\)](#)



**Significance:** G Mar 31, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

**INADEQUATE OPERABILITY EVALUATION FOR ECCS THROTTLE VALVE (SECTION 1R15).**

Green. A Non-cited violation of 10 CFR 50, Appendix B, Criterion V was identified for failing to follow procedures in the completion of an operability evaluation for potential clogging of the emergency core cooling system (ECCS) throttle valves. The result was that the operability evaluation failed to establish that hard debris would not cause clogging of the ECCS flow path. The safety significance was very low because a subsequent operability evaluation demonstrated that although hard debris would enter the containment sump, it would not enter the ECCS piping.

Inspection Report# : [2000006\(pdf\)](#)



**Significance:** G Dec 30, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

**FAILURE TO TAKE CORRECTIVE ACTION REGARDING MULTIPLE TRIPS OF THE A EMERGENCY SERVICES CHILLED WATER CHILLER**

10CFR50, Appendix B, Criterion 16 requires, in part, that conditions adverse to quality be corrected. Following an investigation into the causes of multiple trips of the "A" Emergency Services Chilled Water chiller, the licensee's corrective actions did not correct the condition, in that the corrective actions themselves rendered the chiller inoperable, as described in AR 24123.

Inspection Report# : [2000004\(pdf\)](#)

G

**Significance:** Jul 01, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

**Inadequate Control Room Emergency Filtration system surveillance test procedure**

A non-cited violation was issued for failure to establish an adequate procedure for satisfying Technical Specification (TS) surveillance requirement 4.7.6, Control Room Emergency Filtration System (CREFS) in that the procedure used for that purpose included actions which rendered both trains of the CREFS inoperable, a condition not allowed by the TS. The safety significance was low because the CREFS cannot initiate a reactor transient and is not used to mitigate core damage, and because, although the CREFS performs a barrier function by protecting the control room staff from the effects of a release of radioactive materials, the subject procedure rendered the CREFS inoperable for only a few minutes every 18 months.

Inspection Report# : [2000002\(pdf\)](#)

G

**Significance:** Apr 01, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

**Inadequate corrective actions for activities rendering both trains of the Control Room Emergency Filtration System (CREFS) inoperable**

A non-cited violation of 10CFR50, Appendix B, Criterion XVI, "Corrective Action" was issued for failure to take corrective actions to stop activities which periodically rendered inoperable both trains of the Control Room Emergency Filtration System. Because the violation did not involve an actual job dose, and because the violation did not involve more than two occurrences in an 18-month period, the occupational radiation safety significance determination process determined that the safety significance was low.

Inspection Report# : [2000001\(pdf\)](#)

G

**Significance:** Feb 19, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

**Spent fuel pool water level not maintained greater than 23 feet above stored fuel assemblies**

A non-cited violation was identified for multiple failures to maintain Spent Fuel Pool water level 23 feet above stored boiling water reactor (BWR) fuel assemblies as required by Technical Specification 3.9.11. Licensee Event Report (LER) 50-400/1999-01-00 had reported that nine BWR assemblies had not been fully seated in the spent fuel storage racks because on each of the affected assemblies, a channel fastener had caught on the top of the storage racks. The safety significance of the violation is low because the depth of the water above the top of the active fuel was never less than 23 feet. Therefore, the violation did not affect the ability of the water barrier to absorb 99 per cent of the assumed iodine gas activity that could be released from a rupture of an irradiated fuel assembly.

Inspection Report# : [1999008\(pdf\)](#)

G

**Significance:** Oct 09, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to recognize that an A (1) goal was exceeded**

The licensee failed to take appropriate corrective action under 10CFR50.65 (a)(1) when a maintenance rule (a)(1) performance goal was exceeded for the Target Rock Position Indication performance monitoring group in system 9001, containment isolation valves. The established goal of no more than one failure in 18 months was exceeded on June 11, 1999, but was not recognized by the licensee, and appropriate corrective action was not taken until another functional failure occurred on August 17, 1999. This issue was characterized as a Non-Cited Violation and was determined to have low risk significance because failure of the Target Rock position indicators did not prevent operators from determining valve positions, and other more time-consuming methods were available. Second, the failure to recognize that a maintenance rule goal had been exceeded did not affect the ability of any valve to operate.

Inspection Report# : [1999006\(pdf\)](#)

G

**Significance:** Jul 17, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to identify and correct conditions adverse to quality**

Failure to promptly identify and correct a test deficiency during a surveillance test on November 22, 1998, and failure to correct the causes of the failure of valve 1CC-176 to shut during a surveillance test on December 6, 1998, were two examples of a violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. The first example involved failure to use the corrective action program to document a test deficiency which identified that there was a problem with valve 1CC-176 prior to entry into mode 4. The second example involved a failure to correct the causes of the 1CC-176 inoperability which would have allowed the event described in item 1999004-01 to reoccur without being identified by post

maintenance /surveillance testing. For risk significance see item 1999004-01.

Inspection Report# : [1999004\(pdf\)](#)



**Significance:** Jul 17, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to demonstrate the operability of containment-isolation valves prior to entering Mode 4**

Failure to perform an adequate cycling test and verify the isolation time of valve 1CC-176 and failure to verify the isolation time of valve 1CC-202 prior to entering Mode 4 on November 24, 1998, and the subsequent entry into Mode 4, was a violation of surveillance requirement TS 4.6.3.1 and TS 4.0.4. The licensee's program to implement this surveillance did not consider the fact that a portion of the containment isolation valves could not be fully tested from the control room handswitch. As a result valves 1CC-176 and 1CC-202 were not adequately tested to meet the TS surveillance requirement prior to entry into mode 4. For risk significance see item 1999004-01.

Inspection Report# : [1999004\(pdf\)](#)



**Significance:** Jul 17, 1999

Identified By: NRC

Item Type: NCV NonCited Violation

**Mode 4 entry and subsequent unit operation with an inoperable containment isolation valve**

Operating the unit with valve 1CC-176 inoperable and taking no action to comply with Technical Specification (TS) Action requirements during the period from November 24, 1998, through December 6, 1998, was a violation of TS 3.6.3, Containment Systems. For approximately 11 days the licensee operated the unit with an inoperable component cooling water system containment-isolation valve. The subject valve isolates component cooling water flow to the reactor coolant drain tank heat exchanger and the excess letdown heat exchanger. The scenario requiring the use of valve 1CC-176 to shut in order to contain a radioactive release was estimated at E-14/year, a relatively low risk significance and was a green inspection finding. The system piping is a closed loop inside containment and is neither a high-energy line nor a bypass leakage path. The failure of the valve to close would be indicated in the control room. Emergency procedures require operators to verify valve closure and manually close valves which did not close automatically. During the subject period the valve could be shut from a manual handswitch on the main control board.

Inspection Report# : [1999004\(pdf\)](#)

## Emergency Preparedness

## Occupational Radiation Safety

## Public Radiation Safety

## Physical Protection



**Significance:** Nov 23, 1999

Identified By: Licensee

Item Type: VIO Violation

**Failure To Comply With The Regulations In 10 CFR Part 73 And The Provisions Of The Harris Physical Security Program**

Four Examples of a violation for failure to comply with 10 CFR Part 73, Physical Protection of Plants and Materials, and the provisions of the Harris physical security program related to access authorization were identified. The examples included: (1) Failure to review and evaluate background information for persons granted unescorted access, (2) Continuation of the granting of unescorted access authorization, (3) Failure to maintain original data on which the licensee granted unescorted access authorization for five years, and (4) Failure to log safeguards events within 24 hours of discovery. The significance of the violation was determined to be low since it was determined that the individuals granted unescorted access would have been granted access if the background information had been actually verified. Although the violation was identified by the licensee, due to failure to restore compliance within a reasonable time, a notice of violation was warranted.

Inspection Report# : [1999008\(pdf\)](#)

Inspection Report# : [1999007\(pdf\)](#)

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## Miscellaneous

**Significance:** N/A Jun 30, 2000

Identified By: NRC

Item Type: FIN Finding

### IDENTIFICATION AND RESOLUTION OF PROBLEMS

Based on the results of the inspection, there were no findings identified. The implementation of the corrective action program was acceptable with negative observations noted. The licensee was effective at identifying problems and placing them into the corrective action program as evidenced by the inspectors review of external operating experience, Corrective Action Program Trend Reports, and items from system health reports. When conditions adverse to quality were identified, the licensee generally identified the appropriate causes and developed and implemented effective corrective actions. Based on several negative observations, additional attention and emphasis was needed on investigating conditions adverse to quality; developing effective corrective actions; documenting the investigation, the corrective actions, and the ongoing status of those actions; and completing and documenting effectiveness reviews. The inspectors determined that the licensee properly classified discrepant conditions, but did not use risk when classifying/assigning prioritization of these items. The licensee's self-assessments and audits were effective in identifying deficiencies in the corrective action program, and were similar to the problems identified by the inspectors during review of the program. Based on discussions conducted with plant employees from various departments, the inspectors determined that a reluctance to report safety concerns did not exist.

Inspection Report# : [2000008\(pdf\)](#)

**Significance:** N/A Dec 29, 2001

Identified By: NRC

Item Type: FIN Finding

### IDENTIFICATION AND RESOLUTION OF PROBLEMS

The inspectors concluded that collectively the inspection findings indicated that the corrective action program was having a positive impact on risk reduction, but some issues were still being identified due to events and NRC inspections.

Inspection Report# : [2001005\(pdf\)](#)

**Significance:** TBD Dec 12, 2001

Identified By: NRC

Item Type: AV Apparent Violation

### FAILURE TO OBTAIN NRC APPROVAL PRIOR TO IMPLEMENTING A CHANGE TO THE APPROVED FIRE PROTECTION PROGRAM

Apparent Violation. The inspectors identified an apparent violation of License Condition 2.F, for accepting through analysis a degraded Thermo-Lag fire barrier assembly between the B Train Switchgear Room/Auxiliary Control Panel Room and the A Train Cable Spreading Room. This change adversely affected the ability to achieve and maintain safe shutdown in the event of a fire and, as such, required NRC approval. This issue was not assessed in accordance with the SDP but instead was assessed in accordance with guidance in Sections IV.A.1 through IV.A.4 and Section IV.B of the NRC's Enforcement Policy. The issue was significant because the licensee's change process for the fire protection program allowed this degraded condition to be accepted without NRC approval.

Inspection Report# : [2000009\(pdf\)](#)

**Significance:** N/A Jul 27, 2001

Identified By: NRC

Item Type: FIN Finding

### PROBLEM IDENTIFICATION & RESOLUTION

Based on the results of the inspection, no findings of significance were identified. The implementation of the corrective action program was acceptable. The licensee was effective at identifying problems and placing them into the corrective action program as evidenced by the review of external operating experience, Corrective Action Program Trend Reports, and items from system health reports. When conditions adverse to quality were identified, the licensee generally identified the appropriate causes, and developed and implemented effective corrective actions. Several minor negative observations were identified which included documentation of corrective actions, maintenance rule classification, and one isolated instance of untimely condition report initiation. The licensee properly classified discrepant conditions. Corrective actions to address the NRC identified cross-cutting issue concerning several conditions/events for which the licensee developed conclusions before they had gathered and adequately analyzed enough information to fully understand the condition/event (NRC Inspection Report 50-400/00-04) were reviewed. These corrective actions included heightened management attention to equipment problems and their resolution. Additional corrective actions were being implemented during the inspection. The completed and planned corrective actions were appropriate, thorough, and comprehensive. The licensee's self-assessments and audits were effective in identifying deficiencies in the corrective action program. Based on discussions conducted with plant employees from various departments, the inspectors determined that a reluctance to report safety concerns did not exist.

Inspection Report# : [2001008\(pdf\)](#)

**Significance:** N/A Mar 31, 2001

Identified By: NRC

Item Type: FIN Finding

**PROBLEM IDENTIFICATION AND RESOLUTION ERROR RELATED TO COMPLETION OF OPERABILITY EVALUATION**

No Color. A problem identification and resolution error was identified in the mitigating systems cornerstone. The error was associated with the completion of an operability evaluation for debris clogging of the Emergency Core Cooling System (ECCS) throttle valves, and involved the development of conclusions before enough information had been gathered and adequately analyzed to fully understand the condition.

Consequently, some of the licensee's conclusions were inaccurate. This error was determined to be a continuation of the trend discussed in Section 4OA2 of NRC Inspection Report 50-400/00-04.

Inspection Report# : [2000006\(pdf\)](#)

**Significance: N/A** Dec 30, 2000

Identified By: NRC

Item Type: FIN Finding

**PROBLEM IDENTIFICATION AND RESOLUTION ERRORS**

No-color. Problem identification and resolution errors were identified in the mitigating system cornerstone. The errors involved the development of conclusions before enough information had been gathered and adequately analyzed to fully understand the condition/event. Consequently, some of the licensee's conclusions were inaccurate, and some of the associated corrective actions were ineffective and/or inappropriate. Similar errors had occurred in the past in the Initiating Event and Barrier Integrity cornerstones (Section 4OA2).

Inspection Report# : [2000004\(pdf\)](#)

Last modified : March 29, 2002