May 6, 2004

Mr. Christopher M. Crane
President and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: CLINTON POWER STATION
NRC INSPECTION REPORT NO. 05000461/2004003 (DRP)

Dear Mr. Crane:

On April 7, 2004, the NRC completed a team inspection at the Clinton Power Station. The enclosed report documents the inspection findings which were discussed on April 7, 2004 with Mr. J. D. Williams 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 operating 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 samples selected for review, the team concluded that, in general, problems were properly identified, evaluated, and corrected. Weaknesses were identified in evaluation of the extent of condition and generation of condition reports. The team concluded that continued attention to the corrective action program is critical to further program improvement. There were two Green findings identified during this inspection. One involved the evaluation of the extent of condition of foreign material in an emergency diesel generator starting air system and did not involve a violation of regulatory requirements. The second finding involved inadequate corrective actions to assess the extent of condition for a problem with incorrect fuses identified in reactor protection system electronic circuit cards. The second finding was determined to be a violation of NRC requirements. However, because of the very low safety significance and because the finding 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.1 of the NRC's Enforcement Policy.

If you deny this Non-Cited Violation, you should provide a response with the basis for 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 III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Clinton facility.

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/

Ann Marie Stone, Chief
Branch 3
Division of Reactor Projects

Docket No. 50-461
License No. NPF-62

Enclosure: Inspection Report No. 05000461/2004003(DRP)
w/Attachment: SUPPLEMENTAL INFORMATION

cc w/encl: Site Vice President - Clinton Power Station
Plant Manager - Clinton Power Station
Regulatory Assurance Manager - Clinton Power Station
Chief Operating Officer
Senior Vice President - Nuclear Services
Vice President - Operations Support
Vice President - Licensing and Regulatory Affairs
Manager Licensing - Clinton Power Station
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-461
License No:	NPF-62
Report No:	05000461/2004003(DRP)
Licensee:	AmerGen Energy Company, LLC
Facility:	Clinton Power Station
Location:	Route 54 West Clinton, IL 61727
Dates:	March 15 through April 7, 2004
Inspectors:	T. Tongue, Project Engineer, Lead Inspector B. Dickson, Senior Resident Inspector R. Daley, Reactor Inspector D. Zemel, Illinois Emergency Management Agency
Approved by:	A. M. Stone, Chief Branch 3 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000461/2004003; 03/15/2004 - 04/07/2004; Clinton Power Station; Identification and Resolution of Problems.

This report covers a 2-week on site inspection of the licensee's corrective action program. The inspection was conducted by two region-based inspectors, one senior resident inspector, and a State of Illinois resident inspector. Two Green findings were identified during the inspection of which one was a Non-Cited Violation. The significance of issues is indicated by their color (Green, White, Yellow, Red) and was determined by the Significance Determination Process. 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 in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

Identification and Resolution of Problems

Overall, the team concluded that the licensee adequately identifies, evaluates and corrects problems. With some exceptions, the licensee generally identified problems and entered the conditions into their corrective action program. Weakness were identified in the area of evaluation of the problems, specifically associated with evaluation of extent of the condition. Two findings as well as other examples of less than rigorous reviews were identified by the team. Most corrective actions reviewed were appropriately implemented with several specific examples of weaknesses and successes identified.

Cornerstone: Mitigating Systems

- Green. The inspectors identified a finding of very low safety significance concerning the licensee's failure to determine the extent of condition for improper fuses installed in the reactor protection system (RPS) electronic circuit boards. This finding was determined to be a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI.

  This finding is more than minor because it affects the design and reliability of the RPS to perform its protective function of protecting the reactor core and containment. The licensee determined that although the fuses were improperly sized, the reactor protection system remained operable and could perform it's safety function. Therefore, this finding was determined to be of very low safety significance. (4OA2.2.b.3)

- Green. The team identified a finding of very low safety significance when the licensee failed to take appropriate steps to evaluate the extent of condition of foreign material in the starting air system of an emergency diesel generator.

  The finding is more than minor because it is associated with the Mitigating System (MS) cornerstone attribute of equipment reliability and capability of systems that respond to initiating events to prevent undesirable circumstances. This finding was of very low safety significance because once evaluated, it did not result in a loss of function per Generic Letter 91-18 (Rev 1). No violations of NRC requirements were identified. The

licensee documented this issue in condition report 213491. Additionally the licensee established action items to evaluate the source of the foreign material found in the 1A Diesel Generator air system following the March 2004 failure. (4OA2.2.b.4)

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

.1 Effectiveness of Problem Identification

a. Inspection Scope

The team conducted a review and assessment of the licensee's processes for identifying and correcting problems at the Clinton Power Station. The team reviewed previous licensee and inspector-identified issues related to the seven safety cornerstones with emphasis on the Reactor Safety strategic performance area to determine if problems were appropriately identified, characterized, and entered into the corrective action program (CAP). The team reviewed selected plant procedures, interviewed plant and contractor personnel, and attended various station meetings to understand the station's processes for initiating the CAP and related activities. The team also reviewed Nuclear Oversight Assessments, Operating Experience Reports, and trend assessments to determine if problems were being identified at the proper threshold and entered into the CAP process.

The team selected a number of condition reports (CRs), action reports (ARs), and other corrective action documents, primarily generated since the last Problem Identification and Resolution (PI&R) inspection, for more in-depth review. Also, the team searched for items or issues which looked like potential trends and assessed whether the licensee had appropriately identified and captured these trends within the corrective action program.

The team reviewed the past performance of selected plant systems or components to assess equipment monitoring, evaluate maintenance rule implementation, and to identify if any issues were missed by the licensee. The systems or components selected were reactor core isolation cooling (RCIC), the motor driven reactor feed pump, Division 3 emergency diesel generator, and air operated valves (AOVs). As part of this assessment, the team interviewed system managers, reviewed system health reports and system monitoring programs, and performed walkdowns of accessible portions of the systems and components.

The specific documents reviewed are listed in the Attachment to this report.

b. Observations and Findings

With some exceptions, the team concluded that the plant personnel identified plant problems and entered them into the corrective action program by initiating CRs or issue reports. The threshold for initiating a CRs in most cases was low. However, the team identified instances where potential system health and reliability issues that were developed through other licensee chartered processes, were not being tracked in the licensee's corrective action process.

No findings of significant were identified; however, the inspectors noted several observations as described below:

b.1 Condition Reports - Issue Initiation

In general, the team concluded that the threshold for identifying deficiencies both for plant equipment and programmatic issues was low. The team noted that the CR generation rate had increased significantly over the last two years and especially within the last 4 months. The recent step increase was due to the initiation of a new "issues" web based system implemented by the licensee in December 2003 and was confirmed through interviews with station staff. During interviews with licensee staff members, the inspectors noted that most interviewees stated that the new system greatly improved not only the ease of initiating a condition-issue report but also improved their ability to track their issues to closure. However, some individuals were unfamiliar with this feature which may indicate a weakness in the training process. The inspectors also noted that while a few CRs were generated during the year as a result of inspector prompting, the overall number of those instances had decreased significantly compared to the previous year which may indicate a greater awareness of the CR-issue process.

However, the team identified several examples where the licensee missed opportunities to initiate CR's or issues. For example:

- During a review of RCIC's system's health evaluation, the team noted that a number of instances where the analog trip module cards setting needed to be calibrated/adjusted in order to meet procedural setpoint tolerances during past technical specification required channel calibration and function tests. The licensee did not write CRs reflecting this trend until prompted by the team.

- In CR 114453 , "Reactor Scram Due to MPT "B" Sudden Pressure," the licensee noted that safety relief valve (SRV), 1B21-F047A, experienced elevated tailpipe temperatures after the plant automatic shutdown. This was abnormal, since the reactor pressure response showed a peak pressure below the pressure setpoint of the SRV (1113 psig). The licensee concluded that the tailpipe temperature was attributed to leakage or "chatter." The licensee did not initiate another action to determine the root cause of the elevated temperature. The team noted that since the tailpipe temperature returned to normal, the cause could not have been due to leakage, because the tailpipe temperatures would have remained elevated. The licensee agreed with the team and initiated CR 209078 to track and evaluate this issue.

- Air Operated Valves (AOVs) The team noted that AOV deficiencies were not commonly added to the corrective action program with a CR, but that most deficiencies were documented on a Work Request as a broke-fix type item. Since CRs were not written for all deficiencies found, trending of component performance was not done per the CR program. The system engineer performed trending using WRs with some CRs and posted results in a custom Excel Spreadsheet that was not available to the site. However, the engineer

included the information in the Program Health Report, a synopsis of component condition documented for review by management and other interested parties.

- Two examples where operations personnel were unaware of plant activities were identified and CRs were not generated at the time of occurrence. The first involved work conducted outside of the turbine building from an elevated scissors lift on January 7, 2002. Had the lift toppled, it would have fallen on the reserve auxiliary transformer power supply conductors or it's static VAR compensator. This work activity had not been screened through the work/risk management program. The second example occurred on September 29, 2002, when higher than normal concentrations of total organic compounds in the turbine building sump water were identified by chemistry personnel. The elevated level was due to painting and paint curing in the turbine building. Operations personnel were unaware of the painting activities. The licensee generated issue report number 211801 for both of these items during the PI&R inspection.

The team concluded that the forgoing examples identified by the team were minor events; however, the examples demonstrated a weakness in the initiation of CRs.

b.2 Trending

The team reviewed the effectiveness of the licensee's trending program which was used to identify problems. Although the licensee has the capability to perform trends using the corrective action program software, it's use was not apparent to the team. Common cause analysis reports which had been completed were initiated as individuals believed trends occurred and could not be tied directly back to trend reports.

The team identified one example of a missed trend that occurred between February 2003 and March 2004. Operators had received several alarms in the main control room with the self test system pertaining to RCIC. The licensee had initiated several CRs stating that a RCIC system load driver card was the cause of the failures. Repairs were made but there was no evidence of identification of a trend. The team did not have an operability concern because the load driver card that caused the alarms was associated with the system gland seal steam air compressor and the RCIC remained operable. However, the team was concerned that the licensee had not identified the multiple card failures as an adverse trend.

b.3 Nuclear Oversight Assessments and Self-Assessments

The team reviewed the a sample of quarterly Nuclear Oversight Continuous Assessment Reports generated since the previous PI&R inspection and a sample of self-assessment reports performed by various plant departments. The reports indicated a thorough review of plant activities. Deficiencies were documented on CRs or issue reports and entered into the corrective action program and enhancements were tracked with the tracking system. The focused area self assessment (FASA) of the self-assessment program in preparation for this PI&R inspection was thorough and critical. The FASA Team identified similar issues such as a need for deeper "extent of condition"

evaluations. Condition reports were generated to correct problems and improve weaknesses in implementation. The presence of NOS was noted in the plant activities. In addition, the team observed NOS taking an active role challenging activities in the daily CAP meetings. The team concluded that the NOS at Clinton was a positive influence and its observations and plant self-assessment were consistent with the NRC findings.

.2 Prioritization and Evaluation of Issues

a. Inspection Scope

The team reviewed previous inspection reports and other corrective documents generated since February 2002. The team examined selected Apparent Cause Evaluations (ACEs), Root Cause Reports (RCR), prompt investigations, operability determinations, and Common Cause Analyses (CCAs) to independently verify that identified issues were appropriately prioritized and evaluated when entered into the corrective action program (CAP). The team reviewed data for a 5-year period for the reactor core isolation cooling (RCIC), motor driven reactor feed pump, and the Division 3 emergency diesel generator. The team focused on the technical adequacy of the cause determinations, adequacy of the extent of condition reviews including evaluations of potential common cause or generic concerns, and the appropriateness of the corrective actions. In addition, the team also assessed the adequacy of the operability and reportability determinations and selected several items to ensure proper implementation of the Maintenance Rule.

The team reviewed the controlling procedures, selected records of activities, and observation of various licensee meetings to observe the assignment of CR categories and priorities for current issues and the review of root cause analyses and corrective actions. In addition, the team conducted interviews with licensee personnel. The specific documents reviewed are listed in the Attachment to this report.

a. Observations and Findings

The team observed that in general, the licensee's prioritizations and evaluations were adequate and focused on safety and risk. However, two findings of very low safety significance and several observations related to less than rigorous extent of condition reviews were identified. The team also made observations with respect to the roles of the review committees, specifically, the SOC, CAPCO, and MRC.

b.1 Role of the Site Overview Committee (SOC), Corrective Action Program Coordinators (CAPCO) and Management Review Committee (MRC)

The team concluded that the performance of the review committees were mixed. During the inspection, the team members attended several of the daily SOC and MRC meetings. The meetings moved quickly and discussion on a topic was usually by exception which led the team to question the function of the SOC.

The team noted that the SOC's role, as defined in procedures, was to evaluate each issue for appropriateness of corrective actions, significance for investigation level

recommendations, and extent of condition. However, there was little objective evidence that these activities were occurring during these meetings. At the SOC meetings, issues were processed very quickly with little or no discussion among committee members. As discussed below, the team identified several concerns with respect to extent of condition reviews which were not questioned by SOC members. Although the team did not identify any issues which were mis-categorized by the SOC, the team was concerned that the collegial review of the issues may not occur until the MRC meeting up to 14 days later. Through discussions with plant staff, the team noted that some assessment of the dispositioning was done separately outside of the SOC meetings, e.g. through discussions between the CAPCO's and department managers.

The team also noted that some cause evaluations and proposed corrective actions presented to the review groups lacked the necessary rigor and quality to ensure effective implementation of corrective actions. The team observed that MRC members provided sufficient feedback to ensure that the evaluations and proposed corrective actions were appropriately revised. In one case observed, a cause evaluation was rejected by the MRC.

In addition, through interviews with licensee staff, the team determined that several interviewees did not know function of the SOC or MRC which indicated additional communication and or training was needed in this area.

b.2 Extent of Condition

The team reviewed CR's, apparent cause reports (ACE), and root cause reports (RCR) and concluded that with some exceptions, the licensees evaluations of extent of condition were adequate. The team identified that for more challenging situations the extent of condition was frequently short of acceptable and lacking in rigor. This has also been identified by the resident inspectors during routine inspections. Two findings of very low safety significance were identified and are discussed in Sections b.3 and b.4. Additional observations of minor significance are discussed below:

- Diesel Driven Fire Pump 'A': The team identified that the diesel fire pump had a history of problems with high jacket water temperatures and was concerned that the licensee had not evaluated the extent of condition. For example:

- In August 2002, the fire pump was secured due to high coolant temperature (CR 118636). The licensee investigation revealed fouling of the shell side of the pump heat exchanger.

- In September 2002, a catastrophic failure of the pump occurred caused by overheating of the engine. The licensee did not determine the root cause of the overheating. The license replaced the pump.

- On October 29, 2003, the fire pumps engine's jacket water temperature was outside of procedural limits. The licensee documented in CR 83703 that the water pump belt was loose and corrected it by tightening the belt.

- On March 1, 2004, again, the engine's jacket water temperature was high. The licensee again concluded that the belt was loose, tightened the belt and closed CR 205058 to action tracking.

The team reviewed CR 205058 and determined that the licensee had not evaluated whether corrective actions to prevent recurrence were appropriate. It was not apparent that the licensee evaluated the acceptability of the high temperatures. Late in the inspection, the licensee provided an evaluation by the vendor that stated the fire pump would meet it's design expectations because it would perform at elevated temperatures. However, the team concluded that the plant staff had not demonstrated the necessary rigor until questioned by the team.

- Division 1 Diesel Generator Undervoltage Devices Found Flagged: In November 2002, the licensee initiated CR 132942 when operators found undervoltage flags had dropped indicating a momentary degraded voltage condition on 4160 Volts AC Buses 1A1, 1B1, and 1C1. As a followup, the operator reset all of the flags. This adverse condition was supposed to be followed under work order (WO 515516), but this WO was canceled. However, at a later date, because another dip in voltage occurred, licensee management initiated an engineering change request (ECR) to evaluate the trend and determine if undervoltage devices should have tripped. While the licensee did evaluate the issue under the ECR, the recommended corrective actions involved lengthening the time delay on the low voltage relays. The licensee did not evaluate whether the undervoltage conditions were normal. While it appeared that the undervoltage condition did not adversely affect any equipment, the team was concerned about the lack of a questioning attitude with respect to the underlying root cause which is voltage transients.

- Reactor Scram Due to Main Power Transformer (MPT) 'B' Sudden Pressure Trip: The licensee determined that the root cause for the July 4, 2002, reactor scram was the failure of the sudden pressure relay (SPR) caused by infant mortality due to a manufacturing defect in the sudden pressure relays bimetal orifice. The team questioned the validity of the root cause analysis. There were two possible causes for the failure of the SPR: (1) a manufacturing defect in the SPR bimetal orifice device or; (2) the sudden pressure bimetal device experienced higher than recommended temperatures (greater than 82 degrees Celsius) for an extended period of time which resulted in damage to the bimetal orifice device.

  The team determined that the second cause was possible because it was supported by the vendor (Qualitrol), and the licensee confirmed that the transformer temperature detector in the days prior to the plant trip indicated temperatures as high as 90 degrees Celsius. The licensee ruled out the second possible cause by stating that the oil temperature where the SPR was mounted would typically be lower than the temperature at the top of the transformer where the oil temperature gauge is sensing. The licensee reasoned that with the top oil temperature above specification, the temperature at the SPR was likely lower

and within the operating range for the SPR. The team noted that the licensee did not perform testing to confirm their assumptions.

The team also noted that the transformer vendor rated the transformer for 115 degrees Celsius. However, as discussed above, the sudden pressure relay, an integral part of the transformer, was rated for only 82 degrees Celsius. Because the inconsistency between the temperature ratings for the transformer and relay were not addressed by the licensee, it was possible for improper operation. While this transformer is not a safety related piece of equipment, this issue has generic implications.

The team questioned whether the licensee identified the cause for the sudden pressure relay failure. Following the scram, the licensee retested the "B" relay again without success. The other phases of the MPT were also tested. Both "C" and "D" phases also did not test satisfactorily. In this case, the relays did not trip when called upon to do so. An additional CR was written (CR 114477) to document this adverse condition. The CR determined that these relays did not operate properly, because there was an "air bubble in the oil space that prevented operation of the relay." From interviews with the licensee's staff, this bubble was never observed, but it was postulated to be the cause.

The team concluded that this is another example of lack of rigor in pursuing the extent of condition. The team is concerned that the potential may exist for a similar event because all of the options were not pursued for the root cause.

b.3 Failure to Identify the Extent of Condition for Incorrect Fuses As a Condition Adverse to Quality

Introduction The inspectors identified a Green, Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, for the licensee's failure to determine the cause and appropriate corrective actions for a significant condition adverse to quality.

Description On February 2, 2004, a maintenance technician discovered that a 2.5 Amp fuse was installed in a Reactor Protection System (RPS) circuit board instead of a 0.25 amp fuse. As a result of the condition, the maintenance technician replaced the fuse with a 0.25 amp fuse. A CR was initiated (AR 201824). The cause for the condition was indeterminate, and the CR was closed to trending.

The license did not perform an extent of condition evaluation for the situation and did not evaluate the effects of the condition on the Reactor Protection System. The inspectors were primarily concerned that the same type fuse may have been installed in other circuit cards in the RPS. Since there was no evidence that the fuse was incorrectly installed during previous maintenance activities, it was possible that the vendor might have supplied the circuit card with the 2.5 amp fuse already installed. The inspectors noted that if the vendor supplied the card with the wrong fuse, similar cards in the RPS may have had the same incorrectly installed fuses. Additionally, the licensee had not performed a past operability review on the original condition, so there was no technical analysis evaluating the effects of the mis-application of the 2.5 amp fuse on the RPS.

Since similar circuit cards were installed in the RPS, generic operability concerns in regard to the RPS existed.

Based upon the teams concerns, the licensee initiated CR 212061 to address the extent of condition and any operability concerns in regard to this issue. Based upon the licensee's followup for this new CR, the licensee identified the circuit card to be associated with the 10 second time delay provided for a scram signal. When the mode switch is taken to shutdown, this card provides a 10 second scram pulse to ensure that all rods are inserted and that the reactor is shutdown. Each RPS division (4 divisions) have one of these cards. Additionally, these same time delay cards are used in other applications in the RPS circuitry. Since, the plant was operating during the inspection, the licensee could not determine if other 2.5 amp fuses were mis-applied in RPS circuit cards. The licensee evaluated the potential effects on these cards if a 2.5 amp fuse were installed instead of a 0.25 amp fuse. The licensee determined that even with the incorrect fuse installed, the design of the card was such that a backup fuse (an upstream 0.5 amp) would blow and perform the same function if the 2.5 amp fuse were called upon to interrupt current and did not. Additionally, the licensee determined that any other failure mode would either cause the RPS to fault in the fail-safe, desired, position (half scram), or the self-test circuitry for the RPS would identify any failure that could affect the RPS function. Any identified failure would be addressed at that time by entry into the appropriate LCO(s).

Analysis The team concluded that the failure to determine the cause of the misapplication of the 0.25 amp fuses in the RPS circuit cards was a performance deficiency warranting a significance evaluation. The team determined that the finding was greater than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, " Issue Disposition Screening" issued January 14, 2004. The finding was associated with the Mitigating Systems cornerstone objective of reliability of systems to respond to initiating events to prevent undesirable circumstances and the attribute of design control. The RPS provides timely protection against the onset and consequences of conditions that threaten the integrity of the fuel barrier and the reactor coolant pressure boundary, and this fuse mis-application affected the function of the RPS. The finding was of very low safety significance because the deficiency once evaluated, did not result in a loss of function per Generic Letter 91-18. The licensee documented in CR 212061 that the RPS would still be able to perform its function despite the mis-application of a 2.5 amp fuse in the time delay cards.

Enforcement 10 CFR 50, Appendix B, Criterion XVI, states, in part, that in the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. Contrary to the requirements in 10 CFR 50, Appendix B, Criterion XVI, the licensee failed to determine the cause of this condition, an incorrectly sized fuse in an RPS time delay circuit card, and failed to determine an adequate extent of condition and appropriate corrective actions for this significant condition adverse to quality. By failing to perform an extent of condition evaluation, the licensee failed to pursue the cause and necessary corrective actions for assuring that this adverse condition affecting a risk and safety significant system was resolved and corrected.

Because the finding has been captured by the licensee's corrective action program (CR 212061), this violation is being treated as a Non-Cited Violation (NCV 05000461/200403-01(DRP)) consistent with Section VI.A.1 of the NRC Enforcement Policy.

b.4 Failure to Evaluate the Extent of Condition of the Division 1 Emergency Diesel Generator Starting Air System

Introduction: A Green finding was identified by the team for the licensee's failure to take appropriate corrective actions to evaluate the extent of foreign material identified in the Division 1 emergency diesel generator starting air system. The finding was not considered to be a violation of regulatory requirements.

Description: The team reviewed the work history and CRs associated with the Division 1 "A" air receiver check valve, 1DG168 and determined that the licensee did not adequately address the cause and extent of condition for foreign material found in the air system. Specifically,

- In November 2002, following the installation of a new air compressor for the Division 1 'A' air starting subsystem and air dryer check valves in both the Division 1 DG 'A' and 'B' air starting sub-systems, the "A" DG air receiver check valve failed an inservice test.

- In September 2003, foreign material in the Division 1 DG air starting system caused the "A" DG air receiver check valve (1DG168) to fail an inservice test. The licensee replaced the check valve and closed the CR to action tracking. Despite the second failure, the licensee did not address, via the CR or the work instructions, whether the piping system had been inspected to ensure that it was free of foreign material.

The inspectors questioned the licensee regarding the extent of condition review. The licensee decided to reopen the issue and perform an apparent cause evaluation. As part of the apparent cause evaluation, the licensee reinspected the air piping associated with the 'A' air receiver. During that inspection on November 6, 2003, the licensee found additional foreign material of the same type that caused the second failure. The extent of condition evaluation in the apparent cause evaluation for the September 2003 failure concluded that foreign material within the air supply subsystem for the Division 2 and 3 DG units was not an issue. The condition appeared to be limited to the Division 1 DG "A" air supply subsystem.

However, on March 24, 2004, during the PI&R inspection, the licensee noted abnormal pressure indications in the Division 1 DG air starting system air dryer. On March 26, 2004, the licensee documented in AR 210997 that Division 1 DG starting air system air receiver 'B' inlet check valve 1DG-169 was leaking by. When the valve was replaced under work order 679440, foreign material was found inside the valve seat area. The team reviewed the CR and work order, and identified that the licensee did not investigate whether any other foreign material was left in the line and did not attempt to identify the source of the foreign material.

The team concluded that the licensee's failure to address the extent of condition in the CR and in the work order that replaced the failed air check valve on March 26, 2004, demonstrated a weakness in the licensee's ability to preform adequate extent of condition reviews. Specifically, the team is concerned that the failure to examine the system for additional foreign material could result in failures that could affect the reliability of the starting requirements of the emergency diesel generator because it has been identified in both the 'A' and 'B' trains of the Division 1 DG starting air system.

Analysis: The licensee's failure to adequately perform an extent of condition review for foreign material following an in-service testing failure of a Division 1 DG air starting system check valve due to foreign material being caught in the valve seat was a performance deficiency. This was the third such failure in the Division 1 DG air starting system within the last 18 months. The inspectors reviewed this finding against the guidance contained in Appendix B, "Issue Dispositioning Screening," of IMC 0612, "Power Reactor Inspection Reports." In particular, the inspectors compared this finding to the findings identified in Appendix E, "Examples of Minor Issues," of IMC 0612 to determine whether the finding was minor. Following that review, the inspectors concluded that none of the examples listed in Appendix E accurately represented this example. As a result, the inspectors compared this performance deficiency to the minor questions contained in Section 3, "Minor Questions," to Appendix B of IMC 0612. The inspectors concluded that the finding was greater than minor because the finding was associated with the Mitigating System (MS) Cornerstone attribute of equipment reliability and affected the MS objective of ensuring the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. In this example, the failure to inspect for additional foreign material in the piping system could result in challenges to the reliability of the emergency diesel generator to respond as designed to an initiating event.

The inspectors evaluated this finding using Manual Chapter 0609, "Significance Determination Process," Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," Phase 1 screening associated with the MS Cornerstone. The inspectors answered no to all five questions. Therefore, the inspectors concluded that this issue was a finding of very low safety significance (Green).

Enforcement: No specific licensee procedure or instruction required by 10 CFR 50 Appendix B was violated; therefore, no violation of regulatory requirements occurred. This issue was considered a finding of very low safety significance (FIN 05000461/2004003-02). The licensee entered the event into its corrective action system as CRs 176490, 210977, 194448, and 213491.

.3 Effectiveness of Corrective Action

a. Inspection Scope

The team reviewed selected condition and issue reports, apparent cause evaluations (ACE), common cause assessments (CCA), root cause reports (RCR) and associated corrective actions to evaluate the effectiveness of corrective actions, verifying timeliness and appropriateness with safety and risk significance. The team also reviewed the

licensees corrective actions for four Non-Cited Violations (NCV) documented in NRC inspection reports during the past 2 years. The team selected samples from all areas with focus on the reactor core isolation cooling system (RCIC), motor driven reactor feed water pump, the Division 3 emergency diesel generator, the diesel driven fire pumps, and air operated valves.

The team focused on information recorded since February, 2002, but selected items were reviewed going back over a 5-year period. The team selected samples based on their importance in reducing operational risks and recurring problems. A listing of the specific documents reviewed is in the Attachment to this report.

b. Observations and Findings

In general, the team concluded that the licensee adequately corrected plant problems. The inspectors determined that longstanding plant issues identified during the previous PI&R inspection have been corrected. Effectiveness reviews were also actively used to determine the overall impact and long term corrective action. No findings of significance were identified; however, the team noted several observations with respect to the effectiveness of corrective actions.

b.1 Selected System Reviews

The team reviewed samples of condition and issue reports, apparent cause evaluations, root cause reports, work orders conducted independent walkdowns of several selected systems and/or components. These included the reactor core isolation cooling (RCIC), the motor driven reactor feed water pump, division 3 emergency diesel generator, and air operated valves. The reviews were primarily for the period since the previous PI&R inspection and in the case of RCIC, motor driven reactor feed pump, and the Division 3 emergency diesel generator, data was selected for the past five years. In general, observed equipment deficiencies had been entered into the corrective action program. However, the team identified several situations not previously entered into the corrective action program associated with the material condition.

Reactor Core Isolation Cooling System: The licensee identified a number issues with the system including high pump vibrations and excessive leak-by into the reactor core isolation cooling system turbine casing through the steam admission valve equalizing valve. Several effective corrective actions were implemented such as removing the valve from the system and replacing the pump shaft and bearing. Overall these actions have resulted in improved performance within the past 5 years. The team did not identify any concerns with respect to the operability or evaluation of the system.

Division 3 Emergency Diesel Generator Because of previous performance problems, this component was placed in Maintenance Rule (A)(1) status for unavailability in 2000 when an extensive outage was necessary to replace the generator and turbocharger. These items were damaged when the generator was synchronized out of phase. The licensee determined that the failure was caused by a design problem with the Emergency Reserve Transformer and inappropriate loading of the EDG. Subsequently, the EDG has performed reasonably well with lesser problems.

The most recent problem involved the loss of some lube oil from the generator outboard bearing and having the oil slung into the generator windings. The licensee determined that the loss of lube oil was caused by an alignment issue with the bearing sight glass on the bearing casing. This resulted in oil being added to the operating level and then being slung out during operation. The licensee generated an operability evaluation that showed that the bearing was acceptable with less oil (about 454 cc) and that the generator could perform its function of running loaded for 7 days without operator intervention. The licensee developed a comprehensive corrective plan to replace the bearing which was executed during the PI&R inspection. The inspectors concluded that the licensee's corrective actions appeared appropriate.

Motor-Driven Reactor Feedpump (MDRFP) The team noted several historical problems concerning the pump's flow control valve (FCV). Recent problems with the MDRFPs minimum flow valve linkage failure have also led to reactor vessel level perturbations. Additionally, issues related to the MDRFP's minimum flow valve complicated the licensee response to a reactor scram on December 2, 2003. This complication resulted in an additional scram signal being generated due to low reactor vessel water indications. Multiple failures of the MDRFP's suction relief valve were recently corrected by replacing it with a modified relief valve. The team concluded that the licensee's corrective actions appear to be appropriate.

4OA4 Cross Cutting Aspects of Findings

Safety-Conscious Work Environment

a. Inspection Scope

The team interviewed a number of members of the plant staff, representing almost all work groups at all levels, to assess the establishment of a safety conscious work environment.

During the interviews, document reviews, and observations of activities, the team looked for evidence that plant employees might be reluctant to raise safety concerns. The interviews typically included questions similar to those listed in Appendix 1 to NRC Inspection Procedure 71152, "Suggested Questions for Use in Discussions with Licensee Individuals Concerning PI&R Issues." The team also reviewed the station's procedures related to the Employee Concerns Program, (ECP) and discussed the implementation of this program with the station's program investigator/coordinators. The team also reviewed associated procedures, several case reports and trend studies to verify compliance.

b. Observations and Findings

No significant findings were identified. None of the plant staff members interviewed expressed concerns regarding a safety-conscious work environment. All staff members said individuals were encouraged by management to identify issues and bring them to management's attention or enter them into the corrective action program. All personnel interviewed acknowledged that the new "issues" web based process was more user-friendly than the previous system. The team noted that the CAP program was used

more than in the past and individuals were not avoiding entering issues into the CAP due to fear of being assigned actions to address them (boomerang effect) especially during heavy work loads.

When questioned about their knowledge of the ECP, all staff members said they were aware of it, and knew how to contact the ECP coordinators. Staff members did not express any significant reluctance to use the ECP and no one stated that they knew anyone who had a negative experience using the ECP. When asked if they actually knew anyone who had brought a concern to the ECP, none of the staff members interviewed could name anyone. This indicated that the confidentiality of the ECP was rigorously maintained. The trend data reviewed indicated that the ECP cases were reasonably distributed by departments and specialty fields with no significant concentration in any particular area. Since the last PI&R inspection, there has been a reduction in the number of ECP cases at the site. Everyone interviewed also knew of the availability of the NRC.

4OA5 Other Activities

(Closed) Violation 05000461/2003002-01: Failure to provide complete and accurate information to the NRC which impacted a licensing decision.

During an audit in late August 2002, the licensee identified that license applications for two individuals were incomplete in that medical conditions were not reported to the NRC. Once submitted, the NRC concluded that the individual licenses needed to include restrictions for operation. A severity level III violation with no civil penalty was issued in May 2003. The licensee initiated CR 00127786 to identify the root cause and initiate corrective actions.

During this inspection, the team reviewed the licensee's corrective actions. This included a review of the revised procedures governing upkeep of the medical records, processing applications, and individual responsibilities to report medical issues. The team also interviewed the station nurse to ascertain her understanding of the process. Previous audits of the medical records program were also reviewed. The team selected several reactor operator and senior reactor operator medical files and compared the records to that maintained by the NRC. No significant issues were identified. This violation is closed.

4OA6 Management Meetings

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. D. Williams and other members of licensee management in an exit meeting on April 7, 2004. Licensee management acknowledged the findings presented and indicated that no proprietary information was provided to the inspectors.

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

K. Baker, Design Engineering, Sr. Manager
R. Bement, Site Vice President
T. Bostwick, Regulatory Assurance
B. Bunte, Engineering Programs Manager
R. Davis, Radiation Protection Manager
R. Frantz, Regulatory Assurance Representative
W. Iliff, Regulatory Assurance Manager
J. Madden, Nuclear Oversight Manager
M. McDowell, Plant Manager
R. Peak, Plant Engineering, Sr. Manager
K. Scott, I and C Maintenance Manager
J. Sears, Chemistry Manager
D. Schavey, Operations Director
T. Shortell, Training Manager
J. Stoval, Outage Manager
J. Williams, Site Engineering Director
C. Williamson, Security Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000461/20004003-01	Failure to identify the extent of condition for incorrect fuses in the reactor protection system.
05000461/2004003-02	Failure to evaluate the extent of condition of foreign material found in the division 1 emergency diesel generator starting air system.

Closed

05000461/2003002-01	Failure to provide complete and accurate information to the NRC which impacted a licensing decision.

LIST OF DOCUMENTS REVIEWED

The following is a list of licensee documents reviewed during the inspection, including documents prepared by others for the licensee. Inclusion of a document on this list does not imply that NRC inspectors reviewed the entire documents, but, rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. In addition, inclusion of a document on this list does not imply NRC acceptance of the document, unless specifically stated in the body of the inspection report.

Assessments

FASA AT#: 179242-05; Corrective Action Program - December 19, 2003

NOA-C-02-01Q; Nuclear Oversight Continuous Assessment Report, January - March, 2002; April 10, 2002

NOA-C-02-02Q; Nuclear Oversight Continuous Assessment Report, April - June, 2002; July 30, 2002

NOSA-CL-02-3Q; Nuclear Oversight Continuous Assessment Report, July - September, 2002; October 30, 2002

NOSA-CL-02-4Q; Nuclear Oversight Continuous Assessment Report, October - December 2002; January 30, 2003

NOSA-CPS-03-05; Engineering Design Control Audit Report, August 4 - August 15, 2003; August 18, 2003

Nuclear Oversight Monthly Issue Report, January 1, 2004 - January 31, 2004

Nuclear Oversight Monthly Issue Report, February 1, 2004 - February 29, 2004

Condition or Issue Reports

CR 2-00-03-086; Division 3 DG exceeds Maintenance Rule unavailability criteria. Potential (a) (1) classification. March 20, 2000

CR 00147624; Inadequate reporting of licensed operator medical information, March 5, 2003

CR 00127786; Inadequate documentation for initial licensed training individual medical status, October 16, 2002.

CR 076094;Fire Pump ‘A’ Inop Due to Failing Surveillance, 09/22/01

CR 97392; Higher than expected direct reading ferrography lube oil result, February 7, 2002

CR 98757; Document Discrepancy NFPA Code Conformance Eval - 4.3.10.3.c; January 11, 2002

CR 102013; 3 Safety Related PM's went past late prior to PM deferral, April 1, 2002, and associated ACE.

CR 122323; Relay K5 failed calibration, September 10, 2002

CR 103225; Breakers on CB MCC C Tripped off Inadvertently; April 10, 2002

CR 103752; Abnormal Fluctuation of DG 1C Voltage During CPS 9080.23

CR 106914; Common Cause Analysis on OPS Clock Resets; May 6, 2002

CR 107813; Reactor Scram due to Feedwater Transient, May 13, 2002, and associated Root Cause Report

CR 108748; Reactor Feed Pump Min Flow Valves Control Systems Problems, 5/17/02

CR 108849; Loss of FW Heating due to Normal Drain Valve 1HD24A failing, 5/20/02

CR 114453; Reactor Scram Due to MPT B Sudden Pressure; July 4, 2002

CR 114477; As Found Trip Points for MPT "C" (1MP04EC) Out of Specification; July 5, 2002

CR 115115; 10 CFR 21 Notification Regarding ABB K-Line Breakers' Failure; July 10, 2002

CR 120027; Inadvertent Entry into Tech Specs, 08/20/02

CR 121706; Complete a Follow-up Review of FP/Battery Tests per AR 93755, 09/05/02

CR 123805; 1DC17E, 5A, CKT 32 Bkr Won't Open - MPT D Sudden Pressure Relay; September 19, 2002

CR 123841; Unusual Noise and Smoke Coming from 0FP01PA During (CPS) 9071.0; (Apparent Cause Evaluation), 09/20/02

CR 123953; Lessons Learned from Fire Pump A Event, 09/21/02

CR 126729; A Fire Pump Auto Started, 10/10/02

CR 128841; Normal Power from TB MCC 1F-3EL Lost, During CW "B" Start; October 24, 2002

CR 132942; Divisional DG Undervoltage Devices Found Flagged; November 23, 2002

CR 136484; O-Ring Failures in DG Air Start Motor Shutoff Valves, December 9, 2002, and associated Nuclear Event Report.

CR 136948; Divisional DG Undervoltage Devices Found Flagged; December 20, 2002

CR 141615; Adverse Trend in implementation of Exelon CAP, January 28,2002

CR 144463; CPS 9071.04 Does Not Restore FP System to OP Status, 02/13/03

CR 145537; Potential Inoperability of Cnmt Isolation Valve 1E12-F004B; February 20, 2003

CR 146148; Incomplete PMT Steps n Work Orders 18352 and 18334, February 25, 2003, includes associated ACE.

CR 160096; Auto Start of Fire Pumps During Surveillance Testing, 05/22/03

CR 161968; CAP Improvements, June 5, 2003

CR 165928; Inadequate Implementation by the Site of LS-AA-105, 6/5/03

CR 165946; 'A' Fire Pump Run Time Changed Without Notifying Chemistry, 07/02/03

CR 167671; Incorrect Pump Shaft for FP 'B', 07/15/03

CR 170723; Oil Leak from Div. 3 DG Generator Outboard Bearing Reservoir, August 4, 2003, includes associated Operability Evaluation and 10CFR50.59 Screening.

CR 172878; Unexpected STS Failure, August 25, 2003,

CR 176490; Chunk of Rust Found in DG Air Start System Check Valve, September 9, 2003, and associated Apparent Cause Evaluation

CR 176078; High Rate of Flow Switch Failures, September 17, 2003, and associated Common Cause Analysis

CR 179686; STS Failure Due to RCIC LoadDriver Card C-A14-A125 Failure, October 7, 2003

CR 181782; RCIC Minimum Flow Valve Failure, October 19, 2003, and associated Apparent Cause Evaluation

CR 181797; Unexpected RCIC Turbine Trip and Seal Compressor Start, October 19, 2003

CR 182511; DC MCC 1A Ground While Starting the RCIC Gland Seal Air Comp, October 23, 2003

CR 183613; NOS Identified Untimely Operability Determination, August 11, 2003

CR 184004; Repeat Failure - Unexpected STS Failure, October 31, 2003

CR 184088; NOS Identifies Potential Orifice Related Trend, October 31, 2003, and associated Common Cause Analysis

CR 184482; Unsupported Acceptance Criteria Included in19-AK-13; October 31, 2003

CR 185197; SSDI Calculation Enhancement; November 6, 2003

CR 185804; Unexpected Annunciator 5004-3H (STS Failure), November 10, 2003

CR 188449; Unexpected MCR Alarm 5004-3H, STS Failure, November 29, 2003

CR 188841; TG Reverse Power Trip Did not Occur on SCRAM; December 2, 2003

CR 185942; Self Test Failure, November, 11, 2003

CR 189324; Bypass Valve Oscillations Observed; December 3, 2003

CR 189462; Main Turbine Control Valve Fluctuation During Raising Power; December 7, 2003

CR 190178; Higher than Expected Temperature Found on Fuse Block; December 10, 2003

CR 191035; 1DG01KC: Increase in Particle Counts above Expected, December 16, 2003

CR192078; Unexpected Annunciator 5003-3H (Recurring STS Failure), December 20, 2003

CR 194856; TS 3.3.6.2 Table Note (B) not Consistent with Other TS; January 13, 2004

CR 195810; Follow-up Issue from Common Cause Analysis for CR 176078, 01/16/04

CR 197833; Div 3 Degraded Voltage Time Delay TS Allowable Value; January 27, 2004

CR 199342; Water Found Dripping from Safety Related Pull-Box; February 4, 2004

CR 201824; Incorrect Size Fuse Found Installed in NSPS Card; February 15, 2004

CR 202048; MOV Thermal O/L Bypass Relays Read Questionable; February 16, 2004

CR 202599; Blown Fuse 1E32AF02; February 18, 2004

CR 203192; 1E32AF03 Fuse Need Replaced per MA-CL-001; February

CR 203193; 1E32AF04 Fuse Needs Replaced; February 21, 2004

CR 203194; 1E32AF05 Fuse Needs Replaced; February 21, 2004

CR 203270; Fuse for a MSIV LCS Replaced/Non Safety Fuse; February 18, 2004

CR 205803; CR Deficiencies Not Addressed, 11/20/03

CR 205832; Div 3 DG Generator Outboard Oil Level Low, March 3, 2004

CR 207437; Deficiencies Identified During Maintenance Audit, 3/9/04

CR 208343; Fire Pump B Smoking Excessively During 9071.01, 03/15/04

CR 208932; Uses of M&TE Not Properly Documented, 3/17/04

CR 210271; Unacceptable Results of the Calibration of 1FW010C, 2/24/04

CR 211801; Shift Not Informed/Aware of In-Progress Work Details, 3/18/04

CR 212295; Inappropriate Closure of CR Corrective Actions, 10/31/03

CR 212745; Maintenance Rule Functional Failure Determination, 04/02/04

Condition or Issue Reports Generated During the Inspection

CR 209078; Gaps in Rigor from Review of Scram Data on 07-04-2002; March 17, 2004

CR 211801; Shift Not Informed/Aware of In-Progress Work Details; March 18, 2004

CR 212061; Incorrect Size Fuse Found Installed in NSPS Card; March 31, 2004

CR 209350; Assess Overall Performance of all ATMS - Aggregate Impact; March 18, 2004

CR 209347; Evaluate Need for PM(S) on NSPS Cards; March 18, 2004

CR 209344; No Cards on Hand for C-A14-125 CATID-1149380; March 18, 2004

CR 212525; Corrective Action to not Adequately Identified; April 1, 2004

CR 212745; Maintenance Rule Functional Failure Determination; April 2, 2004

Calculations

EQ-CL006; Environmental Qualification of the Okonite Company Low Voltage Power and Control Cables; Revision 20

Drawings

937220501; Electrical - General Notes; Revision 2

E02-1AP03; Electrical Loading Diagram; Revision Y

E03-1AP00; Motor Cont. Center Starter and Misc Details; Revision M

Miscellaneous

2003 Corrective Action Program Improvement Plan

PORC Number 03-007; PORC Meeting Discussion Minutes; March 25, 2003

NRC IN 2003-08; Potential Flooding Through Unsealed Concrete Floor Cracks, June 25, 2003, and the licensees associated evaluation and documentation.

NRC IN 2002-26; Failure of Steam Dryer Cover Plate after a Recent Power Uprate, September 11, 2002, including Supplements 1and 2, GE SIL 644: BWR Steam Dryers and the licensees response.

NCVs

NCV 2002-006-01; Technical Specification 5.4.1 Violation was Identified for an Inadequate Procedure used During the Performance of a Division III EDG Test.

NCV 2003-09-03; Misalignment of 4160V Bus 1C1 Reserve Feed PT's Cubicle Door; March 31, 2004

Procedures

LS-AA-115, Operating Experience Procedure, Rev. 3

LS-AA-120, Issue Identification and Screening Process, Rev. 0

LS-AA-125, Corrective Action Program (CAP) Procedure, Rev. 7

ER-AA-410-1000, Air Operated Valve Categorization, Rev. 1

CC-AA-107; Configuration Change Acceptance Testing Criteria; Revision 3

CC-AA-107-1001; Post Modification Testing; Revision 0

CC-AA-206; Fuse Control; Revision 4

CPS 8410.04; Molded Case Circuit Breaker/Bucket Component Functional Testing and Maintenance; Revision 19b

DE-28; Removing and Abandoning Equipment; Revision 3

EI-AA-1; Nuclear Policy, Employee Issues, Rev. 1

EI-AA-101; Employee Concerns Program, Rev. 3

EI-AA-1002; Employee Concerns Program Trending Tool, Rev. 0

FA-CL-0001; Fuse Program Guidance; Revision 1

WC-AA-106; Work Screening and Processing, Rev. 1

HR-AA-07-101; Licensed Nuclear Operator Medical Examination; Revision 0

OP-AA-105-101; Administrative Process for NRC License and Medical Requirements; Revision 6

Vendor Manuals

900, 910 Series; Rapid Pressure Rise Relay, Qualitrol Corporation

Work Orders

WO 01126; RCIC Turbine Trip Valve Doesn't Indicate Tripped

WO 10595; RCIC Turbine Speed GETARS Card 1C88N2403 Will Not Calibrate

WO11966; Point 9 RCIC Instrument Panel Area Temp at Alarm Setpoint

WO25465; Perform Non-destructive Check Valve Diagnostic Testing

WO 30177; Sys. Engr. Identified That Protective Jacket for Conduit

WO 36747; Low Fails are Coming in at Least Once per Shift

WO 40494; Replace MCC Bucket with New One

WO 40496; Replace MCC Bucket with New One

WO 41759; RCIC STM Outbd Won't Open With C/S

WO 43481; Lost Indication and Status Light During RCIC Trip

WO 47553; 1E51-F064 Will Not Open

WO 47801; 1E51F064 Found to Have 60 DPM Packing Leak During RPV Hydro

WO 49217; LD Valve Stem Leakage

WO 50289; Install New Packing Rework Valve Due to Repeated Steam

WO 50768; Trouble Shoot/Determine Cause for Repeat Issue (CR 100604)

WO 538602; Replace MCCB 1DC17E5A/32 Since Breaker Will not Open; January 22, 2003

WO 54864; Failed Source Check During 9038.70

WO 58140; GETRS Flow CH.20 Not Responding During RCIC Run (CR 116075)

WO 58156; RCIC Storage Tank Level Switch Reset Light Is Erratic

WO 65962; During RCIC Outage Insulation Was Removed from the RCIC
WO 668454; Fuse for a MSIV LCS Replaced/Non Safety Fuse; March 31, 2004

LIST OF ACRONYMS

AC	Alternating Current
ACE	Apparent Cause Evaluation
AR	Action Request
AV	Air Operated Valve
CCA	Common Cause Analysis
CAP	Corrective Action Program
CAPCO	Corrective Action Program Coordinator
CR	Condition Report
DG	Diesel Generator
FASA	Focused Area Self Assessment
FCV	Flow Control Valve
FSAR	Final Safety Analysis Report
ECR	Engineering Change Request
LCO	Limiting Condition for Operation
MDRFP	Motor Driven Reactor Feed Pump
MPT	Main Power Transformer
MRC	Management Review Committee
MS	Mitigating System
NCV	Non-Cited Violation
OD	Operability Determination
PI&R	Problem Identification and Resolution
PRA	Probable Risk Analysis
RCIC	Rector Core Isolation Cooling
RCR	Root Cause Report
RPS	Reactor Protection System
RV	Relief Valve
SOC	Site Overview Committee
SPR	Sudden Pressure Relay
SRV	Safety Relief Valve
WO	Work Order