UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931

December 21, 2001

Southern Nuclear Operating Company, Inc.
ATTN: Mr. D. N. Morey
Vice President
P. O. Box 1295
Birmingham, AL 35201

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT - NRC PROBLEM IDENTIFICATION AND RESOLUTION REPORT 50-348/01-04 AND 50-364/01-04

Dear Mr. Morey:

On November 30, 2001, the NRC completed an inspection at your Farley Nuclear Plant, Units 1 and 2. The enclosed report presents the inspection findings which were discussed on November 29, 2001, with Mr. Grissette and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, compliance with the Commission's rules and regulations, and with the conditions of your license. Within these areas, the inspection involved selected examination of procedures and representative records, observations of activities, and interviews with personnel.

On the basis of the sample selected for review, the team concluded that in general, problems were properly identified, evaluated, and corrected. There was one Green finding identified during this inspection for inadequate corrective actions, as required by 10 CFR 50 Appendix B, Criteria XVI, for failure to address a degraded condition of the 1C Emergency Diesel Generator (EDG). The licensee did not follow their Condition Report requirements to perform a root cause and broadness reviews. As a result, a different degraded condition of the 1B EDG occurred, which resulted in that EDG becoming inoperable. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating this issue as a non-cited violation, in accordance with Section VI.A.I of the NRC's Enforcement Policy. If you deny this non-cited violation, you should provide a response with the basis of your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-0001; and the NRC Resident Inspector at the Joseph M. Farley Nuclear Plant.

In addition, several examples of minor problems were identified including not issuing a condition report for some problems, poor quality of documentation in some condition reports and action items, not assessing program implementation by some self-assessments, lack of proper evaluation and use of operating experience, and untimely followup on negative trend analysis results.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Stephen J. Cahill, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos.: 50-348, 50-364
License Nos.: NPF-2, NPF-8

Enclosure: NRC Inspection Report
50-348/01-04 and 50-364/01-04

cc w/encl:
M. J. Ajluni, Licensing
Services Manager, B-031
Southern Nuclear Operating
Company, Inc.
Electronic Mail Distribution

L. M. Stinson
General Manager, Farley Plant
Southern Nuclear Operating
Company, Inc.
Electronic Mail Distribution

J. D. Woodard
Executive Vice President
Southern Nuclear Operating
Company, Inc.
Electronic Mail Distribution

State Health Officer
Alabama Department of Public Health
RSA Tower - Administration
Suite 1552
P. O. Box 303017
Montgomery, AL 36130-3017

M. Stanford Blanton
Balch and Bingham Law Firm
P. O. Box 306
1710 Sixth Avenue North
Birmingham, AL 35201

William D. Oldfield
SAER Supervisor
Southern Nuclear Operating Company
Electronic Mail Distribution

Distribution w/encl:
F. Rinaldi, NRR
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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	50-348, 50-364
License Nos.:	NPF-2, NPF-8
Report Nos.:	50-348/01-04, 50-364/01-04
Licensee:	Southern Nuclear Operating Company, Inc. (SNC)
Facilities:	Farley Nuclear Plant, Units 1 and 2
Location:	7388 N. State Highway 95 Columbia, AL 36319
Dates:	November 13-16 and 26-30, 2001
Inspectors:	B. Crowley, Senior Reactor Inspector (Lead) B. Holbrook, Senior Project Engineer T. Johnson, Senior Resident Inspector
Approved by:	S. Cahill, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000348-01-04, IR 05000364-01-04, on 11/13-16 and 26-30/2001, Southern Nuclear Operating Company, Inc., Farley Nuclear Plant, Units 1 and 2, annual baseline inspection of the identification and resolution of problems.

The inspection was conducted by a Senior Reactor Inspector, a Senior Project Engineer, and the Farley Senior Resident Inspector. One Green finding of very low safety significance was identified during this inspection and was classified as a non-cited violation. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609 "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www.nrc.gov/NRR/OVERSIGHT/index.html.

Identification and Resolution of Problems:

The inspectors determined that, in general, problems were properly identified, evaluated, and corrected. A low threshold for self-identification was demonstrated. Significant problems were adequately addressed. However, some minor problems were noted including the failure to initiate Condition Reports (CRs) for equipment problems, CRs with poor documentation quality, and action items (AIs) that were not clearly linked to the problem and were not clearly focused on addressing the identified causes. Since documentation was not always complete, in many cases, the inspectors had to clear and concise in addressing the corrective action. Some self-assessments were programmatic in scope and did not assess the output or implementation of the program being assessed. Operating experience (OE) items were sometimes not evaluated, reviewed for applicability, or incorporated into site procedures, and corrective actions to determine root causes for some negative trends identified from trend analysis were not always timely.

Cornerstone: Mitigating Systems

Green. A non-cited violation was identified for inadequate corrective actions, as required by 10 CFR 50 Appendix B, Criteria XVI, for failure to address a degraded condition of the 1C Emergency Diesel Generator (EDG). The licensee did not follow their Condition Report requirements to perform a root cause and broadness review. As a result, a different degraded condition of the 1B EDG occurred, which resulted in that EDG becoming inoperable. Both of these conditions were related to not following vendor guidance in the respective EDG vendor instruction manuals as required by plant procedures.

However, this finding was of very low safety significance because the 1C EDG was determined to be degraded but operable and the 1B EDG failure occurred during the refueling outage, when it was not required to be operable.

Report Details

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

a. Effectiveness of Problem Identification

(1) Inspection Scope

To assess the effectiveness of the licensee's corrective action program (CAP), the inspectors reviewed selected corrective action documents for risk significant systems. Selected systems included High Head Safety Injection (HHSI), Auxiliary Feedwater (AFW), EDGs, Component Cooling Water (CCW), and Service Water (SW). The reviews included various significance levels and both equipment and human performance issues and also included examination and evaluation of functional failure information, system health reports and corrective maintenance information, and samples of associated documentation for each of these areas and systems. Additionally, the review of documents was performed to determine if individual and repeat problems had been captured and documented in the licensee's CAP. Walkdowns of the selected systems were conducted to assess material condition to determine if deficiencies existed that had not been entered into the CAP.

The inspectors reviewed the results of the licensee's process for evaluating Operating Experience (OE) items and reviewed documentation associated with selected examples. This review was completed to verify that the licensee had completed evaluations for applicability and incorporated actions into plant programs as required by plant procedures. Self-assessments, audits, trend reports, and management observations were also reviewed to assess the effectiveness of problem identification and documentation.

For self-assessments, the inspectors reviewed procedures and documents associated with the CAP and the self-assessment processes and compared licensee performance to the procedures and documentation requirements to verify the procedures and regulatory requirements were being met. The inspectors also attended selected management meetings involving the CAP and discussed initiation threshold expectations with various personnel.

Procedures and major documents reviewed are listed in the attachment of this inspection report.

(2) Findings

The licensee's CAP or Condition Report (CR) system was appropriately organized and provided for five levels of significance. The process had appropriate reviews according to significance and included reviews at both the initiation and completion stages. The inspectors determined that the licensee was generally effective at identifying problems and initiating corrective action documents. A low threshold for individual problem identification was demonstrated.

However, the inspectors identified several examples where the licensee had failed to initiate CRs. On November 27, 2001, the inspectors walked down portions of the Unit 1 CCW system with the system engineer. During the tour, a leak was observed above the 1A CCW heat exchanger on a 1.5 inch service water line to a relief valve. This leak was a through wall leak in an ASME class 3 safety-related pipe. The operators had already received notification of the leak earlier in the day during a daily work order (WO) review meeting. The leak had been identified on November 26, and was documented on WO number 1008650. However, a CR was not initiated to document the problem. Subsequently, CR 2001002955 was initiated by the Operations Shift Superintendent (OSS).

The inspectors discussed the lack of a CR with the OSS, maintenance personnel, and engineering. Although the problem was identified on a WO, maintenance and planning supervision did not recognize the need to initiate a CR to document the issue and initiate CAP actions. In addition, control room back shift supervision and the non-licensed system operators who tour the area had opportunities to identify the need for a CR. The licensee wrote another CR (2001002967) to document and track the human performance issues associated with not writing a CR when the leak was first identified. An operability determination (OD-01-14) concluded the 1A CCW heat exchanger was operable. Additional follow up by the licensee found another through wall leak in a SW drain line on the same heat exchanger that was only documented by WO number 554242. The licensee initiated another CR (2001002970) to address the new issue. Based on additional below minimum wall readings from Ultrasonic Testing inspections and two distinct leaks, the licensee removed the heat exchanger from service to make repairs.

The licensee conducts quarterly trends of upper tier cause codes, event codes, and equipment problems. The current trending program was relatively new and the latest quarterly trend report (2nd quarter of 2001 issued October 5, 2001) included only 4 quarters of data due to a recent computer program change. Since only 4 quarters of data were available, the results were not considered completely accurate. Although the current trending program was relatively new and the data had limitations, review of the data indicated that results were generally effective in identifying repetitive equipment and performance problems. Trend results were entered into the CAP through CRs and resulted in AIs for affected departments to review trend results and take appropriate corrective actions.

The inspectors noted that both the 1st quarter and 2nd quarter 2001 trend reports identified negative performance trends for the Maintenance and Outage & Modifications (O&M) departments and recommended that root cause determinations be performed for the performance issues. The inspectors determined that neither department had initiated root cause investigations for the identified issues. The O&M department had dispositioned the findings of the trend reports by stating that a root cause analysis was not needed. No details were documented to justify why a root cause was not needed. Additionally, no root cause determination or justification for not needing a root cause had been documented by the maintenance department. The inspectors were later informed that new CRs were issued by both departments to take corrective actions for the trend report recommendations.

Overall, self-assessment processes were diverse and had identified areas for improvement. The licensee's program for self-assessment consists of two types of self-assessments, focused and on-going. Focused self-assessments target specific organizations or program areas such as maintenance, operations, corrective actions, etc. On-going self-assessments are more general and include activities such as management reviews, trending, review of CRs, etc. The program allows credit for a wide variety of activities, including internal and external assessments and audits, bench marking, equipment reporting programs, trending activities, and management review boards. In general, the inspectors found that audits and self-assessments of the CAP was beneficial and resulted in identification of problems with implementation and initiation of corrective actions. However, the inspectors found that some self-assessments were programmatic only and did not assess the output or implementation of the program. Examples were corrective action self-assessments dated August 8 and September 7, 2000 and the 2000 Annual Effectiveness Review of the Operating Experience Evaluation Program. The licensee had recently identified areas needing improvement in their self-assessment program and a management initiative was ongoing to develop a new generic self-assessment program for all three Southern Nuclear Company plants.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed licensee CAP procedures and selected corrective action documents listed in the attachment of this report. The review was to determine if problem significance levels were assigned appropriately, root cause evaluations were thorough, OE was effectively used and regulatory requirements and licensee procedure requirements were met. The inspectors also attended licensee Operating Experience Review Board (OERB) meetings to assess OERB effectiveness.

(2) Findings

Issues in CRs were generally properly characterized and evaluated. The licensee conducts a weekly OERB, comprised of site management personnel, that reviews issues from the previous week for items that may be OE examples. Additionally, board members review issues for human performance and root cause (RC) evaluations for detail and thoroughness. The inspectors determined that the OERB was a value added management initiative.

The inspectors noted a lack of quality documentation in many CRs. There were some examples where there was no clear link between the issues identified in the CR and AI initiated to correct the problem. There were examples where the AI was not clear and focused in addressing the identified causes. Since documentation was not always complete, in many cases, the inspectors had to discuss the issues with personnel involved to understand what was actually done to address the problem. Examples of unclear or incomplete CR documentation included the following:

- CR 2001002150 was initiated on August 28, 2001, when the 2C Component Cooling Water pump could not be secure. One AI was closed on September 10,

2001, and verified completed on September 14, 2001. The inspectors questioned the AI status and was told that maintenance management disagreed with the RC and had not completed the AI. The inspectors were later informed that a new AI had been opened to complete the action.

- CR 2000005538 was initiated on October 6, 2000, following a failure of the Unit 1 3B Post Accident Hydrogen Analyzer (PAHA). One AI was to determine why a previous Occurrence Report and corrective actions failed to prevent this failure. The RC identified that personnel did not change the PM schedule to replace component wiring. There was no CR to address the problem of not changing the schedule.

- CR 2001001556 was initiated on June 26, 2001, when a SW valve failed to operate. The RC was a pinched wire under a pressure switch cover. This was a maintenance preventable functional failure (MPFF). The RC identified the causes to be inadequate lighting and self checking not used. No AI addressed the poor lighting and failure to self check.

- CR 2000005465 was issued on September 22, 2000, to track AI progress for Appendix R Emergency Lighting, which was classified as Maintenance Rule (a) (1) on April 1, 1995. One AI was to perform quarterly ohmic testing of new emergency lighting. Another document specified semi-annual ohmic testing. The system engineer stated that he was unsure as to what testing should be performed.

- Another element of the same AI was to replace the emergency lighting charging units with new units. However, the AI response stated further installation of the new charging units should be placed on hold until resolution of the problem of loss of electrolyte due to boiling is resolved. A new CR is being generated. The inspectors and the system engineer could not locate a new CR.

- CR 2000005785 was initiated on November 22, 2000, due to the failure of the 1C charging pump breaker to close. The RC was a handswitch had failed due to aging problems. This was identified as a repetitive problem. Four AIs were initiated to create a new PM task to replace the MCB handswitches. None of the handswitches had been replaced and the AIs were closed based upon the task having been developed.

During review of CRs to verify that the correct Severity Levels were assigned as specified by site procedures, the inspectors noted that some CRs for failures classified as MPFFs were not assigned a Severity Level 3 as dictated by the licensee procedure. The inspectors discussed this observation with licensee personnel who conducted a review of the CR data base. This review identified three CRs, 2001001124, 2001001518 and 2001002688, that should have been Severity Level 3 instead of the assigned Severity Level 4. Corrections were made and correct severity levels were assigned. The inspectors reviewed licensee procedures and discussed this problem with licensee personnel. The inspectors determined that the probable cause of the above problem was that personnel who review CRs for MPFF determination are allowed 120 days by procedure to conduct the review. The author of the CR assigns Severity

Levels based upon the problem and doesn't know if the failure will be classified as a MPFF. The CR may not be updated after the MPFF determination to reflect the required Severity Level 3.

The inspectors also observed that the Gammametrics system had been classified as Maintenance Rule (a) (1) on February 5, 2001. There was no Severity Level 3 CR initiated for this problem. Licensee personnel initiated a Severity Level 3 CR to correct this problem. The inspectors viewed these minor errors as administrative oversights since other CRs with RC evaluations and broadness reviews had addressed the same failures. However, a vulnerability existed to miss a RC and broadness review if appropriate severity levels were not identified. Licensee personnel stated they would review this aspect of the program.

The inspectors reviewed several examples where OE was either not evaluated, reviewed for applicability, or incorporated into site procedures. As a result, preventable problems occurred. Examples, most of which the licensee had already determined were deficiencies with the use of OE, included the following:

- On October 29, 2001, the sequencer for EDG B1G failed to operate during a surveillance test. The RC identified that inadequate pre-and-post testing for a newly installed switch was the problem and that EPRI guidance had not been used. The inspectors noted that EPRI document NP-7213, dated April, 1991, provided guidance and acceptance criteria for testing of this component. This information was never incorporated into site procedures.

- On May 11, 2000, the Unit 2 Turbine Driven Auxiliary Feed Water (TDAFW) pump tripped due to speed control problems. The RC identified that oxide build-up on components was the cause and that a bench check of the components could have detected the problem. The RC identified that INPO O&MR associated with this problem was not incorporated into site procedures. The inspectors reviewed INPO O&MR 418, Recent problems with Woodward Governor Control Systems, dated January 1996, and observed that methods to identify the problem were discussed but not incorporated into site procedures.

- On September 10, 2001, the Refueling Water Storage Tank (RWST) was cross connected to the Spent Fuel Pool (SFP) when placing the SFP purification system in service. The RC identified that personnel error and human performance was the primary cause. One of the contributing causes was a weakness in system interrelation knowledge. The RC identified that INPO SER 91-003, Spent Fuel Pool Overflow Events, Revision 1, discussed this problem. One cause was the insufficient knowledge of the existing status of the system. The licensee's response to SER 1-91 (same as SER 91-003) contained no recommendation regarding insufficient knowledge.

- On January 23, 2001, the Unit 1 TDAFW pump bearing was damaged during coast down following a surveillance test. The RC identified that the problem was poor installation, craftsmanship, and assembly associated with bubbler type bearing oilers and was a MPFF. The RC did not reference OE. However,

OE11420, HPSI Pump Bearing Experienced a Lack of Oil Due to Inability to Drain From Oil Bubbler, dated September 28, 2000, described the same problem with bubbler oilers at another facility. The inspectors determined that the OE was not distributed to responsible departments since the OE referenced a particular type of pump not used at the site. The OE was applicable since the site used the same type of oilers.

- On August 18, 2000, CR 2000005241 was initiated when the Unit 1 Gammametrics failed. The RC for this problem identified repetitive failures and that the cause was extreme ambient temperatures. One AI was, in part, to further investigate the driver card failures and determine vendor recommendations. The RC also identified that the licensee had documentation on vendor recommendations that was over ten years old and had not incorporated the information.

The inspectors noted that the licensee had initiated improvements for the OE process and were tracking improvement progress by CR 2001002102. The inspectors discussed the OE program with personnel responsible for reviewing OE items to gain an understanding of their implementation and use of the program procedures. The inspectors determined that responsible personnel were aware of procedure FNP-0-AP-65, FNP Operating Experience Evaluation Program, but few were aware of procedure FNP-0-M-028, Farley Nuclear Plant See-In Procedures Manual, Version 12, that provides detailed instructions and guidance for performing actions necessary to accomplish the requirements of the OE program. Accountability for prompt investigation, resolution, and closure of OE items was not established, but left to the individual department OE representatives to take actions they deemed necessary. It was not clear that applicability and significance of OE items were thoroughly evaluated for site impact and incorporated into site procedures. The inspectors noted however, that higher level OE items such as NRC Information Notices and Generic Letters were dispositioned at a higher level and were timely.

The licensee had identified RC improvements as one of the focus areas in their site major problem report. The inspectors noted mixed quality with respect to RC evaluations, but CR 2001002102 had been issued August 14, 2001, to correct RC evaluation deficiencies identified during an external audit and in response to Corrective Action Report 2489. Although the CR original due date of October 7, 2001 was not met and extensions were granted, corrective AIs appeared to be appropriate.

The inspectors noted that the RC evaluations associated with higher level issues that received increased management review and attention were of higher quality than other RC evaluations. The RC associated with CR 2001002056, dated August 16, 2001, conducted by a two person team for processing of OE associated with capacitor failures, was reviewed by the inspectors and determined to be of good quality. The inspectors attended an OERB conducted on November 15, 2001, where management board members reviewed a team RC associated with CR 2001002756 for the failure of the B1G Sequencer during a surveillance test. The OERB concluded that the RC was not thorough and detailed. The inspectors concluded that the OERB conducted a thorough review of the RC and provided oversight and direction to ensure a high quality product.

The inspectors reviewed the following RC evaluations that were examples of the quality inconsistencies:

- The CR 2001001535, RC, for a main generator and reactor trip on June 23, 2001, was a high level CR and classified as a Severity Level 2. The recommended corrective action for maintenance to reinforce the expectations for correct procedure usage and the use of Human Performance tools when performing any procedure or task was not identified as a critical corrective action. This was a RC of the problem. However, the maintenance department initiated an AI to complete the action.

- The Severity Level 3 CR 2000005465, RC, dealing with emergency lighting, stated the RC was initiated to help trend and track the failures of Appendix R Emergency Lighting. The RC contained no broadness review details. The RC failed to address why the corrective actions from a previous REA had not already been implemented or why they were not effective. The inspectors noted that the Emergency Lighting was classified Maintenance Rule(a) (1) in 1995 and remained in that classification.

- The RC Severity Level 3 CR 2001000650, RC, dealing with a failure of the breaker for the 2B charging pump to close, was initiated on March 15, 2001. The problem was identified as a MPFF. The RC basically restated the problem and provided no other specifics. It did not address the three previous failures that occurred since October 2000, or why previous corrective action did not prevent this problem. The broadness review identified that this problem was not an isolated case but provided no specifics.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed selected CRs and CAP documents listed in the attachment and actions associated with Non-cited violations (NCVs) and selected Licensee Event Reports (LERs) to evaluate the effectiveness of corrective actions. Corrective actions were evaluated to verify they appropriately addressed the cause, were thorough, and were implemented in accordance with procedure requirements. Additionally, the inspectors reviewed problems to verify that the extent of condition was appropriately considered and that open corrective actions did not result in an undue risk condition. The inspectors held discussions with licensee personnel regarding their perceptions of the program effectiveness and reviewed the process for review of completed plant issues to verify licensee procedure requirements were being met.

(2) Findings

Based on the sample reviewed, the inspectors found that the licensee's corrective actions were generally thorough, addressed root causes, and considered generic implications. However, the inspectors determined that corrective actions to address a previous degraded condition of the 1C Emergency Diesel Generator (EDG) were inadequate in that the CR was assigned the wrong severity level and a RC and

broadness review was not conducted. This inadequate corrective action was a violation of 10 CFR 50, Appendix B, Criterion XVI. As a result, a different degraded condition of the 1B EDG occurred, which resulted in that EDG becoming inoperable. Both of these conditions were related to not following vendor guidance in the respective EDG vendor instruction manuals as required by plant maintenance procedures. This finding is of very low safety significance and constitutes an NCV (Green).

In February 2001, during routine preventive maintenance (PM) on the 1C EDG, the licensee identified a failed bearing on the vertical drive unit. A non-cited violation (NCV 50-348,364/2000-06-01) was issued at that time because the EDG vendor instruction manual required an inspection of the drive unit's bearings every five years, but was not performed as required by the implementing maintenance procedure (MP). The licensee issued CR 2001000230 and revised the MP as corrective action. The CR was classified as a Severity Level (SL) 4; however, since it was a NCV, the CR should have been a SL 3 as required by procedure FNP-0-AP 30, Preparation and Processing of Condition Reports. A RC and broadness review are required for SL 3 CRs. In this case, a RC and broadness review were not conducted and a review of vendor manual recommendations and PM implementing MPs and other related maintenance activities for both Farley type EDGs was not completed.

On October 20, 2001, during a safety injection surveillance test, CR 2001002669 was written for a jacket water leak into the rocker arm oil system of the 1B EDG. This condition caused the 1B EDG to be declared inoperable. The CR was classified as a SL 3, and a RC determined that this was another example of a failure to follow the vendor manual as required by MPs. Belleville spring washers in the exhaust valve for one cylinder failed causing a jacket water leak into the oil system. These belleville washers should have been replaced during previous maintenance activities as required by the vendor instruction manual (Manual No. U184852, Fairbanks Morse and Colt-Pielstick Diesel Engine, section 2.2, page D14). The implementing MP (FNP-0-MP-14.13, EDGs 1-2A, 1B, and 2B Removal and Inspection of Engine Cylinder Head) did not require replacing the belleville washers during reassembly as stated in section 7.8.

This finding had a credible impact on safety, in that two instances where the licensee failed to follow the EDG vendor instruction manual as required by site MPs, resulted in an EDG degradation (the 1C EDG) and a failure (the 1B EDG). However, when the 1B EDG failed and was declared inoperable, it was during the refueling outage and mode 5 when the EDG was not required to be operable. The licensee subsequently replaced all the exhaust cylinder belleville washers on all three of the affected EDGs.

10 CFR 50, Appendix B, Criteria XVI (Corrective Action), requires that for significant conditions adverse to quality, such as failures and deviations, measures be established to assure that the cause of the condition is determined and corrective action taken to preclude repetition. In addition, the identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to management. Contrary to this, a degraded condition of the 1C EDG was not thoroughly evaluated by a RC including a broadness review as required by the CR program, and a subsequent failure of the 1B EDG occurred. Both failures were similarly caused by not following the maintenance guidance in the respective EDG vendor instruction manual as required by site MPs. The violation is being treated as a

NCV in accordance with section VI.A of the NRC Enforcement Policy. This issue was entered into the licensee's corrective action program as CR 2001002961. This was identified as NCV 50-348,364/2001-04-01, Inadequate Corrective Actions for the 1C EDG Failure.

In addition, during the inspectors review of licensee actions with respect to NCVs, the inspectors identified two other NCVs, 50-348,364/2001-01-02 and 2001-03-02, where the SL was classified as a lower level. The licensee took actions to correct these problems.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

During the course of the inspection, the inspectors interviewed various levels of licensee personnel and developed a general view of the safety-conscious work environment in order to determine if any conditions existed that would cause workers to be reluctant to raise safety concerns. The inspectors also reviewed the licensee's employee concerns program (ECP) documents listed in the attachment. In addition to discussion of the program with the ECP Coordinator, the inspectors reviewed documented resolutions of ECP issues to determine if concerns were being properly reviewed and identified deficiencies were being resolved in accordance with the licensee's CAP.

(2) Findings

The inspectors noted that the threshold for the identification of issues had lowered substantially, as evidenced by the increase in the number of CRs. The total number of CRs issued in 1999 was 1470 and was approximately 3000 for 2001. Based on discussions with system engineers and other personnel, licensee management emphasized the need for all employees to identify and report safety issues through the CAP or ECP. The inspectors did not identify any reluctance to identify safety concerns. The ECP was actively communicated and assessed for effectiveness by the licensee.

4OA6 Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. D. Grissette, Assistant General Manager, Plant Support, and other members of the licensee's staff on November 29, 2001. The inspectors asked the licensee if any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

Attachment: As stated

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. V. Badham, Administration Manager
R. M. Coleman, Outage and Modification Manager
C. D. Collins, Operations Manager
D. E. Grissette, Assistant General Manager - Plant Support
J. R. Johnson, Assistant General Manager - Operations
R. R. Martin, Engineering Support Manager
B. L. Moore, Maintenance Manager
L. M. Stinson, Plant General Manager

Other licensee employees contacted included office, operations, engineering, maintenance, chemistry/radiation, and corporate personnel.

ITEMS OPENED, DISCUSSED AND CLOSED

Opened and Closed

NCV 50-348,364/2001-04-01 Inadequate Corrective Actions for the 1C EDG Failure (section 4OA2.c)

LIST OF DOCUMENTS REVIEWED

Procedures

FNP-0-AP-7, Version 19.0, Corrective Action Reporting
FNP-0-AP-22, Version 13, Nonconformance Control / Deficiency Reporting
FNP-0-M-028, Version 12, Farley Nuclear Plant See-In Procedures Manual
FNP-0-AP-30, Version 30.0, Preparation and Processing of condition Reports, Plant Event Reports and Licensee Event Reports
FNP-0-ACP-60, Version 6.0, Excellance in Human Performance
FNP-0-AP-55, Revision 0, Self-Assessment Program
FNP-0-AP-65, Revision 10, FNP Operating Experience Evaluation Program
FNP-0-ACP-9.0, Version 6.0, Root Cause Program
FNP-0-ACP-9.1, Version 8.0, Root Cause Investigation
FNP-0-ACP-9.3, Version 5.0, Focused Self-Assessments
SNC Concerns Program Procedure, Revision 6

Audits and Assessments

Farley Nuclear Plant SAER Audit Report No: 2001-CAR/19-1, Audit of Corrective Action
Farley Nuclear Plant SAER Audit Report No: 2001-CAR/19-2, Audit of Corrective Action
Corrective Action Reports (CARs) 2476, 2460, 2471, 2473, 2475, 2477 and 2478

Attachment

CR 20021002111, Areas of Improvement Identified by INPO Assessment
CR 2001000724, Review and Corrective Actions for INPO SOERs
Self Assessment of Corrective Action Program dated 9/8/2000
Self Assessment of Corrective Action Program by Strategic Analysis dated 8/8/2000
CR 200000554, Annual Effectiveness Review of the Operating Experience Evaluation Program

Miscellaneous Documents

Quarterly Plant Trend Report July, Aug and Sep 2000
Quarterly Plant Trend Report Oct, Nov, Dec 2000
1st Quarter 2001 Trend Report and Human Performance Observation Summary FNP-01-0063-LIC
2nd Quarter 2001 Trend Report and Human Performance Observation Summary FNP-01-0093-LIC
Operability Determination (OD 01-14), Unit 1A CCW Heat Exchanger SW Piping Through Wall Leaks
Maintenance Rule Periodic Assessment, March 9, 2001
Design Change Request, So1-2-9705
Gamma-Metrics Failure Analysis, July 6, 2001
Training Advisory Notice, TWAFW (2-2000-477)

Quarterly System Health Reports

Auxiliary Feedwater System (2001, quarters 1, 2 and 3)
Diesel Generators (2001, quarters 1, 2, and 3)
Component Cooling Water System (2001, quarters 1, 2, and 3)
Chemical & Volume Control System (2001, quarters 1, 2, and 3)
Service Water (2001, quarters 1, 2, and 3)

(a) (1) SSC Monthly Status Reports

Auxiliary Feedwater System (August - October, 2001)
Emergency Diesel Generators (August - November, 2001)

Operating Experience Documents

10 CFR 21 Report, Woodward Electronic Controls with Electrolytic Capacitors
OE 12743, Auxiliary Feedwater Pump Turbine Bearing Damage
OE 11637, Auxiliary Feedwater Pumps Declared Inoperable Due to Potential Plugging of Suction Strainers
OE 12516, Water leakage During Pressure Testing of Charging Pipe in CVCS
OE 12770, Service Water Cooling Pump Failure
OE 12016, B ESW Pump Inoperable Due to Low Pressure and Low Flow
SER 1-91, Spent Fuel Pool Overflow Events

LERs

50-364/2000-004	50-348,364/2001-001	50-348,364/2001-002
50-364/2001-001	50-364/2001-001	

NCVs

50-348,364/2000-06-01	50-348,364/2000-06-02	50-348,364/2000-04-01
50-348,364/2001-02-01	50-348,364/2001-03-01	50-348,364/2001-03-02

Condition Reports

Auxiliary Feedwater System

2001002957	2001002672	2001002033	2001002056	2001002069	2001000706
2001000144	2001000267	2001000524	2000005806	2001000742	2000005518
2001002491	2001001107	2001000775			

High Head safety Injection System

2001001368	2000005785	2001001124	2001000650	2001001054	2001002143
2001000604	2001001703	2001000914			

Emergency Diesel Generator System

200005161	200005170	200005174	200005192	200005251	2000054541
200005469	200005505	200005515	200005539	200005546	200005627
200005632	200005655	200005679	200005773	200100037	200100068
200100087	200100106	200100229	200100230	200100339	200100352
200100543	200100545	200101099	200101257	200101362	200101363
200101365	200101407	200101538	200101570	200101652	200101685
200101751	200101851	200101855	200101916	200101988	200102141
200102296	200102593	200102669	200100274	200101275	200100802
200100093	200100102	200005693	200005702	200102756	

Component Cooling Water System

2000005272	2001000269	2001000740	2001000876	2001001890	2001001737
2001001639	2001001502	2001001409	2001000876	2001000740	2001000741
2001002475	2001002955	2001002967	2001002970	2001002150	

Service Water System

2001002715	2001002716	2000005705	2000005735	2000005910	2000005917
2000005918	2001000067	2001000129	2001000190	2001000192	2001000280
2001000646	2001001156	2001001261	2001001556	2001001279	2001001539
2001001556	2001002199	2001002349	2001002637	2000005680	2001002637

Miscellaneous

2001000274 2001000292 2001000269 2001000017 2001000258 2001000650
2001000408 2001000247 2000005803 2001000267 2001000524 2000005806
2001000742 2000005518 2001000774 2001000724 2001002111 2001002102
2000005194 2001002098 2001002480 2001001462 2001002870 2001002905
2001002105 2001001013 2001000774 2001002098 2001000539 2001001355
2001000274 2001000144 2001001090 2001000480 2001001266 2000005785
2001000761 2000005568 2001000188 2001001622 2000005790 2001000025
2000005465 2001002101 2000005682 2000005328 2000005443 2001000658
2001000077 2001001535 2001002056 2001002803 2001001605 2000005241
2001001668

Work Orders (WOS)

Auxiliary Feedwater System

01006256 20007583 01001555 01007407
01000584 01003912 01007651 01007247
00557276 01007392

Component Cooling Water System

1007156 1006500 557273 1002776 1002927 1003004
1003003 1003069 1003083 103228 554303 1004581
554852 554855 1004580 554570 1004850 1004920
1004966 554304 1005481 1005482 1005483 105506
1005692 556599 556600 1006157 1006176 1006175
1006671 1006743 106635 1007157 1007391 1007466
1007614 1007615 1002596 1002269 1000583 545225
548537 20009809 553672 553674 20008814 1007641

EDGs

1000156 1000241 544576 1000262 1002927 20010053
544511 555669 2000684 545793 555610 99005124
553284 20011418 548818 548819 548820 548821
545702 551645 20005034 20006694 20008847 100156
1005400

High Head Safety Injection System

1004576 1004590 1002822 1003000 20009512 1003858
2001001124 1002109

Service Water System

1001702	1000075	2008434	20009680	20010036	20010086
1005034	1000349	1000435	1002340	20010100	20009002
1000518	1002282	1001698	1001699		