October 30, 2002

Mr. T. Coutu
Site Vice President
Kewaunee Nuclear Power Plant
N490 Hwy 42
Kewaunee, WI 54216

SUBJECT: KEWAUNEE NUCLEAR POWER PLANT
NRC INTEGRATED INSPECTION REPORT 50-305/02-05

Dear Mr. Coutu:

On September 30, 2002, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Kewaunee Nuclear Power Plant. The enclosed report documents the inspection findings which were discussed on October 1, 2002, with you and members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the NRC identified two issues of very low safety significance (Green). These issues were determined to involve violations of NRC requirements. However, because of their very low safety significance and because they were entered into your corrective action program, the NRC is treating these issues as Non-Cited Violations, in accordance with Section VI.A.1 of the NRC's Enforcement Policy.

If you contest the subject or severity of a Non-Cited Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 801 Warrenville Road, Lisle, IL 60532-4351; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector Office at the Kewaunee facility.

In response to the terrorist attacks on September 11, 2001, the NRC issued an Order and several threat advisories to commercial power reactors to strengthen licensees' capabilities and readiness to respond to a potential attack. The NRC established a deadline of September 1, 2002, for licensees to complete modifications and process upgrades required by the order. To confirm compliance with this order, the NRC issued Temporary Instruction 2515/148 and over the next year, the NRC will inspect each licensee in accordance with this Temporary Instruction. The NRC continues to monitor overall security controls and may issue additional temporary instructions or require additional inspections should conditions warrant.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made 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/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Kenneth Riemer, Chief
Branch 5
Division of Reactor Projects

Docket No. 50-305
License No. DPR-43

Enclosure: Inspection Report 50-305/02-05

cc w/encl: D. Graham, Director, Bureau of Field Operations
Chairman, Wisconsin Public Service Commission
State Liaison Officer

DOCUMENT NAME: C:\ORPCheckout\FileNET\ML023040516.wpd

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RIII		RIII				
NAME	MKunowski:dtp		KRiemer				
DATE	10/29/02		10/30/02				

OFFICIAL RECORD COPY

ADAMS Distribution:
WDR
DFT
JGL1
RidsNrrDipmIipb
GEG
HBC
JFL
C. Ariano (hard copy)
DRPIII
DRSIII
PLB1
JRK1

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-305
License No:	DPR-43
Report No:	50-305/02-05
Licensee:	Nuclear Management Company, LLC
Facility:	Kewaunee Nuclear Power Plant
Location:	N490 State Highway 42 Kewaunee, WI 54216
Dates:	July 1 through September 30, 2002
Inspectors:	J. Lara, Senior Resident Inspector Z. Dunham, Resident Inspector P. Krohn, Senior Resident Inspector, Point Beach T. Madeda, Physical Security Inspector D. Nelson, Radiation Specialist T. Ploski, Senior Emergency Preparedness Inspector M. Castanedo, Reactor Engineer H. Gonzalez, Reactor Engineer F. Ramirez, Reactor Engineer D. Chyu, Reactor Engineer H. Peterson, Senior Operations Engineer N. Valos, Examiner L. Vick, Inspector, NRC Headquarters, Operator Licensing Branch C. Goodman, Inspector, NRC Headquarters, Operator Licensing Branch D. Nelson, Senior Radiation Specialist
Approved By:	Kenneth Riemer, Chief Branch 5 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000305-02-05; Nuclear Management Company, LLC; on 07/01-09/30/02, Kewaunee Nuclear Power Plant; Fire Protection, Identification and Resolution of Problems, Licensed Operator Requalification Program.

This report covers a 3-month period of baseline resident inspection and announced baseline inspections in radiation protection, emergency preparedness, and physical security. The inspection was conducted by resident inspectors, Region III inspectors, and NRC Headquarters inspectors. Two Severity Level IV Non-Cited Violations (NCVs) which were Green findings were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. 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.

A. Inspection Findings

Cornerstone: Mitigating Systems

- Green. A finding of very low risk significance was identified by the inspectors for the licensee's failure to provide fire barrier seals on auxiliary building Appendix R walls separating the Dedicated and Alternate fire zones.

  The finding was of greater than minor risk significance because it involved the degradation of the effectiveness of a fire protection defense-in-depth feature (Appendix R fire barriers), which in the event of a fire could allow for the spread of fire between both Dedicated and Alternate safe shutdown fire zones, and therefore could have affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because a credible fire scenario involving the degraded fire barriers could not be realistically postulated due to the actual low combustible loading in the immediate area at the time of the finding and the relative distance between mitigating system components. This issue was determined to be a Non-Cited Violation of 10 CFR Part 50, Appendix R, requirements.

  This finding was also determined to be related to the licensee's ability to identify and resolve problems: a Problem Identification and Resolution cross-cutting issue. The inspectors reviewed the specific corrective actions associated with the unsealed fire penetrations and open corrective actions associated with the fire protection program and from those reviews, determined that the licensee had not implemented timely and effective corrective actions. (Section 1R05)

Cornerstone: Emergency Preparedness

- Green. A Non-Cited Violation of 10 CFR 50.54(q) was identified for the failure to correct a self-revealing deficiency that was initially identified in June 2002 and that was related to the emergency planning standards of 10 CFR 50.47(b). The deficiency concerned the meteorological monitoring system's instrumentation and the resulting erroneous 10 meter wind direction indications in the Control Room. Correct wind direction information would be required to ensure the capability to provide accurate dose assessments and protective action recommendations under accident conditions, as required by the Kewaunee Emergency Plan.

  The finding was determined to be of very low safety significance because the erroneous wind direction readings were identified prior to being needed for response to an actual emergency and alternate means were available to obtain accurate meteorological data. Therefore, the issue did not result in the failure to meet a planning standard. (Section 2PS3.2)

B. **Licensee-Identified Violation**

A violation of very low safety significance which was identified by the licensee has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. The violation and corrective action tracking number is listed in Section 4OA7 of this report.

Report Details

Summary of Plant Status

The plant was operated at approximately 100 percent power for most of the period except for brief reductions in power to facilitate quarterly scheduled main turbine stop and control valve testing and auxiliary feedwater surveillance testing.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R04 Equipment Alignment (71111.04)

.1 Partial System Walkdowns

a. Inspection Scope

The inspectors conducted partial walkdowns of the system trains listed below while the opposite train of equipment was out-of-service or when equipment deficiencies existed to warrant verification of the system lineup to verify that the systems were correctly aligned to perform their design safety function. In preparation for the walkdowns, the inspectors reviewed the system lineup checklists, normal operating procedures, abnormal and emergency operating procedures, and system drawings to verify the correct system lineup. During the walkdowns, the inspectors also examined valve positions and electrical power availability to verify that valve and electrical breaker positions were consistent with, and in accordance with, the licensee's procedures and design documentation. The inspectors also reviewed any outstanding work orders (WOs) and Corrective Action Process (CAP) documentation as applicable to verify that those documents did not reveal issues that could affect train function. The material condition of the equipment was also inspected.

- 'A' Train Safety Injection - July 25, 2002
- 'A' Diesel Generator - August 8, 2002
- 'A' Component Cooling Water (CCW) - August 22, 2002
- 'B' Train Safety Injection - August 30, 2002
- CCW System - September 25, 2002

b. Findings

No findings of significance were identified.

.2 Complete Walkdown of Auxiliary Feedwater (AFW) System

a. Inspection Scope

During the week of July 2, 2002, the inspectors conducted a semi-annual walkdown of a risk significant system. The inspectors inspected the AFW system since the system was ranked one of the ten most important systems for risk at the facility. To verify the proper system lineup, the inspectors reviewed operations procedures, including the system lineup checklist and normal and abnormal procedures, the Updated Safety Analysis Report (USAR), system drawings, and vendor manuals to verify that the licensee's procedures did not prescribe any actions which were contrary to the design basis requirements for the system. Additionally, the inspectors reviewed current temporary design changes, operator workarounds (OWAs), and the licensee corrective action program database to determine if there were any outstanding system deficiencies which could prevent the system from performing its design function. Using the system lineup checklist, the inspectors walked down system components to verify that valves were correctly positioned, electrical power was correctly aligned, and that support systems were operational. During the walkdown, the inspectors also checked equipment labeling, verified that hangars and support structures were installed properly, and evaluated the overall material condition of the system. The inspectors also conducted a general review of the licensee's corrective action database records to determine whether the licensee was adequately identifying equipment alignment problems for other risk significant systems at an appropriate threshold.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Fire Zone Inspections

a. Inspection Scope

The inspectors walked down the following areas or accompanied licensee personnel performing fire penetration inspections to assess the overall readiness of fire protection equipment and barriers:

- 'A' Diesel Generator and Day Tank Room - July 13, 2002
- 'B' Diesel Generator and Day Tank Room - July 13, 2002
- Deaerating Drains Tank Room - August 10, 2002
- Auxiliary Building Basement - August 10, 2002
- Control Room Air Conditioning and Records Storage Room - August 12, 2002
- Cardox Storage Tank Room - August 13, 2002
- Turbine Building Basement and Mezzanine - August 20, 2002
- Auxiliary Building Basement - August 22, 2002
- Charging Pump Room - August 30, 2002
- Safety Injection Pump Room - August 30, 2002
- Component Cooling Pump Room 'B' - August 30, 2002

- Fire Penetration Inspection in Hot Chemistry Laboratory - Preventative Maintenance Procedure (PMP) 08-33, September 5, 2002

Emphasis was placed on the control of transient combustibles and ignition sources, the material condition of fire protection equipment, and the material condition and operational status of fire barriers used to mitigate fire damage or propagation. Additionally, fire hoses, sprinklers, and portable fire extinguishers were inspected to verify that they were in satisfactory physical condition and were unobstructed. Passive features, such as fire doors, fire dampers, and fire zone penetration seals, were also inspected to verify that they were in satisfactory condition and capable of providing an adequate fire barrier.

b. Findings

Introduction

A finding of very low risk significance (Green) was identified by the inspectors for the licensee's failure to provide fire barrier seals on auxiliary building Appendix R walls separating the Dedicated and Alternate fire zones. This finding was a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix R requirements.

Description

On August 22, and August 30, the inspectors performed walkdown inspections of different Appendix R fire zones and identified wall penetrations which had not been sealed.

On August 22, the inspectors inspected Appendix R Fire Zone AX-23B, in the auxiliary building basement. The scope of the inspection included examinations of floor, ceiling, and wall penetrations. The inspectors identified two unsealed pipe penetrations through the Appendix R wall. The unsealed pipes penetrated through the wall separating the fire zone containing the charging pumps (dedicated shutdown system) and the alternate shutdown system components. This issue was discussed with fire protection personnel who initiated a work order to seal the penetration, established an hourly fire watch, and initiated CAP012675, "Unsealed Penetrations Found in Appendix R Wall." As part of the review of this issue, licensee personnel identified a third unsealed penetration in the same area as discussed above.

On August 30, the inspectors performed detailed walkdowns of Appendix R Fire Zone AX-23A, in the safety injection pump room. This included inspection of floor, ceiling, and wall penetrations. The inspectors identified an unsealed Appendix R wall pipe penetration. The unsealed pipe penetrated through the wall separating the 'B' safety injection system pump (alternate shutdown system) and the residual heat removal valve gallery which contained dedicated shutdown system components. The inspectors noted that the pipe was physically routed in a floor trench and the penetration did not have a unique identifying number. The inspectors discussed this finding with the shift management who subsequently initiated an hourly fire watch, a work request to seal the open barrier, and CAP012769, "Inoperable Appendix R Fire Barrier."

Analysis

The inspectors determined that the licensee's failure to ensure that fire penetrations were sealed within Appendix R wall barriers was a performance deficiency warranting a significance evaluation. The inspectors concluded that the finding was of greater than minor risk significance in accordance with Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Disposition Screening." This conclusion was based on the fact that the finding involved the degradation of the effectiveness of a fire protection defense-in-depth feature (Appendix R fire barriers), which in the event of a fire could allow for the spread of fire between both Dedicated and Alternate safe shutdown fire zones, and therefore could have affected the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences.

Utilizing the Phase 1 screening worksheet of IMC 0609, "Significance Determination Process," Appendix F, "Determining Potential Risk Significance of Fire Protection and Post-Fire Safe Shutdown Inspection Finding," and the guidance in Section F.5, "Fire Protection Risk Significance Screening Methodology - Phase 2," the inspectors characterized the finding to be of very low risk significance (Green) based on the following criteria: although the finding documented a degradation of a fire protection feature, a credible fire scenario involving the degraded fire barriers could not be realistically postulated due to the actual low combustible loading in the immediate area at the time of the findings and the relative distance between mitigating system components.

Based on the results of this inspection, the inspectors concluded that this finding related to the licensee's ability to identify and resolve problems: a Problem Identification and Resolution cross-cutting issue. As discussed in Section 4OA2.1 and .3, of this report, the inspectors reviewed the licensee's documented corrective actions associated with the licensee's and NRC's identification of unsealed Appendix R fire penetrations. The inspectors reviewed the specific corrective actions associated with the unsealed fire penetrations and open corrective actions associated with the fire protection program which were first opened for action following the last NRC triennial fire inspection (see IR 50-305/01-02) in February 2001. From those reviews, the inspectors determined that the licensee had not implemented timely and effective corrective actions.

First, in May 2001, the licensee identified in corrective action document KAP WO 01-3355 [KAP-Kewaunee Assessment Process, the previous name for the corrective action program], that the fire barrier penetration inspection, per PMP 08-33, "FP-Penetration Fire Barrier Inspection," Revision D, would not be completed within the 18-month periodicity of the facility's fire plan. The KAP stated, in part, that the inspection procedure PMP 08-33 was inadequate for performing the penetration inspections. The KAP also referenced KAP Corrective Action 00-1568-001, which required the development of a facility Fire Barrier Control Program in order to properly address the weaknesses associated with PMP 08-33. Although the licensee noted that the penetration inspection was overdue as of the end of May 2001, it was not until several months later that the licensee resumed performance of the fire barrier

penetration inspections. As of September 10, 2002, PMP 08-33 had not been completed. The inspectors determined that timely implementation of the required fire barrier inspections could have identified the deficiencies discussed in this finding.

Secondly, in April 2001, the licensee completed Root Cause Evaluation (RCE) 01-038, "Electrical Pull Box PB 2105 Does Not Meet Appendix R Requirements." The RCE was performed due to the lack of test documentation to support the use of the pull box as a qualified 3-hour barrier. As a result of the RCE, corrective actions included "Perform a walk-down of all Appendix R barriers in the plant for entry into the barrier program database." The due date for completing this corrective action was December 2002. Although the completion date had not expired for this corrective action, the inspectors concluded that this corrective action was not implemented in a timely manner as indicated by the minimal progress in completing the corrective action. The inspectors determined that timely implementation of this corrective action could have provided the licensee an additional opportunity to identify the Appendix R fire barrier deficiencies discussed in this finding.

Enforcement

Section III.G.1.a of 10 CFR Part 50 Appendix R, required, in part, that one train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control stations be free of fire damage. Contrary to this requirement, on August 22 and 30, 2002, a total of three unsealed Appendix R fire penetrations which separated Dedicated and Alternate safe shutdown equipment were identified by the inspectors. The failure to ensure that Appendix R fire penetrations were sealed was determined to be a violation of 10 CFR Part 50, Appendix R, Section III.G.1.a. The licensee could not determine the actual length of time that the penetrations were unsealed, but the licensee postulated that it was possible for the unsealed penetrations to have existed since initial construction of the facility. This issue was characterized to be of very low safety significance (Green) and was classified as a Severity Level IV violation. This Severity Level IV violation is being treated as an NCV (NCV 50-305/02-05-01, Failure to Provide Appendix R Barriers Between Dedicated and Alternate Fire Zones) consistent with Section VI.A.1 of the NRC Enforcement Policy. As immediate corrective actions, the licensee initiated hourly fire watches and initiated work requests to provide acceptable fire barriers. The licensee documented the issues in the corrective action program as CAP012675 and CAP012769.

.2 Annual Fire Drill Inspection

a. Inspection Scope

On July 30, 2002, the inspectors observed an unannounced fire drill at the facility to evaluate the readiness of the fire brigade to respond to and fight fires. The drill simulated a fault with the facility's 'C' Main Transformer which resulted in an oil fire. The inspectors observed the following activities to verify that the fire brigade was capable of adequately fighting fires:

- Donning of protective clothing and turnout gear,
- Operation of self-contained breathing apparatus,

- Deployment and simulated pressurization of fire hoses,
- Communication between the fire brigade leader and fire brigade team members, and
- Implementation of fire fighting strategies.

The inspectors also attended the licensee's post-drill critique to evaluate the adequacy of the drill observers' comments and observations.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

On June 28, 2002, the licensee performed heat exchanger performance monitoring on the spent fuel pool heat exchanger. On July 5, the inspectors reviewed the test procedure and associated test data to verify that the test acceptance criteria were adequate to demonstrate acceptable heat transfer capability of the heat exchanger and that the test data met the acceptance criteria. Additionally, the inspectors also verified that the test accounted for instrument inaccuracies and that the test frequency was sufficient to provide early detection of heat exchanger degradation prior to any loss of heat removal capabilities below design values.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Facility Operating History

a. Inspection Scope

The inspectors reviewed the plant's operating history from January 2001 through August 2002, to assess whether the Licensed Operator Requalification Training (LORT) program had addressed operator performance deficiencies noted at the plant.

b. Findings

No findings of significance were identified.

.2 Licensee Requalification Examinations

a. Inspection Scope

The inspectors performed a biennial inspection of the licensee's LORT program. The inspectors reviewed the annual requalification operating and written examination

material to evaluate general quality, construction, and difficulty level. The operating portion of the examination was inspected during September 16 - 20, 2002. The operating examination material consisted of two dynamic simulator scenarios and seven job performance measures (JPMs). No written examination was administered during this annual requalification examination. However, the previous 2000 - 2002 biennial written examination material and overall results were reviewed. The biennial written examination consisted of approximately 40 open reference, multiple choice questions. The written examination was organized into two parts, Part A and Part B. Part A used the static simulator as an open reference instrument. Part B was an open reference examination on administrative controls and procedural limits. The inspectors reviewed the methodology for developing the examinations, including the LORT program 2-year sample plan, probabilistic risk assessment insights, previously identified operator performance deficiencies, and plant modifications. The inspectors reviewed the licensee's program and assessed the level of examination material duplication during the current year annual examinations as compared to the previous year's annual examinations. The inspectors also interviewed members of the licensee's management, operations, and training staff and discussed various aspects of the examination development.

b. Findings

No findings of significance were identified.

.3 Licensee Administration of Requalification Examinations

a. Inspection Scope

The inspectors observed the administration of the requalification operating test to assess the licensee's effectiveness in conducting the test and to assess the facility evaluators' ability to determine adequate performance using objective, measurable performance standards. The inspectors evaluated the performance of one operating shift crew in parallel with the facility evaluators during two dynamic simulator scenarios. In addition, the inspectors observed licensee evaluators administer five JPMs to four licensed operators. The inspectors observed the training staff personnel administer the operating test, including pre-examination briefings, observations of operator performance, individual and crew evaluations after dynamic scenarios, and techniques for JPM cuing. The inspectors evaluated the ability of the simulator to support the examinations. A specific evaluation of simulator performance was conducted and documented under Section 1R11.7, "Conformance With Simulator Requirements Specified in 10 CFR 55.46," of this report. The inspectors also reviewed the licensee's overall examination security program.

b. Findings

No findings of significance were identified.

.4 Licensee Training Feedback System

a. Inspection Scope

The inspectors assessed the methods and effectiveness of the licensee's processes for revising and maintaining its LORT program up-to-date, including the use of feedback from plant events and industry experience information. The inspectors interviewed licensee personnel (operators, instructors, training management, and operations management) and reviewed the applicable licensee's procedures. In addition, the inspectors reviewed the licensee's quality assurance/quality control oversight activities, including licensee's training and operations department self-assessment reports, to evaluate the licensee's ability to assess the effectiveness of its LORT program and to implement appropriate corrective actions.

b. Findings

No findings of significance were identified.

.5 Licensee Remedial Training Program

a. Inspection Scope

The inspectors assessed the adequacy and effectiveness of the remedial training conducted since the previous annual requalification examinations and the training planned for the current examination cycle to ensure that they addressed weaknesses in licensed operator or crew performance identified during training and plant operations. The inspectors reviewed remedial training procedures and individual remedial training plans, and interviewed licensee personnel (operators, instructors, and training management). In addition, the inspectors reviewed the licensee's previous NRC annual examination cycle remediation packages for unsatisfactory operator performance on the operating test to ensure that remediation and subsequent re-evaluations were completed prior to returning individuals to licensed duties.

b. Findings

No findings of significance were identified.

.6 Conformance With Operator License Conditions

a. Inspection Scope

The inspectors evaluated the facility and individual operator licensees' conformance with the requirements of 10 CFR Part 55. The inspectors reviewed the facility licensee's program for maintaining active operator licenses and to assess compliance with 10 CFR 55.53(e) and (f). The inspectors reviewed the procedural guidance and the process for tracking on-shift hours for licensed operators and which control room positions were granted credit for maintaining active operator licenses. The inspectors also reviewed nine licensed operators' medical records maintained by the facility's medical contractor for ensuring the medical fitness of its licensed operators and to assess compliance with

medical standards delineated in American National Standards Institute/American Nuclear Society ANSI/ANS-3.4-1983, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants," and with 10 CFR 55.21 and 55.25. In addition, the inspectors reviewed the facility licensee's LORT program to assess compliance with the requalification program requirements as described by 10 CFR 55.59(c).

b. Findings

The inspectors identified an apparent violation of medical requirement regulations, 10 CFR 55.21, "Medical Examination," and 10 CFR 55.23, "Certification," in that the licensee's medical evaluations appeared to be inadequate in reference to ANSI/ANS-3.4-1983, and failed to adequately implement all the required medical testing. The finding is greater than minor, but is unresolved pending completion of the licensee's investigation into the medical issue, subsequent NRC review, and completion of a significance determination.

On September 18, 2002, during review of nine licensed operators' medical records, the inspectors identified that a checklist existed for ANSI/ANS 3.4-1983 (ANSI) requirements. The checklist was apparently used for the year 2000 medical examinations. Of the nine records reviewed, the checklist for three of the operators' specifically noted discrepancies associated with the ANSI requirements; however, the overall physical examination was signed by the examining physician as being satisfactory. On one checklist, the disqualifying condition, based on Section 5.3.2, "Cardiovascular," for the conditions of arrhythmia and peripheral vascular insufficiency, was noted as "Yes." In addition, the same record also noted an unsatisfactory electro-cardiogram (ECG). The inspectors questioned the examining physician who had completed the particular checklist that indicated that disqualifying conditions existed. The physician subsequently changed the unsatisfactory conditions to satisfactory in front of the inspectors without further evaluating the medical record.

Other records noted questionable conditions, such as skin condition affecting the capability of wearing protective clothing (Section 5.4.10), endocrine (Section 5.4.11), hematopoietic (Section 5.4.12), and laboratory tests (normal hemoglobin, Section 5.4.16). The inspectors checked the actual laboratory results of the blood test. Pertaining to the blood test, the records showed that apparently these conditions were high outside the normal band as noted in the laboratory test results.

ANSI/ANS 3.4-1983 stated, in part, that the primary responsibility for assuring that qualified personnel are on duty rests with the facility licensee. In addition, the health requirements set forth within the standard provided the minimum necessary to determine that the physical condition and general health of the operators were not such as might cause operational errors endangering public health and safety. The specific health requirements and disqualifying conditions are described in Section 5.3, "Disqualifying Conditions," and Section 5.4, "Specific Minimum Capacities Required for Medical Qualifications," of the ANSI standard.

Contrary to ANSI requirements, the inspectors identified medical examination records that appeared to indicate that several medical conditions for certain operators were

questionably outside the ANSI standard. Based on the review of the information, the inspectors questioned the overall adequacy of the medical examinations which noted each operator satisfactorily met the ANSI standards.

In addition, on September 23, 2002, following the inspectors' questions regarding the adequacy of the facility licensee's medical examinations, the licensee conducted reviews of their medical examinations and records. The licensee found that certain tests per the ANSI standard were not completed. Specifically, the licensee was not adequately testing its operators for nose sensitivity, Section 5.4.2, and neurological testing, Section 5.4.14. The licensee implemented immediate corrective action by conducting testing of its operators before they were allowed back onshift.

The safety significance of this issue was more than minor due to licensed operators who may not be medically qualified performing licensed duties that could potentially affect the health and safety of the public. Accordingly, an Unresolved Item (URI 050-305/02-05-02, Adequacy of Medical Examinations) was opened pending the NRC's review of the licensee's completed follow-up investigation into the adequacy of its overall medical evaluations. The licensee was further reviewing their medical program and entered this issue into its corrective action program as CAP013062 and CAP013080.

.7 Conformance With Simulator Requirements Specified in 10 CFR 55.46

a. Inspection Scope

The inspectors assessed the adequacy of the licensee's simulation facility (simulator) for use in operator licensing examinations and for satisfying experience requirements as prescribed in 10 CFR 55.46, "Simulation Facilities." The inspectors also reviewed a sample of simulator performance test records (i.e., transient tests, malfunction tests, and reactor core performance tests), simulator work order records, and the process for ensuring continued assurance of simulator fidelity in accordance with 10 CFR 55.46. The inspectors reviewed and evaluated the discrepancy process to ensure that simulator fidelity was maintained. This was accomplished by a review of discrepancies noted during the inspection to ensure that they were entered into the licensee's corrective action system and by an evaluation to verify that the licensee adequately captures simulator problems and that corrective actions were performed and completed in a timely fashion commensurate with the safety significance of the item (prioritization scheme). Open simulator discrepancies were reviewed for importance relative to impact on 10 CFR 55.45 and 55.59 operator actions as well as nuclear and thermal hydraulic operating characteristics. Closed simulator discrepancies were reviewed for the last 12 months for timeliness of resolution.

The inspectors also reviewed the licensee's recent simulator core modeling performance testing to assess the adequacy of the simulator core replicating the actual reactor plant core. Furthermore, the inspectors conducted interviews with members of the licensee's simulator configuration control group and completed the Inspection Procedure IP 71111.11, Appendix C, checklist to evaluate whether or not the licensee's plant-referenced simulator was operating adequately as required by 10 CFR 55.46(c) and (d).

b. Findings

The inspectors identified an apparent violation of the simulator fidelity regulation, 10 CFR 55.46, "Simulation Facilities," in that the licensee's maintenance of simulator core modeling and simulator fidelity appeared to not comply with ANSI/ANS-3.5-1985, "Nuclear Power Plant Simulators for Use In Operator Training." The finding is greater than minor, but is unresolved pending completion of the licensee's core modeling testing and investigation, subsequent NRC review of the core testing data, and completion of a significance determination for this issue.

On September 19, 2002, the inspectors identified three issues concerning the potential failure to comply with 10 CFR 55.46, "Simulation Facilities." The first issue concerned the licensee's use of the simulator to meet experience requirements for applicants for initial operator and senior operator licenses in accordance with 10 CFR 55.46(c)(2)(i). The second issue concerned the adequacy of the licensee conducting periodic simulator performance testing throughout the life of the simulator. The third issue concerned the licensee's program for correcting simulator modeling and hardware discrepancies, including discrepancies identified from performance testing in accordance with 10 CFR 55.46(d)(2).

First Issue: Operator License Eligibility Requirements

In accordance with 10 CFR 55.46(c)(2)(i), if the plant-referenced simulator was to be used to meet experience requirements for applicants for operator and senior operator licenses, it must utilize models relating to nuclear and thermal-hydraulic characteristics that replicate the most recent core load in the nuclear power reference plant for which a license was being sought.

The licensee's plant-referenced simulator was supposed to be operated under ANSI/ANS-3.5-1985; however, the inspectors found no evidence that the licensee had conducted on the simulator (for Cycle 25, the most recent core load) the required core performance tests. In addition, as required by ANSI/ANS-3.5-1985 (Section 3.1.1(9)), the licensee had apparently not demonstrated that the simulator was capable of performing, using only operator action normal to the reference plant, core performance testing, such as plant heat balance, determination of shutdown margin, and measurement of reactivity coefficients and control rod worth, using permanently installed instrumentation.

Based upon a sample review of five core performance tests previously conducted on a pre-Cycle 25 core load (Cycle 7), the inspectors determined that the records and data reviewed were insufficient to confirm that the plant-referenced simulator utilized models relating to nuclear and thermal-hydraulic characteristics that replicated the most recent core load. The specific simulator core performance tests reviewed were:

1. Initial Criticality By Dilution, All Rods Out, Boron Endpoint, Point of Adding Heat (POAH) (Test No. 21702001)

2. Isothermal Temperature Coefficient Measurement (Test No. 22002001)

3. Control Rod Worth Using Rod Swap (Test No. 21902001)

4. Reference Bank Worth Measurement (Test No. 21802001)

5. Power Defect Measurement (Test No. 22102001)

In addition, it appeared that the simulator core performance tests as described in ANSI/ANS-3.5-1985 for the current plant Cycle 25 core load had not been conducted to date.

During June 2002, the licensee conducted a comparison of the simulator model versus predicted and measured data for Cycle 25, which concluded that the simulator Cycle 25 core would respond in a manner similar to that of the plant's Cycle 25 core. However, due to lack of records and data, the inspectors determined that the licensee apparently had not performed the normal operations test on the simulator for core performance testing for the Cycle 25 core load. Based on initial information provided by the licensee, there was no apparent evidence that the simulator would in-fact replicate the most recent core load at Kewaunee. Furthermore, the inspectors found no evidence that at least one of the nuclear characteristics, samarium, was considered or modeled for the most recent simulated core load (Cycle 25).

Subsequent to the inspection, the licensee performed the previously listed five simulator core performance tests for Cycle 25 during the week of October 1 - 4, 2002. The licensee submitted the October 2002 core performance test data to the NRC. That material is currently undergoing NRC review.

Second Issue: Periodic Performance Testing

Previous regulations required periodic simulator performance testing throughout the life of the simulator. Similar requirements have since been included in the new regulations in 10 CFR 55.46(d)(1). At the time of the inspection, the licensee could not provide sufficiently detailed information to allow the inspectors to assess whether or not the plant-referenced simulator performance tests, specifically core performance tests, were being conducted throughout the life of the simulator. Specifically, it appeared that the simulator performance tests were not conducted with the appropriate frequency to assure continued simulator fidelity. In general, the inspectors could not determine, with the information provided by the licensee, that results of performance tests were being retained 4 years after completion of each performance tests or until superceded by updated test results.

Contrary to 10 CFR 55.46(d)(1), the inspectors found apparent lapses in the facility licensee's conducted simulator performance testing. The inspectors determined that prior to the Cycle 25 core load, the testing data for the licensee's simulator core modeling appeared only to be configured to the Cycle 7 core load.

Third Issue: Maintenance of Simulator Fidelity

The inspectors determined that the licensee's simulator management and configuration control procedures appeared to be insufficient for providing direction for meeting

simulator fidelity requirements. The procedures appeared to have several weaknesses that raised significant concerns. For example, the simulator corrective action program did not appear to ensure the following: (1) that discrepancies were identified in a timely manner and considered generic implications; (2) that discrepancies were properly prioritized for resolution commensurate with the safety significance of the item; (3) that corrective actions were proposed (based on a root cause, if appropriate); and (4) that discrepancies were corrected in a timely fashion.

One potentially significant issue was that none of the current simulator control procedures prescribed a prioritization scheme for simulator discrepancy items. The inspectors determined that the previous version of the simulator control procedure described a prioritization scheme, Simulator Control Procedure, No. SCP 5.2, "Simulator Feedback Reports," dated June 29, 2002, Revision G. This scheme was based on a formula*, "Frequency + Observable Effect x 2 = Impact."* The scale ran from 3 (lowest priority) to 9 (highest priority).

Based on review of several examples of licensee identified and prioritized simulator fidelity items, the inspectors determined that the prioritization scheme appeared not to be workable. For example, the scheme was directly opposite from the plant work order priority scheme assigned to indicate relative importance or urgency of processing the work order and implementing corrective action as described in General Nuclear Procedure, GNP-08.02.14, "Work Screening and Classification," Revision A, dated June 20, 2002. The terms for the formula, "importance," "frequency," and "observable effect," used to determine the prioritization scheme were not well understood by the licensee's training staff. The definitions for these terms were not written down or formalized in a procedure. One staff member claimed that "frequency" was determined by the number of times the action was performed by the operators in the plant and not whether it was important to safety. Furthermore, only a few staff members were familiar with the present prioritization scheme.

In addition, it appeared to the inspectors that simulator discrepancies were often not being corrected because most Simulator Work Orders (SWOs) were not assigned a schedule for corrective action. Only those SWOs that were assigned a ranking of 8 or 9 on the above described scheme had scheduled due dates. In addition, numerous active, open SWOs appeared not to have proposed corrective actions.

Contrary to 10 CFR 55.46(d)(2), the inspectors determined that the licensee apparently was not adequately correcting simulator modeling and hardware discrepancies and discrepancies identified from performance testing.

In summary, the licensee's simulator appeared to be inadequate for satisfying experience eligibility requirements for operators based on preliminary information and data associated with Cycle 25 and previous cycle performance testing. The licensee's overall periodic simulator performance testing appeared to be lacking. Based on preliminary information, the plant-referenced simulator core modeling data appeared not to have been updated between Cycle 7 and Cycle 25. Furthermore, it appeared that the licensee's process for continued assurance of simulator fidelity with regard to identifying, reporting, correcting, and resolving simulator discrepancies through its corrective action program was not effective.

The safety significance of these issues is more than minor due to the apparent failure to meet the requirements of 10 CFR 55.46 with regard to assuring maintenance of the plant referenced simulator fidelity. Accordingly, an Unresolved Item (URI 050-305/02-05-03, Adequacy of the Plant-Referenced Simulator to Conform With Simulator Requirements in 10 CFR 55.46) was opened pending further review by NRC Headquarters representatives of licensee's simulator performance testing data and other applicable documents. The licensee was gathering additional information and documentation for further NRC review. The licensee entered this issue into their corrective action program as CAP013305.

.8 Simulator Dynamic Requalification Exam

a. Inspection Scope

On August 12, 2002, the inspectors observed a simulator dynamic requalification exam to evaluate crew performance, formality of communications, and annunciator response. The inspectors reviewed the following licensee procedures and documents in order to establish the inspection criteria:

- General Nuclear Procedure (GNP) - 03.17.01, "Alarm Response Standard," Revision A
- GNP-03.17.02, "Briefings Standards," Revision A
- GNP-03.17.04, "Communications Standard," Revision A
- Emergency Plan Implementing Procedure-AD-02, "Emergency Class Determination," Revision AD

In addition, the inspectors evaluated the crew's implementation of the facility's abnormal procedures and emergency operating procedures, oversight and direction provided by the shift manager and control room supervisor, and the adequacy of identification and reporting of the event classification in accordance with the facility's emergency plan. The inspectors also compared the simulator board configuration with the actual control room board configuration for consistency between the two to verify that the simulator environment matched the actual control room environment as closely as possible. The inspectors observed the post-scenario critique to determine whether performance issues were accurately identified and addressed.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Steam Dump Controller Erratic Operation

a. Inspection Scope

On July 13, 2002, the inspectors reviewed the licensee's implementation of the Maintenance Rule, 10 CFR 50.65, for the condenser steam dumps which were noted to cycle erratically when shifted from manual to automatic in the steam pressure mode during the last unit startup on May 15, 2002. The inspectors reviewed the licensee's

evaluation of the event to determine if the malfunction of the steam dumps was appropriately evaluated and if corrective actions were adequate to ensure future proper operation. The licensee determined that a dummy resistance load in the manual hand controller had been set incorrectly which led to the valve cycling when switched from manual to automatic. The inspectors reviewed the licensee's maintenance practices, particularly the setting of dummy resistance loads, associated with the steam dump controllers to verify that other controllers at the station were not susceptible to a similar maintenance related error. Additionally, the inspectors reviewed the licensee's maintenance rule evaluation to verify that the steam dumps were properly scoped in accordance with 10 CFR 50.65 and that performance criteria were appropriate.

b. Findings

No findings of significance were identified.

.2 AFW Pump Discharge Check Valves Sticking Open

a. Inspection Scope

On August 26, 2002, the inspectors reviewed the licensee's evaluation of AFW pump discharge check valves which had a history of sticking open during unit startups, resulting in back leakage from the main feedwater system. The licensee considered the sticking check valves to be maintenance rule preventable functional failures, and as such, exceeded the reliability performance criteria for the scoped function of preventing back leakage which could steam bind an AFW pump. In April 2002, the licensee placed the check valves in 10 CFR 50.65(a)(1), and developed corrective actions and goals to return the check valves to (a)(2). The inspectors reviewed the licensee's goals and corrective actions to verify that they were adequate to return the check valves to (a)(2) and reviewed the licensee's corrective action database to determine if there were other AFW equipment deficiencies which should be evaluated as potential maintenance rule functional failures.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation (71111.13)

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and assessment of plant risk, scheduling, and configuration control during the planned and emergent work activities listed below. In particular, the licensee's planning and management of maintenance was evaluated to verify that on-line risk was acceptable and in accordance with the requirements of 10 CFR 50.65(a)(4). Additionally, the inspectors compared the assessed risk configuration against the actual plant conditions and any in-progress evolutions or external events to verify that the assessment was accurate, complete, and

appropriate. Licensee actions to address increased on-line risk during these periods were also inspected to verify that actions were in accordance with approved administrative procedures.

- 'B' Diesel Generator Out-of-Service for Immersion Heater Replacement - July 11, 2002
- Technical Support Center Diesel Generator Overhaul - July 29 to August 2, 2002
- Check Valve ICS-8A Troubleshoot and Repair - August 15, 2002
- Valve CC-302 Troubleshoot with Letdown Isolated - August 20, 2002
- Risk profile associated with work performed during week of September 2 - 9, 2002
- Risk profile associated with work performed during week of September 16 - 19, 2002

b. Findings

No findings of significance were identified.

1R14 Non-Routine Evolutions (71111.14)

.1 Power Reduction for AFW Quarterly Full Flow Inservice Testing

a. Inspection Scope

On August 24, 2002, the unit was reduced to 95 percent power to facilitate quarterly AFW full flow in-service testing. The inspectors observed control room activities to evaluate staff adherence to plant operating procedures, equipment operation, and communications. The following documents were reviewed to establish the inspection criteria:

- N-0-03, "Plant Operation Greater Than 35 percent Power," Revision AM
- GNP-03.17.02, "Briefings Standards," Revision A
- GNP-03.17.04, "Communications Standard," Revision A

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed design basis information and Technical Specification (TS) requirements to verify the technical adequacy of the operability evaluations listed below, to verify that system operability was properly justified, and that the system remained available, such that no unrecognized increase in risk occurred. Where applicable, the inspectors also reviewed calculations and input assumptions to determine the validity of the results. Following silting concerns associated with the emergency Service Water (SW) fill line to the component cooling water system, the inspectors also reviewed the

silting and fouling history associated with the containment fan coil units and the emergency diesel generator jacket water coolers to ascertain the effectiveness of the licensee's silting and biofouling control program.

The inspectors reviewed the following operability evaluations:

- CAP 12136, Breaker for 'B' Diesel Generator Keep Warm Oil System Tripped - July 3, 2002
- CAP 12384, Drawing Discrepancy Associated with Residual Heat Removal Interlocks - July 30, 2002
- CAP 12621, Sedimentation in the Service Water Supply to 'B' Auxiliary Feedwater Pump - August 16, 2002
- CAP 12649, LD-2 Failed to Close Upon Demand - August 22, 2002
- CAP 12800, Calculation Error, September 3, 2002
- CAP 12967, Two IPEOP Setpoints Non-Conservative, Not in Accordance with Guidelines - September 18, 2002
- CAP 12975, RHR 'A' Pressure Transmitter Out of Tolerance - September 23, 2002

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (OWA) (71111.16)

.1 OWA 02-09

a. Inspection Scope

The inspectors reviewed OWA 02-09 which documented sluggish operation of Letdown Heat Exchanger Cooling Water Temperature Control Valve CC-302. The inspectors evaluated the OWA to determine whether there was any impact on the operators to properly respond to plant transients and accidents and to implement abnormal operating procedures and emergency operating procedures.

b. Findings

No findings of significance were identified.

.2 Semi-Annual Cumulative Review of OWAs

a. Inspection Scope

On August 26, 2002, the inspectors reviewed all active OWAs to determine whether there were any cumulative effects of the OWAs on the reliability and availability of system equipment, and whether there was any increased impact on operators to respond in a correct and timely manner to plant transients and accidents.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors reviewed the proposed revision to Abnormal Operating Procedure A-SW-02, "Abnormal Service Water System Operation," Revision S. Procedure A-SW-02 prescribed actions in the event of abnormal operation or conditions associated with the facility's SW system. Additionally, the inspectors reviewed proposed revisions to SW alarm response procedures. The inspectors reviewed the proposed changes, safety reviews, USAR, and design accident documentation to verify that the procedures would meet design accident requirements and that the procedures could be performed as written. The inspectors also reviewed the licensee's associated 10 CFR 50.59 evaluation to ensure that the proposed procedure revision met the requirements of 10 CFR 50.59.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors observed the post-maintenance testing activities associated with the maintenance and emergent work activities listed below to verify that the test was adequate for the scope of the maintenance work which had been performed and that the testing acceptance criteria were clear and demonstrated operational readiness consistent with the design and licensing basis documents. The inspectors attended pre-job briefings to verify that the impact of the testing had been properly characterized; observed or reviewed the test to verify that the test was performed as written and all testing prerequisites were satisfied; and reviewed the test acceptance criteria. Following the completion of the test, the inspectors conducted walkdowns of the affected equipment, when applicable, to verify that the test equipment was removed and that the equipment was returned to a condition in which it could perform its safety function.

- Technical Support Diesel Generator Overhaul - August 5, 2002
- Containment Spray Check Valve ICS-8A Maintenance - August 19, 2002
- Letdown Heat Exchanger Temperature Control Valve CC-302 Maintenance - August 21, 2002
- Auxiliary Building Mezzanine Fan Coil Unit Clean and Flush - August 30, 2002
- Residual Heat Removal 'A' Pump Motor Oil Change - September 18, 2002
- 'C' Charging Pump Motor Refurbishment - September 20, 2002

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed surveillance testing on risk-significant equipment to verify that the equipment was capable of performing its intended safety function and that the surveillance tests satisfied the requirements contained in TSs and the licensee's procedures, and that the equipment was capable of meeting its design function. During the surveillance tests, the inspectors reviewed the test to verify that it was adequate to demonstrate operational readiness consistent with the design and licensing basis documents, and that the testing acceptance criteria were clear. Portions of the test were observed to verify that the test was performed as written, that all testing prerequisites were satisfied, and that the test data were complete, appropriately verified, and met the requirements of the testing procedure. When abnormalities or unexpected responses occurred during testing, the inspectors verified that the licensee stopped, placed the equipment in a stable and safe condition, and proceeded in a deliberate and cautious manner. Following the completion of the test, where applicable, the inspectors conducted walkdowns of the affected equipment and reviewed completed test documentation to verify that the test equipment was removed and that the equipment was returned to a condition in which it could perform its safety function.

The inspectors observed and reviewed the performance of the following surveillance testing on risk-significant equipment:

- Train 'A' Safety Injection Pump and Valve Test - In-Service Test (IST), July 17, 2002
- Train 'B' Service Water Pump and Valve Test - IST, August 1, 2002
- Train 'A' Containment Spray Pump and Valve Test - IST, August 14, 2002
- PMP 08-30 - Carbon Dioxide System Inspection and Dry Test (QA-1), September 6, 2002
- Nuclear Power Range Channel 1 (Red) N-41 Quarterly Calibration - SP 48-004G, September 3, 2002
- Train 'A' Residual Heat Removal Pump and Valve Test - IST, September 16, 2002

The inspectors also reviewed CAP 012848, "Editorial Error in USAR Section 7.2," which was initiated as a result of the inspection activity and discussed a positive flux rate reactor trip setpoint described in the USAR which did not agree with TS protective instrumentation setpoints--an editorial error which had existed for approximately 2 years but which had been unnoticed by the licensee.

b. Findings

No findings of significance were identified.

1EP2 Alert and Notification System (ANS) Testing (71114.02)

a. Inspection Scope

The inspector discussed with Emergency Preparedness (EP) staff the design, operation, and periodic testing of the ANS in the Kewaunee County portion of the Kewaunee Plant's Emergency Planning Zone to determine whether the ANS was adequately maintained and tested between mid-2000 and mid-2002 in accordance with relevant documents. The inspector also reviewed records associated with scheduled and other ANS maintenance activities to verify that corrective actions were taken following test failures and other reported equipment malfunctions. The inspector remotely observed a bimonthly Kewaunee County ANS operability test that was initiated by a county official.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization (ERO) Augmentation Testing (71114.03)

a. Inspection Scope

The inspector reviewed and discussed with EP staff the procedure that included the primary and back-up methods for initiating an ERO activation and the provisions for maintaining the ERO call-out roster. The inspector also reviewed and discussed assessments of potential upgrades to the methods for contacting ERO members during off-hours.

The inspector reviewed the provisions for conducting monthly, off-hours ERO augmentation drills, and reviewed drill and corrective action records to verify that the licensee maintained, tested, and adequately critiqued its ability to activate the ERO in accordance with commitments. The inspector also reviewed a sample of records on the licensee's ongoing efforts to improve staff augmentation capabilities, such as increasing the numbers of persons assigned to certain ERO positions and determining that the same pre-designated personnel could fill their ERO positions for an emergency at either the Kewaunee Plant or the Point Beach Plant.

The inspector reviewed the current ERO roster to determine whether acceptable numbers of personnel were assigned to each key and support position. The inspector also reviewed a random sample of 25 ERO members' training records to verify that those personnel, who were listed on the current revision of the call-out roster, had completed all annual EP training requirements.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

a. Inspection Scope

The inspector reviewed a sample of Nuclear Oversight staff's 2001 and 2002 audits of the EP program to verify that these independent assessments complied with the requirements of 10 CFR 50.54(t). The inspector also reviewed a sample of corrective action documents that were associated with the 2001 biennial exercise and several EP drills conducted between June 2001 and February 2002 in order to verify that the licensee had fulfilled its drill commitments and to evaluate the licensee's efforts to identify, track, and resolve concerns identified during these activities. The inspector reviewed a sample of procedures and lesson plans to verify that they were revised as was indicated in relevant corrective action program records.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

On August 23, 2002, the licensee performed an emergency planning drill. The drill was designed to exercise the licensee's onsite and offsite emergency response organization and emergency plan. The inspectors observed portions of the drill from the control room simulator and the technical support center to evaluate the licensee's evaluation, classification, and notification of the simulated event, including development and communication of protective action recommendations. The inspectors interviewed licensee emergency preparedness managers following the drill critiques to determine the licensee's critique results to verify that the licensee had adequately identified drill weaknesses and areas for improvement.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Plant Walkdowns and Radiological Boundary Verification

a. Inspection Scope

The inspectors conducted walkdowns of selected radiologically controlled areas within the plant to verify the adequacy of radiological boundaries and postings. Specifically,

the inspectors walked down several radiologically significant work area boundaries (high and locked high radiation areas) in the Auxiliary Building. The inspectors performed confirmatory radiation measurements to verify that these areas and selected radiation areas were properly posted and controlled in accordance with 10 CFR Part 20, licensee procedures, and the TSs.

b. Findings

No findings of significance were identified.

.2 High Radiation Area and Very High Radiation Area (VHRA) Access Controls

a. Inspection Scope

The inspectors reviewed the licensee's procedures, practices, and associated documentation for the control of access to radiologically significant areas (high, locked high, and VHRAs) and assessed compliance with TSs, procedures, and the requirements of 10 CFR 20.1601 and 20.1602. In particular, the inspectors reviewed the licensee's practices and records for the control of keys to locked high radiation areas and VHRAs, and the licensee's methods for independently verifying proper closure and latching of locked high radiation area and VHRA doors upon area egress. Additionally, radiological postings were reviewed, and access control boundaries were assessed by the inspectors throughout the plant to verify that high, locked high, and VHRAs were properly controlled.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation (71121.03)

.1 Identification of Radiological Monitors Associated With High/VHRAs

a. Inspection Scope

The inspectors completed walkdowns and reviewed calibration records to verify the accuracy and operability of radiation monitoring instruments used for the protection of occupational workers. Instrumentation included area radiation monitors (ARMs), continuous air monitors (CAMs), portable survey meters, the whole body counter, and portal monitors.

The USAR was reviewed to identify those ARMs that were associated with transient high and VHRAs. These monitors included, but were not limited to, the following:

- Fuel Handling Area (R-5)
- In-core Instrument Seal Table Area (R-7)
- Rad Waste Storage Drum Area (R-25)

- Reactor Cavity Sump C (R-30)
- Containment High Level Radiation (R-40 and R-41)

CAMs were identified from the USAR in the following location:

- Containment Particulate (R-11)
- Containment Gas (R-12)

The inspectors performed a walkdown of selected ARMs and CAMs in order to verify that locations were as described in the USAR.

b. Findings

No findings of significance were identified.

.2 Calibration and Operability of Radiological Instrumentation

a. Inspection Scope

The inspectors reviewed the most recent calibrations and alarm set points for selected ARMs and CAMs. A representative sample of current calibration records was also reviewed for the whole body counter, personnel contamination monitors, portable radiation survey instruments, and whole body frisking monitors. The inspectors observed the calibration of several portable survey instruments, reviewed source check data and observed source checks of instruments staged in the Auxiliary Building to verify compliance with procedures.

b. Findings

No findings of significance were identified.

.3 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed a Radiation Protection Group focused area self-assessment of radiological instrumentation and self-contained breathing apparatus (SCBA) controls as well as corrective action program documents covering radiological incidents involving personnel internal contamination events and radiological instrumentation, to verify that the licensee could identify, track, and correct radiological problems in these areas.

b. Findings

No findings of significance were identified.

.4 Respiratory Protection - Self-Contained Breathing Apparatus

a. Inspection Scope

The inspectors reviewed the status and surveillance records for SCBA that were located in various areas onsite, including those units reserved for fire brigade and control room personnel. In addition, the inspectors verified that applicable emergency response and control room personnel were properly trained, mask fit, and medically qualified in the use of SCBA.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

2PS3 Radiological Environmental Monitoring and Radioactive Material Control Programs (71122.03)

.1 Review of Environmental Monitoring Reports and Data

a. Inspection Scope

The inspectors reviewed the 2001 Annual Environmental Monitoring Report. Sampling location commitments, monitoring and measurement frequencies, land use census, the vendor laboratory's Interlaboratory Comparison Program, and data analysis were assessed. Anomalous results including data, missed samples, and inoperable or lost equipment were evaluated. The review of the Radiological Environmental Monitoring Program (REMP) was conducted to verify that the REMP was implemented as required by the Offsite Dose Calculation Manual (ODCM), the Radiological Environmental Monitoring Manual (REMM), and associated Technical Specifications, and that changes, if any, did not affect the licensee's ability to monitor the impacts of radioactive effluent releases on the environment. The most recent quality assessment of the licensee's REMP vendor was reviewed to verify that the vendor laboratory performance was consistent with licensee and NRC requirements.

b. Findings

No findings of significance were identified.

.2 Walkdowns of Radiological Environmental Monitoring Stations and Meteorological Tower

a. Inspection Scope

The inspectors conducted a walkdown of selected environmental air sampling stations and thermoluminescent dosimeters to verify that their locations were consistent with their descriptions in the REMM and ODCM and to evaluate the equipment material

condition. The inspectors also conducted a walkdown of primary and back-up meteorological monitoring sites to validate that sensors were adequately positioned and operable. The inspectors reviewed the 2001 Annual Environmental Monitoring Report to evaluate the onsite meteorological monitoring program's data recovery rates, routine calibration and maintenance activities, and non-scheduled maintenance activities. The review was conducted to verify that the meteorological instrumentation was operable and was calibrated and maintained in accordance with licensee procedures. The inspectors also reviewed indications of wind speed, wind direction, and atmospheric stability measurements to verify that the indications were available in the Control Room and that the instrument indications were operable.

b. Findings

On September 17, 2002, during a walkdown of primary and back-up meteorological monitoring sites, the inspectors identified that primary 10-meter wind direction instrumentation was indicating an erroneous wind direction. This problem had been previously identified by the licensee on June 29, during a routine operational check of the primary meteorological site instruments. Upon discovery, the instrument was declared out-of-service (OSS), and a Work Request (WO#02-1855) to repair the instrument was initiated. However, the repair had not been completed as of the inspectors' walkdown on September 17. The inspectors also determined that operators in the Control Room and the EP staff had not been notified of this instrument's malfunction, so that proceduralized compensatory measures would be implemented pending completion of repairs on the instrument.

The failure to correct the malfunctioning primary 10-meter wind direction equipment represented a weakness associated with the emergency preparedness cornerstone attribute for maintaining equipment, which is used to assess offsite radiological consequences, in an acceptable state of operational readiness and adversely affects the cornerstone objective to protect the health and safety of the public in the event of a radiological emergency. Specifically, the use of primary 10-meter wind direction readings could have resulted in mis-identified downwind sectors recommended to the State for determining protective measures for the public.

Consequently, this issue represents a finding that is more than minor and which was evaluated using the Emergency Preparedness Significance Determination Process contained in Appendix B to Manual Chapter 0609. Since the finding involved a failure to meet a regulatory (emergency procedures) requirement but did not represent a failure to meet the planning standards of 10 CFR 50.47(b) or those of Appendix E to 10 CFR Part 50, the finding was determined to be of very low safety significance (Green).

10 CFR 50.54(q) requires, in part, that licensees follow and maintain in effect emergency plans that meet the standards of 10 CFR 50.47(b). Planning standard 10 CFR 50.47(b)(8) states that adequate emergency facilities and equipment to support the emergency response are provided and maintained, which include radiological assessment equipment required by planning standard 10 CFR 50.47(b)(9). In accordance with the stated planning standards, Section 7.3.1.1 of the Kewaunee Emergency Plan describes required emergency response assessment equipment,

which includes the plant's meteorological system, and states, in part, that parameters measured by the plant's meteorological system (including wind speed and direction) are utilized in developing site boundary and offsite dose projections. Contrary to the above, the licensee failed to maintain the primary meteorological tower equipment (i.e., 10 meter wind direction instrumentation) such that it could be used to provide site boundary and offsite dose projections. The failure to correct the self-identified malfunction of the wind direction instrumentation and to maintain the meteorological system so that it could be used in the manner required by the Kewaunee Emergency Plan is a violation of 10 CFR 50.54(q). However, since the licensee documented this issue in its corrective action program (CAP012963) and because the violation is of very low safety significance, it is being treated as a Non-Cited Violation (NCV) (NCV No. 50-305/02-05-04, Failure to Correct an Instrument Deficiency).

.3 Review of REMP Sample Collection and Analysis

a. Inspection Scope

The inspectors accompanied the licensee's REMP technician to observe the collection and preparation of air filters and milk samples to verify that representative samples were being collected in accordance with procedures, the REMM, and the ODCM. The inspectors observed the technician perform air sampler field check maintenance to verify that the air samplers were functioning in accordance with procedures. Selected air sampler calibration and maintenance records for 2001 and 2002 were reviewed to verify that the equipment was being maintained as required. The environmental sample collection program was compared with the REMM to verify that samples were representative of the licensee's release pathways. Additionally, the inspectors reviewed results of the vendor laboratory's Interlaboratory Comparison Program to verify that the vendor was capable of making adequate radio-chemical measurements.

b. Findings

No findings of significance were identified.

.4 Unrestricted Release of Material From the Radiologically Controlled Area

a. Inspection Scope

The inspectors evaluated the licensee's controls, procedures, and practices for the unrestricted release of material from radiologically controlled areas and conducted reviews to verify that: (1) radiation monitoring instrumentation used to perform surveys for unrestricted release of materials was appropriate; (2) instrument sensitivities were consistent with NRC guidance contained in Inspection and Enforcement (IE) Circular 81-07 and Health Physics Positions in NUREG/CR-5569 for both surface contaminated and volumetrically contaminated materials; (3) criteria for survey and release conformed to NRC requirements; (4) licensee procedures were technically sound and provided clear guidance for survey methodologies; and (5) radiation protection staff adequately implemented station procedures.

b. Findings

No findings of significance were identified.

.5 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed corrective action program documents addressing issues involving the REMP, as well as a Nuclear Oversight (NO) audit of the Kewaunee Environmental Monitoring Program and 2002 observation reports addressing the REMP, to determine if problems were being identified and entered into the corrective action program for timely resolution.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Cornerstone: Physical Protection

3PP3 Response to Contingency Events (71130.03)

a. Inspection Scope

The Office of Homeland Security developed a Homeland Security Advisory System (HSAS) to disseminate information regarding the risk of terrorist attacks. The HSAS implements five color-coded threat conditions with a description of corresponding actions at each level. NRC Regulatory Information Summary 2002-12a, dated August 19, 2002, "NRC Threat Advisory and Protective Measures System," discusses the HSAS and provides additional information on protective measures to licensees.

On September 10, 2002, the NRC issued a Safeguards Advisory to reactor licensees to implement the protective measures described in Regulatory Information Summary 2002-12a in response to the Federal government declaration of threat level "orange." Subsequently, on September 24, 2002, the Office of Homeland Security downgraded the national security threat condition to "yellow" and a corresponding reduction in the risk of a terrorist threat.

The inspectors interviewed licensee personnel and security staff, observed the conduct of security operations, and assessed licensee implementation of the threat level "orange" protective measures. Inspection results were communicated to the region and headquarters security staff for further evaluation.

b. Findings

No findings of significance were identified.

3PP4 Security Plan Changes (71130.04)

a. Inspection Scope

The inspectors reviewed Revision 4 to the Kewaunee Nuclear Power Plant Security Training and Qualification Plan to verify that the changes did not decrease the effectiveness of the submitted document. The referenced revision was submitted in accordance with 10 CFR Part 50.54(p)(2) requirements by licensee letters dated May 16, and July 10, 2002.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151)

.1 Radiation Safety

a. Inspection Scope

The inspectors performed reviews to verify the licensee's assessment of its performance indicators for the previous 4 calendar quarters for the occupational and public radiation safety cornerstones. No occurrences were identified by the licensee for the 3rd and 4th quarters of 2001 or 1st and 2nd quarters of 2002. The inspectors compared the licensee's data with the previous four quarters' CAPs and offsite dose calculations to verify that there were no occurrences during those quarters concerning the occupational and public radiation safety cornerstones.

b. Findings

No findings of significance were identified.

.2 Reactor Safety

a. Inspection Scope

The inspectors reviewed the licensee's PI collection process and historical data from the 4th quarter of 2001 through the 2nd quarter of 2002 to verify the accuracy of collected and submitted data for the PIs listed below. Additionally, the inspectors reviewed corrective action records, monthly operating reports, control room logs, and licensee event reports to independently verify the data that the licensee had collected.

- Safety System Unavailability - Emergency Alternating Current Power System, July 22, 2002
- Safety System Unavailability - AFW System, July 24, 2002

b. Findings

No findings of significance were identified.

.3 Emergency Preparedness

.a Inspection Scope

The inspector reviewed performance indicators to verify that the licensee accurately reported, with one minor exception, the following indicators in accordance with relevant procedures and Nuclear Energy Institute (NEI) guidance endorsed by NRC: ANS, ERO Drill Participation, and Drill and Exercise Performance for the EP cornerstone. Specifically, the inspector reviewed the licensee's records associated with PI data reported to the NRC for the period July 2000 through June 2002. Records included assessments of Drill and Exercise Performance opportunities during pre-designated Control Room Simulator training sessions, the biennial exercise, and several drills, as well as revisions of the roster of personnel assigned to key ERO positions. The inspector also reviewed records of the results of periodic ANS operability tests.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As discussed in previous section of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's corrective action system at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. Minor issues entered into the licensee's corrective action system as a result of inspectors' observations are generally denoted in the report.

b. Findings

One finding of very low risk significance (Green) was identified by the inspectors for the licensee's failure to provide fire barrier seals on auxiliary building Appendix R walls separating the Dedicated and Alternate fire zones. This finding was a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix R requirements, and is discussed in Section 1R05. Additionally, as discussed in paragraph .3 below, the inspectors reviewed the licensee's documented corrective actions associated with the licensee's

and NRC's identification of unsealed Appendix R fire penetrations. The inspectors identified that the licensee had not performed evaluations to justify delays in performing required fire barrier protection inspections. The inspectors considered the completion of fire protection barrier inspections, as required by corrective actions, to be untimely.

.2 Review of Licensee Documented Concerns Regarding Valve Stem Lubrication Practices

Introduction and Description

On July 9, 2002, as part of the Selected Issue Follow-up Inspection of Inspection Procedure 71152, the inspectors selected CAP003614 (dated March 15, 2002) for review. Corrective Action Process 003614 documented a licensee-identified concern where N-5000, an anti-seize lubricant used in valve maintenance, had been inappropriately applied to the stem of air-operated valve AFW-2A. Used in this application, the N-5000 lubricant had become degraded such that it was causing Valve AFW-2A to stick during its operation. Valve AFW-2A was the 'A' train AFW pump outlet flow control valve. The licensee also identified earlier in March 2002, in CAP003552, that N-5000 had also been applied to a non-safety-related air-operated valve which also had caused the valve to stick during its operation. The licensee directed that an apparent cause evaluation and an extent of condition review be conducted to determine if the issue was isolated to these two examples or was of greater concern.

In addition to reviewing CAP003614, the inspectors also reviewed other historical corrective action documents which documented other instances of degraded valve stem lubrication. The inspectors also evaluated the licensee's evaluation of the issue to verify that the issue was dispositioned in accordance with the licensee's corrective action procedures.

As a result of the inspectors' questions, the licensee documented several additional CAPs and performed an apparent cause evaluation and condition evaluation to identify the source of the N-5000. The inspectors reviewed these additional documents to verify that the licensee identified any additional issues at an appropriate threshold and entered them in the corrective action program, and verified that problems were properly addressed for resolution.

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed corrective action documents, including CAP003614, which documented potential degraded lubrication issues for various valves in the plant. The inspectors' review included verification that problem identification was complete, accurate, and timely, and that the consideration of extent of condition, generic implications, common cause, and previous occurrences were adequate.

(2) Issues

The inspectors identified the following issues:

- On November 27, 2001, the licensee documented in KAP WO 01-19678, that valve AFW-2A was observed to have a build up of N-5000 on the valve stem which was causing the valve to stick during its operation. Shortly after this identification, the valve stem was cleaned, and proper operation of the valve was noted. However, the inspectors noted that it was not until March 15, 2002, that CAP 3614 was written to document the issue. The inspectors considered the length of time between identification of the issue and documentation in the licensee's corrective action program (approximately 3 months) to be untimely.

- The inspectors identified during a historical corrective action document review that since January 1999, there were at least six examples where the licensee noted degraded or potentially degraded stem lubrication on air-operated, motor-operated, or solenoid-operated valves. The inspectors noted that in each example, no operability concern was identified by the licensee. However, the inspectors also determined that in each of these examples, no corrective actions were taken to address the cause of the degraded stem lubrication.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed various corrective action documents, including CAP003614, to evaluate the licensee's evaluation and disposition of performance issues, evaluation of operability issues, and application of risk insights for prioritization of issues and corrective actions.

(2) Issues

- An apparent cause evaluation and the extent of condition review was conducted by the licensee in May 2002. However, the evaluation and review only consisted of interviewing mechanical maintenance personnel and reviewing training program requirements pertaining to the application of N-5000 anti-seize lubricant. The licensee concluded that mechanical maintenance personnel could not have been responsible for applying N-5000 to valve stems as they were not trained to apply N-5000 to valve stems and that interviewed personnel stated that they would not apply N-5000 to valve stems. The licensee then closed the apparent cause evaluation and the extent of condition review with no corrective actions. The inspectors considered the apparent cause evaluation to be inadequate in determining the source of the N-5000 application and the extent of condition review was narrowly focused since the licensee did not consider other valves at the facility to determine if N-5000 had been inappropriately applied. Additionally, the inspectors noted that the licensee did not review historical corrective action documents to determine if previous lubrication issues had been identified or if an adverse trend in lubrication practices had developed.

- In March 2002, the licensee concluded that valve AFW-2A was operable based on acceptable performance during its last scheduled surveillance test. However, the operability evaluation was not performed until approximately three months after the issue was first identified in November 2001, due to the untimely initiation of CAP 3614, and did not address operability of valve AFW-2A from an historical perspective.

.3 Review of Corrective Actions and Issues Associated with Unsealed Appendix R Fire Penetrations

Introduction and Description

On September 10, 2002, as part of the Selected Issue Follow-up Inspection of Inspection Procedure 71152, the inspectors reviewed the licensee's documented corrective actions associated with the licensee's and NRC's identification of unsealed Appendix R fire penetrations (See Section 1R05 for technical details and associated enforcement discussion). In addition to reviewing the specific corrective actions associated with the unsealed fire penetrations, the inspectors also reviewed the licensee's open corrective actions for the last NRC triennial fire inspection (see IR 50-305/01-02) in February 2001.

The inspectors also evaluated the licensee's administrative processing of identified fire protection program issues to verify that the issues were dispositioned in accordance with the licensee's corrective action procedures.

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed fire protection program corrective action documents to verify that problem identification of issues was complete, accurate, and timely, and that the consideration of extent of condition, generic implications, common cause, and previous occurrences were adequate.

(2) Issues

No issues of significance were identified.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed fire protection program corrective action to evaluate the licensee's evaluation and disposition of performance issues, evaluation of operability issues, and application of risk insights for prioritization of issues and corrective actions.

(2) Issues

The licensee identified in KAP WO 01-3355, on May 17, 2001, that the fire barrier penetration inspection, per PMP 08-33, “FP-Penetration Fire Barrier Inspection,” Revision D, would not be completed within the 18-month periodicity of ”Kewaunee Nuclear Power Plant Fire Protection Program Plan,” Revision 4. The KAP also stated that the fire protection group should provide an evaluation to justify delaying completion of the inspection and that PMP 08-33 was inadequate for performing the penetration inspections. The KAP also referenced KAP Corrective Action 00-1568-001 which required the development of a facility Fire Barrier Control Program in order to properly address the weaknesses associated with PMP 08-33.

The inspectors noted that the fire protection group did not perform an evaluation to justify the delay of performing the fire barrier penetration inspection per PMP 08-33 as requested by KAP WO 01-3355. Additionally, although the licensee noted that the penetration inspection was overdue as of the end of May 2001, and that other corrective actions were completed by the end of September 2001, it was not until several months later that the licensee resumed performance of the fire barrier penetration inspections. The inspectors also identified that as of September 10, 2002, procedure PMP 08-33 had not been completed, approximately 14 months after it was originally overdue. The inspectors considered the completion of PMP 08-33 to be untimely.

.4 Review of Corrective Actions and Issues Associated with Fan Coil Unit Motor Sizing

Introduction and Description

On July 18, 2002, as part of the Selected Issue Follow-up Inspection of Inspection Procedure 71152, the inspectors reviewed the documented corrective actions associated with the licensee’s identification of containment fan coil unit motors loaded above their nameplate horsepower. This issue was documented by the licensee in CAP002819. The inspectors evaluated the licensee’s actions regarding this issue to verify appropriate disposition in accordance with the licensee’s corrective action procedures.

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed the existing motor nameplate data, corrective action document, engineering analysis, and qualification records to verify that problem identification of issues was complete, accurate, and timely, and that the consideration of extent of condition, generic implications, common cause, and previous occurrences were adequate.

(2) Issues

No issues of significance were identified.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed the licensee's environmental qualification files, corrective action documents, and the licensee's corrective action program database to evaluate the licensee's evaluation and disposition of performance issues, evaluation of operability issues, and application of risk insights for prioritization of issues and corrective actions.

(2) Issues

No issues of significance were identified.

.5 Radiation Protection Deficiencies

a. Inspection Scope

The inspectors identified occupational and public radiation safety issues identified in CAPs 000251, 000882, 001648, 011810, and 012995. The inspectors selected these CAPs for review to verify that the licensee's identification of the problems were complete, accurate, and timely, and that the consideration of extent of condition review, generic implications, common cause, and previous occurrences was adequate.

The inspectors selected the following five issues, documented in CAPs, for review:

- During a routine Chemistry job observation (GNP-01.40.01) several procedural weaknesses were observed in SP 63-164, "Environmental Sample Collection." The CAP documents the weaknesses and allows for tracking.

- Four out of 5 environmental air samplers failed pre-filter change operational checks and 3 out of 5 air samplers failed the post-filter change operational check, indicating air flow around the filter assembly. An investigation revealed that O-rings were not routinely inspected and that worn O-rings may have caused the failed operational checks.

- During the 2001 steam generator replacement project, numerous dosimetry problem reports were completed when dosimetry problems were identified. The licensee determined that tracking and trending of the problem would continue and, if problems continue to be seen, that appropriate actions would be considered through other CAPs.

- The purpose of the CAP was to document suggestions for improvement/lessons learned from the NRC ALARA/Access Controls inspection that was conducted in the Fall of 2001.

- Invalid meteorological data available for Event Notification and Protection Action Recommendations. When the primary wind direction instrument was determined to be out-of-service, there was no guidance available, or if guidance was available, it was not adhered to or did not adequately provide configuration

management actions to ensure that the invalid data was not displayed, or if displayed, flagged as invalid. The licensee acknowledged that configuration management was a problem that will be addressed in the CAP.

Although minor in nature, each of the issues impacted their respective programs. While some were specific to one unique aspect of a cornerstone, others had generic implications for the plant.

b. Issues

No issues were identified.

4OA3 Event Follow-up (71153)

.1 Closure of Open Items

(Closed) Licensee Event Report (LER) 305/2001-001-00 and 2001-001-01: Single Barrier Appendix R Fire Door Failed to Close - Door Had Not Been Part of a Periodic Test Program

This LER documented the failure of an Appendix R fire door to close completely when tested. The door separated redundant trains of SW pumps. The inspectors reviewed the LER to verify that corrective actions were appropriate and verified implementation of the corrective actions. Additional details appear in NRC Inspection Report 50-305/01-04, Section 1R05. An NCV for failure to meet Appendix R requirements was previously identified (50-305/01-04-01, Failure to Test Fire Door in Accordance with Fire Plan). No other violations of NRC requirements were identified during the review of the LER.

(Closed) LER 50-305/2001-003: Single Barrier Appendix R Doors Installed Improperly - The Closure Actuation System Did Not Conform to Code

This LER documented the licensee's identification that two Appendix R fire doors (279 and 281) with improperly installed actuation equipment were not capable of automatic closure if one specific fusible link, on each door, had melted. The inspectors reviewed and verified the implementation and completion of the corrective actions as stated in the LER. See Section 4OA7 for details regarding a licensee-identified violation associated with this LER.

(Closed) LER 50-305/2002-002: Technical Specifications Required Shutdown - CCW System Leak Could Not Be Repaired Within Limiting Condition for Operation

This LER documented a plant shutdown on May 5, 2002, in accordance with TS requirements, when the licensee identified that estimates of repair time associated with tube leakage of the 'A' heat exchanger would exceed TS allowed outage times. The inspectors reviewed and verified the implementation and completion of corrective actions as stated in the LER and in CAP011582. No violations of NRC requirements were identified during the review of the LER.

(Closed) Unresolved Item (URI) 305/2000-14-03: The licensee incorrectly interpreted the guidance of NEI Document 99-02 by tracking the senior manager in its Technical Support Center and the senior manager in its Emergency Operations Facility as also the key ERO positions in those facilities responsible for preparing emergency notification messages to State and county officials. The inspector determined that the licensee acceptably revised its interpretation of the NEI 99-02 guidance on its key ERO positions in accordance with the response to Frequently Asked Question 234. The licensee identified another manager in each response facility who would support the senior facility manager in preparing notification messages to State and county officials. This URI is closed.

(Closed) LER 50-305/2001-002-00, 01, and 02: Non-rated fire barrier separating redundant Appendix R safe shutdown capabilities

This issue was initially discussed as an URI 50-305/01-02-01 and subsequently closed as an NCV in Inspection Report 50-305/01-11. This issue was preliminarily determined to have substantial safety significance (Yellow). As a result of the barrier not being rated, a fire in the auxiliary feedwater pump B room could result in the loss of both trains of auxiliary feedwater pumps and component cooling water pumps, and all three chemical volume control system charging pumps which would increase the risk of core damage. Subsequent information provided by the licensee showed that the barrier had some mitigation capability and that the ignition frequency was lower than originally estimated. This resulted in a safety significance determination of Green. The final determination was documented in a letter to the licensee dated June 6, 2001.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. T. Coutu and other members of licensee management at the conclusion of the inspection on October 1, 2002. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Interim Exit Meetings

Interim exits were conducted for:

- Radiation Safety with Mr. A. Cayia on July 12, 2002
- Physical Protection with Mr. B. Presl on August 1, 2002
- Emergency Preparedness with Mr. A. Cayia on August 9, 2002
- Licensee's Licensed Operator Requalification Program with Mr. Tom Coutu, Site Vice President/Plant Manager on September 20, 2002
- Radiation Safety and Emergency Preparedness with Mr. Tom Coutu, Site Vice President/Plant Manager on September 20, 2002

4OA7 Licensee-Identified Violation

The following violation of very low significance (Green) was identified by the licensee and is a violation of NRC requirements which met the criteria of Section VI of the NRC Enforcement Manual, NUREG-1600, for being dispositioned as an NCV.

Cornerstone: Mitigating Systems

Kewaunee Nuclear Power Plant Facility Operating License No. DPR-43, Section 2.C(3) required, in part, that the Nuclear Management Company implement and maintain in effect all provisions of the approved Fire Protection Program as described in the KNPP Fire Plan. The Kewaunee Nuclear Power Plant Fire Protection Program Plan, Revision 4, Section 12.6, "Barriers," required, in part, that fire doors which separate redundant trains of safe shutdown equipment be verified to be operable. From 1984 (original installation of fire doors 279 and 281) until January 18, 2001, the actuation mechanisms for fire doors 279 and 281 were not installed in accordance with National Fire Protection Association requirements such that the doors would not have closed, as required, if one specific fusible link, on each door, had melted. The licensee identified the fire doors to be inoperable with the as-found fusible link configuration. Contrary to the above, the licensee failed to adequately verify the operability of fire doors 279 and 281. This failure was considered a violation of the facility's license condition. Because only two of four SW pumps in redundant trains of SW would have been affected by the potential inability of the fire doors to close during a postulated fire, this violation was considered to be of very low risk significance and is being treated as an NCV. This issue was documented in the licensee's corrective action program as KAP WO 01-2053.

KEY POINTS OF CONTACT

Licensee

L. Armstrong, Engineering Director
D. Asbel, Nuclear Oversight
S. Baker, Manager, Radiation Protection
W. Bartelme, Senior EP Specialist
T. Coutu, Site Vice President, Kewaunee Site
K. Davison, Operations Training Manager
R. Farrell, Manager, Planning and Scheduling
M. Fencl, Manager, Security
D. Fitzwater, Licensed Operator Requalification Program Administrator
B. Gauger, Radiation Protection ALARA Supervisor
W. Godes, Operations Training Supervisor
G. Harrington, Licensing Leader
K. Hull, Supervisor, Engineering and Mechanical Design
J. McCarthy, Assistant Plant Manager, Operations
B. Presl, Security Consultant
S. Putman, Manager, Engineering Systems
R. Repshas, Manager, Site Services
J. Rozell, Simulator Support, Test Operator
T. Schmidli, Radiation Protection General Supervisor
D. Seebart, EP Coordinator, Kewaunee Plant
C. Sizemore, Training Supervisor
J. Stoeger, Superintendent, Operations
T. Webb, Regulatory Affairs Manager
W. Yarosz, EP Manager, Kewaunee and Point Beach Plants
S. Zepplin, Simulator Support

Nuclear Regulatory Commission

R. Lanksbury, Chief, Reactor Projects Branch 5

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-305/02-05-01	NCV	Failure to Provide Appendix R Barriers Between Dedicated and Alternate Fire Zones (Section 1R05)
50-305/02-05-02	URI	Adequacy of Medical Examinations (Section 1R11.6)
50-305/02-05-03	URI	Adequacy of the Plant-Referenced Simulator to Conform With Simulator Requirements in 10 CFR 55.46 (Section 1R11.7)
50-305/02-05-04	NCV	Failure to Correct an Instrument Deficiency (Section 2PS3.2)

Closed

50-305/02-05-01	NCV	Failure to Provide Appendix R Barriers Between Dedicated and Alternate Fire Zones (Section 1R05)
50-305/02-05-04	NCV	Failure to Correct an Instrument Deficiency (Section 2PS3.2)
50-305/2001-001-00, 2001-001-01	LER	Single Barrier Appendix R Fire Door Failed to Close (Section 4OA3.1)
50-305/2001-003	LER	Single Barrier Appendix R Doors Installed Improperly (Section 4OA3.1)
50-305/2002-002	LER	Technical Specifications Required Shutdown - CCW System Leak Could Not Be Repaired within Limiting Condition for Operation (Section 4OA3.1)
50-305/01-02-00 50-305/01-02-01 50-305/01-02-02	LER	Non-Rated Fire Barrier Separating Redundant Appendix R Safe Shutdown Capabilities (Section 4OA3.1)
50-305/2000-14-03	URI	Misinterpretation of NEI 99-02 Guidance on Which Key ERO Positions in Technical Support Center and Emergency Operations Facility Were Responsible for Preparing Notification Messages to State and County Officials (Section 4OA3.1)

Discussed

None

LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
ADAMS	NRC's Document System
AFW	Auxiliary Feedwater
ANS	Alert and Notification System
ANSI/ANS	American National Standards Institute/American Nuclear Society
AR	Action Request
ARM	Area Radiation Monitor
CA	Corrective Action
CAM	Continuous Air Monitor
CAP	Corrective Action Process
CCW	Component Cooling Water
CE	Condition Evaluation
CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
ECG	Electro-Cardiogram
EP	Emergency Preparedness
EPIP	Emergency Plan Implementing Procedure
EPMP	Emergency Plan Maintenance Procedure
ERO	Emergency Response Organization
GNP	General Nuclear Procedure
HRA	High Radiation Area
HSAS	Homeland Security Advisory System
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IST	In-Service Test
JPM	Job Performance Measure
KAP	Kewaunee Assessment Process
KNPP	Kewaunee Nuclear Power Plant
LER	Licensee Event Report
LHRA	Locked High Radiation Area
LORT	Licensed Operator Requalification Training
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NO	Nuclear Oversight
NRC	United States Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
OOS	Out-of-Service
OTH	Other
OWA	Operator Workaround
PARS	Public Availability Records
PCR	Procedure Change Request
PI	Performance Indicator
POAH	Point of Adding Heat
PMP	Preventative Maintenance Procedure
RCE	Root Cause Evaluation

REMM	Radiological Environmental Monitoring Manual
REMP	Radiological Environmental Monitoring Program
SCBA	Self-contained Breathing Apparatus
SCP	Simulator Control Procedure
SDP	Significance Determination Process
SW	Service Water
SWO	Simulator Work Order
TS	Technical Specification
URI	Unresolved Item
USAR	Updated Safety Analysis Report
VHRA	Very High Radiation Area
WO	Work Order

LIST OF DOCUMENTS REVIEWED

1R04 Equipment Alignment

N-DGM-10-CLA; Diesel Generator A Prestartup Checklist; Revision I

N-CC-31-CL; Component Cooling System Prestartup Checklist; Revision W

USAR; Section 6.2; Safety Injection System

N-SI-33-CL; Safety Injection System Prestartup Checklist; Revision AF

DCR 3119; Replace Pressure Switch for TDAFW [Turbine-Driven Auxiliary Feedwater] Pump

DCR 2668; AFW Pump NPSH Protection

N-FW-05B-CL; Auxiliary Feedwater System Prestartup Checklist; Rev AI

ISIM-203; ISI Flow Diagram - Main Auxiliary Steam and Steam Dump; Revision L

OPERXK-100-28; Flow Diagram - Safety Injection System

OPERXK-100-29; Flow Diagram - Safety Injection System

1R05 Fire Protection

FPP 08-07; Control of Ignition Sources; Revision F

FPP 08-08; Control of Transient Combustibles; Revision A

FPP 08-09; Barrier Control; Revision D

FPP 08-10; Fire Drills; Revision A

FPP 08-12; Fire Prevention Tour; Revision B

N-FP-08-CL; Fire Protection System Checklist; Revision AN

Appendix R Design Description; December 14, 2000

Kewaunee Fire Protection Program Plan; Revision 4

PMP 08-33; FP - Penetration Fire Barrier Inspection; Revision D

Fire Drill Pre-Plan 2002-15; Yard Area - Main Transformer Phase C; July 30, 2002.

Fire Brigade Drill Scenario; FBD No. 008; Yard Area - Main Transformer Phase C

PFP-1; 1A Diesel Generator and DG Day Tank Rooms TU-90, TU-91 / Elevation 586'

PFP-2; 1B Diesel Generator and DG Day Tank Rooms TU-92, TU-93 / Elevation 586'

E-2009; Integrated Logic Diagram - Fire Protection; Revision J

FPP 08-08; Control of Transient Combustibles; Revision A

FPP 08-09; Barrier Control; Revision D

PFP-21; Control Room HVAC Equipment and Records Storage Rooms AX-35, AX-34, AX-40 / Elevation 642'

PFP-3; CO2 Storage Tank Room, Zone TU-94 / Elevation 586'

1R07 Heat Sink Performance

PMP 21-08; SFP - Spent Fuel Pool (SFP) Heat Exchanger Performance Monitoring; Revision B

USAR; Section 9.3; Auxiliary Coolant System; Revision 17

1R11 Licensed Operator Requalification

LOR-TP; Kewaunee Licensed Operator Requalification Training Program; Revision B

NTP-4; Implementation - Attachments 11, 12, and 13; Revision J

Form NTP-6413; Examination Security Agreement Form 6413; Revision A

QF-1040-04; Remediation/Makeup Training Form; Revision 0

Technical Specifications; Section 6.4, Training; dated February 12, 2001

Active Status; Licensed Operator's Active Status, Effective Period July 1 - September 30, 2002

Assessment 2001-004-2; Nuclear Oversight Fourth Quarter 2001 Assessment Report for Kewaunee; 4th Quarter 2001

Assessment 2002-001-2; Nuclear Oversight 1st Quarter 2002 Assessment Report for Kewaunee; 1st Quarter 2002

Assessment 2002-002-2; Nuclear Oversight 2nd Quarter 2002 Assessment Report for Kewaunee; 2nd Quarter 2002

Audit 00-003; Audit Summary - Operations; 3rd Quarter 2000

Audit 00-004; Audit Summary - Operations; 4th Quarter 2000

Audit 01-001; Audit Summary - Operations; 1st Quarter 2001

Audit 01-002; Audit Summary - Operations; 2nd Quarter 2001

Observation Report # 2001-004-2-028; Nuclear Oversight Observation Report; dated November 15, 2001

Observation Report # 2001-004-2-036; Nuclear Oversight Observation Report; dated November 20, 2001

Observation Report # 2001-004-2-039; Nuclear Oversight Observation Report; dated November 30, 2001

Observation Report # 2002-001-2-009; Nuclear Oversight Observation Report; dated February 12, 2002

Observation Report # 2002-002-2-039; Nuclear Oversight Observation Report; dated June 6, 2002

Observation Report # 2002-002-2-066; Nuclear Oversight Observation Report; dated June 25, 2002

QSR # 2396; Quality Surveillance Report; dated June 11, 2002

LRC-02-DYE06; LOR Dynamic Simulator Examination; Revision A

LRC-02-DYE40; LOR Dynamic Simulator Examination; Revision A

Task Number 0360190101; Job Performance Measure; Revision A

Task Number E070010501; Job Performance Measure; Revision A

Task Number E010020501; Job Performance Measure; Revision A

Task Number FRS0010504; Job Performance Measure; Revision A

Task Number E060010501; Job Performance Measure; Revision A

Task Number 1190050502; Job Performance Measure; Revision A

Task Number 1190030502; Job Performance Measure; Revision A

Respirator Qualifications; Respirator Qualification Matrix - Active Workers Only; dated September 18, 2002

Respirator Fit; Fit Test Report (31 total); dated various

Training Attendance Report Form 6401; Lesson Plan ID: 0-EOP-LP-FR-P.1; 0-EOP-LP-FR-P.2; dated various

Training Attendance Report Form 6401; Lesson Identifier: LRC-01-SE601; dated various

0-FORM-NTP-6; Operations Training - Training Record: SOER 97-01 Potential Loss of HPSI & CH; C14 Quiz 1; LRQ Dynamic Simulator Examination; dated various

Medical Records; Selection of Nine Licensed Operator Medical Records (Four SROs and Five ROs); dated various

USAR Section 14.2.4; Steam Generator Tube Rupture; Revision 17

OPS-TP APPENDIX H FORM H-6; Crew Evaluation Summary (Crew C); dated May 23 and May 25, 2001

OPS-TP APPENDIX H FORM H-5; RO/SRO Evaluation Summary (Crew C); dated May 23 and May 23, 2001

OPS-TP APPENDIX H FORM H-6; Crew Evaluation Summary (Crew A); dated May 9, 2001

OPS-TP APPENDIX H FORM H-5; RO/SRO Evaluation Summary (Crew A); dated May 9, 2001

OPS-TP APPENDIX H FORM H-6; Crew Evaluation Summary (Crew F); dated April 25, 2001

OPS-TP APPENDIX H FORM H-5; RO/SRO Evaluation Summary (Crew F); dated April 25, 2001

Sample Selection of Written Quizzes; various dated March 2000 through April 2002

Simulator Report; Kewaunee Nuclear Power Plant Cycle 25 Simulator Benchmark Report; dated June 2002

LRC-02-EX2R5; Kewaunee 2002 SRO Biennial Examination; dated March 22, 2002

LRC-02-EX2G4; Kewaunee 2002 SRO Biennial Examination; dated April 5, 2002

Training Attendance Report Form 6401; Kewaunee 2002 LOR Examination Evaluation ID: LRC-02-EX2R5; dated March 25, 2002

Training Attendance Report Form 6401; Kewaunee 2002 LOR Examination Evaluation ID: LRC-02-EX2G4; dated April 8, 2002

CAP012981; Potential Compromise of Exam Materials for Licensed Operator Requalification; dated September 17, 2002

CAP013001; Form G-3 (NRC License Active Status Tracking) Not Filled Out; dated September 18, 2002

CAP013002; Shift Managers Rotating into the CRS Position; dated September 18, 2002

CAP013080; Identified Administration Discrepancies in RO/SRO Medical Records; dated September 20, 2002

CAP013062; Failure to Perform Portions of the Medical Certification Tests for Licensed Personnel; dated September 23, 2002

CAP013305; Core Testing Action Request; dated October 15, 2002

SCP 5.1; Reporting of Simulator Problems; Revision E; dated December 18, 2001

SCP 5.2; Simulator Feedback Reports; Revision J; dated April 3, 2002

SCP 5.3; Plant Change Reviews; Revision I; dated January 9, 2002

SCP 5.6; Simulator Work Orders; Revision I; dated March 28, 2002

SCP 5.9; Scheduling of Open Simulator Work Orders; Revision F; dated March 28, 2002

SCP 5.11; Control And Documentation of Simulator Modification Acceptance Testing; Revision D; dated March 28, 2002

NAD-08.02; KNNP Nuclear Administrative Directive, Work Request/Work Order; Revision F; dated April 23, 2002

GNP-08.02.14; KNNP General Nuclear Procedure, Work Screening and Classification; Revision A; dated June 20, 2002

GNP-03.17.10; KNNP General Nuclear Procedure, Reactivity Management; Revision A; dated June 28, 2001

ICP 35-48; Instrument and Control Procedure, CVCS - Charging Pump C Speed Control Loop 428C Calibration; Revision 0; dated August 1, 1995

N-CVC-35A; KNNP General Nuclear Procedure, Operating Procedure, Boron Concentration Control; Revision V; dated June 4, 2002

N-0-03; KNNP General Nuclear Procedure, Operating Procedure, Plant Operation Greater Than 35 percent Power; Revision AM; dated April 18, 2002

N-CVC-35B; KNNP General Nuclear Procedure, Operating Procedure, Charging and Volume Control; Revision AG; dated August 28, 2002

OP/1/A/6100/001; KNNP General Nuclear Procedure, Controlling Procedure for Unit Startup [cold shut down to 15 percent power]; Revision 188

Test Report; Kewaunee Nuclear Power Plant Cycle 25, Simulator Benchmark Report, June 2002, Studsvik Scanpower, [Confidential Contains Proprietary Information]; dated June 2002

Core Performance Test Procedures, Normal Operations: Power Defect Measurement, 22102001; dated May 14, 1998; Isothermal Temperature Coefficient Measurement, 22002001; dated March 2, 1997; Initial Criticality by Dilution, 21702001; dated May 17, 1995; Reference Bank Worth Measurement, 21802001; dated December 18, 1997; Control Rod Worth Using Rod Swap, 21902001; dated December 29, 1997

Simulator Transient Periodic Test Procedures; Manual Reactor Trip From 100 percent Power - two versions, Number 151, dated June 18, 2002 and Number 126, dated May 12, 2001

Simulator Transient Periodic Test Procedures; Simultaneous Trip of all Reactor Coolant Pumps from 100 percent Power -three versions: Number 129, dated May 12, 2001; Number 15408, dated March 20 1998; and Number 15407, dated August 15, 1997

Simulator Transient Periodic Test Procedures; Malfunction (Control Function): ED01, Loss of Off-site Power, 345KV and 138KV, Number 81 Test Run No. 305; dated various

RO4-02-JP-R01; KNNP Training Job Performance Measures, 100 Percent to 85 Percent Power Reduction for Reactivity Manipulation on Core 25 Simulator; Revision A; dated August 7, 2002

RO4-02-SE-R01; KNNP Simulator Exercise Guides, Power Reduction to 85 percent at ½ percent per minute; Revision A; dated August 7, 2002

Audit 01-002; Self-Assessments, Operations Summary; Second Quarter 2001

SWO # 02-053 (Related SFR 02-051); Kewaunee Simulator Core Update to Cycle 25. (Priority 5); no date

SWO # 02-111; Foxboro Controllers in Simulator Are Reverse From Plant (Priority 5); dated August 1, 2002

SWO # 02-054; Many Inconsistencies Exist Between the Plant Control Room and Simulator Such as Meters with Different Scales, Different Descriptions, Labels in Different Positions, Etc.; No Date

SWO # 02-092; Rod Worth in Simulator Appears to be Less Than the Actual Plant. This Is Causing Excessive Shift in Delta I on Load Changes (Priority 9); dated July 9, 2002

SWO # 02-093; Core Cycle 25 at 100 percent Power No Operator Action, Trip the Reactor and PZR Liquid Temp Takes about a 20 Degree Step Change 10 Minutes into Transient Then Comes Right Back Up; dated July 9, 2002

SWO # 02-046; There Are Numerous Instances Where the Radiation Monitoring System Appears to Be Sensitive to Radiological Conditions (Priority 9); dated March 6, 2002

SWO # 02-045; RCS Pressure Decrease Maneuver (Priority 8); dated March 5, 2002

SWO # 99-009; Loss of all AC, Bearing temp. on the TDAFW Pump Increase and Alarm on the PPCS (Priority 8); dated January 22, 1999

SWO # 01-109; When Malfunction to Open PORV 2A, 2B Opens Instead and in Reverse. The Descriptions Are Reversed in the Simulator Software (Priority 8); dated December 27, 2001

SWO # 97-011; When Manually Opened G-1 at High Power and Low Power, There Was No Change to the Electric Plant and Busses 1-4 Remained Powered to the Generator (Priority 7); dated March 18, 1997

SWO # 96-010; RCS Loop Flow Decreases Too Quickly When RXCP is Stopped. (Priority 7); dated May 1, 1996

SWO # 97-022; Simulator AFW Pump Performance under Runout Condition Does Not Match the Plant. Needs Tune Up. (Priority 7); dated August 1, 1997

SWO # 00-024; SW Pumps Cannot Be Started from DSP E-O-06 with Bus 5 De-energized. (Priority 7); dated October 12, 2000

SWO # 01-039; STM Dump Controller in Manual Does Not Respond Properly Minor Adjustments Result in a Massive C/D rate. (Priority 7); dated October 6, 2001

SWO # 01-048; Manually Tripping the Supply Breaker for Busses Causes to Tie-breaker to Close. (Priority 6); dated November 7, 2001

SWO # 91-080; SSFI-Revise Control Logic for 1A, 1B and 1C Compressors; dated December 11, 2001

GNP-03.17.01; Alarm Response Standard; Revision A

GNP-03.17.02; Briefings Standards; Revision A

GNP-03.17.04; Communications Standard; Revision A

Emergency Plan Implementing Procedure-AD-02; Emergency Class Determination; Revision AD

1R12 Maintenance Effectiveness

MRE 1508; Maintenance Rule Evaluation Request per MRE Supervisor

SSC Performance Criteria Sheet; 06 Main Steam

Maintenance Rule Scoping Questions; 06 Main & Auxiliary Steam

Maintenance Rule System Basis; 06 Main Steam & Steam Dump

CE009859; Perform a Condition Evaluation per CAP 11667

CAP011667; Erratic Steam Dump Operation

System Health Report; August 20, 2002

Maintenance Rule System Basis; Auxiliary Feedwater; Revision 2

CAP000411; Perform Maintenance Rule (a)(1) evaluation

CAP000563; AFW-4B Did Not Reseat

MRE001491; AFW Discharge Check Valve Maintenance Rule Evaluation

1R14 Non-Routine Evolutions

N-0-03; Plant Operation Greater Than 35 percent Power; Revision AM

GNP-03.17.02; Briefings Standards; Revision A

GNP-03.17.04; Communications Standard; Revision A

1R15 Operability Evaluations

CAP012800; Calculational Error; September 3, 2002

CAP012802; Flushing of Emergency Make-up SW to CCW Did Not Remove Identified Sediment; September 3, 2002

SP-31-168B; Train B Component Cooling Pump and Valve Test - IST; Original Revision

CAP012800; Silting of Emergency Service Water Fill Line to Component Cooling System Expansion Tank; September 5, 2002

ESR 91-16; Slime and Silting Control In The Service Water System; May 4, 2002

USAR; Section 8.2; Electrical System; Revision 17

ESI-EMD; Diesel Generator Owners Group; Technical Paper - Operating Practice Guidance "Loss of Circulating and/or Turbocharger Soak Back Oil Pumps"; June 1998 - January 1999

CAP AR 12136; Breaker for D/G B Keep Warm System Tripped

CAP AR 12151; D/G Oil Temperature Operability Limit

E-1622; Integrated Logic Diagram Diesel Generator Mechanical System; Revision V

E-1621; Integrated Logic Diagram Diesel Generator Mechanical System; Revision AK

CAP012384; Plant Drawing Discrepancies - E2000-X & E1637-W

K-85-21; Letter Regarding NRC Approval to Remove Auto-Closure Feature from RHR Suction Valves; January 16, 1985

DCR 1449 SER; Removal of Auto Closure of Valves RHR Isolation Valves

E-2036; Integrated Logic Diagram - Residual Heat Removal System; Revision AN

Licensee letter to NRC dated 9/21/2001; Inservice Testing Improvement Project

CAP011961; RCS Pressure Boundary Integrity Valve Considered in Scope for IST

CAP012681; LD-2 Operability Determination Shortfalls

Procedure Change Request 008246; Revise Surveillance Procedure to Include Exercise/Stroke Time Tests for Valves

Procedure Change Request 008247; Revise Surveillance Procedure to Verify Air Operated Valve Remote Position

Condition Evaluation 010090; Perform Condition Evaluation of CAP011961

Proposed Inservice Testing Basis Valve Data Sheet for Valve LD-2

CAP 12967; Two IPEOP Setpoints Non-Conservative, Not in Accordance with Guidelines

1R16 Operator Workarounds

OWA 02-09; CC-302 Letdown Control Outlet Temperature Controller Sluggish in Automatic

A-CC-31A; Abnormal Conditions in the Component Cooling System; Revision O

N-CVC-35B; Charging and Volume Control; Revision AF

OWA 01-08; AFW-4A(B) Often Leak Past Seat When Stopping AFW Following a Plant Startup

OWA 01-16; Tagout 99-253. NRC Generic Letter 96-06 Valves Must Remain Open When At or Above Hot Shutdown

OWA 01-22; SW-1306A(B) Fail Open on Power Supply Perturbations

OWA 02-01; Component Cooling Water Pump Overheating Concern in Two Pump Operation with Normal At-Power Flows

OWA 02-09; CC-302 Sluggish in Auto

1R17 Permanent Plant Modifications

E-1633; Integrated Logic Diagram - Service Water System; Revision AA

E-1632; Integrated Logic Diagram - Service Water System; Revision AH

E-1631; Integrated Logic Diagram - Service Water System; Revision G

E-1630; Integrated Logic Diagram - Service Water System; Revision Q

A-SW-02; Abnormal Service Water System Operation; Revision S

E-SW-02; Leak in Service Water System; Revision R

A-SW-02; Abnormal Service Water System Operation; Revision R

ARP-47051-M; CW Pumps Low Low Level Trip; Revision C

ARP-47051-P; SW Header Pressure Low; Revision E

ARP-47051-Q; Turbine Bldg Service Water Isolation; Revision A

ARP-47052-P; Turbine Bldg SW Header Abnormal; Revision C

ARP-47052-Q; Turbine Bldg SW Isolation Alert; Revision A

OPERM 202; Flow Diagram - Service Water; Sheet 1 of 3; Revision BV

1R19 Post-Maintenance Testing

RT-DGM-10-TSC; Technical Support Center Diesel Generator; Revision V

KAP WO 02-6483; Diesel Generator Manual Test

TSC Diesel Generator Operation Log; August 2, 2002

SP-23-100A; Train A Containment Spray Pump and Valve Test - IST; Revision B

SP-56A-90; Containment Local Leak Rate Type B and C Test Appendix A ICS To Containment PEN 29A; Revision I

KAP WO 02-12937; 6 In. Valve-Check-Containment Spray Pump 1A to Containment Vessel

KAP WO 02-011110-00; CC-302 Responds Sluggishly to Increasing Letdown Heat Exchanger Outlet Temperature

GMP-137; Brush/Tube Scrubber Cleaning Heat Exchanger Tubes and Inspection; Revision G

PMP 17-11; ACA - Auxiliary Building Mezzanine Fan Coil Unit Performance Monitoring and Cooling Coil Inspection and Flushing (QA-1); Revision B

CAP012756; Unable to Complete Performance Monitoring on Aux Bldg. Mezzanine FCU A

N-CVC-35B; Charging and Volume Control; Revision AG

USAR 9.2; Chemical and Volume Control System; Revision 17

KAP WO 02-3405; Charging Pump 1C

1R22 Surveillance Testing

SP-23-100A; Train A Containment Spray Pump and Valve Test- IST; Revision B

PMP 08-30; Fire Protection - CO2 System Inspection and Dry Test (QA-1); Revision K

SP 48-004G;Nuclear Power Range Channel 1 (Red) N-41 Quarterly Calibration; Revision B

CAP012848; Editorial Error in USAR Section 7.2; September 5, 2002

SP-33-098A; Train A Safety Injection Pump and Valve - IST; Original Revision

SP-02-138B; Train B Service Water Pump and Valve Test - IST; Original Revision

SP-34-99A; Train A RHR Pump and Valve Test - IST; Revision A.

OPER XK-100-18; Flow Diagram - Auxiliary Coolant System; Revision AK

SP-34-099A; Train A RHR Pump and Valve Test - IST; Revision A

USAR; Section 6.2; Safety Injections Systems

Kewaunee Pump and Valves IST Plan; Revision O

1EP2 Alert and Notification System (ANS) Testing

EPMP 09.03; Alert and Notification Siren System Testing and Maintenance; Revision I

Card 44-002; ANS Annual Preventive Maintenance; Revision C

Completed Siren Preventive Maintenance Checklists; October 2001

Completed Siren Field Observation Results Forms; May and November 2001

ACE000287; Power Interruptions to Two Sirens Due to Adverse Weather

ACE001098; Conflicting Information on Power Disruptions to Several Sirens

ACE001459; Repair of one Siren's Faulty Communications Equipment

CA007173; Improve Process for Making ANS Programmatic or Software Changes

OTH001660; Meet with County Officials to Discuss Ceasing Use of Local Customers to Verify Siren Operability

PCR006499; Revise ANS Maintenance Procedure to Include Siren Pole Inspection

RCE01-045; Kewaunee County Siren Equipment Problems in 2001

CAP012505; Enhance Siren Test Procedure to Include Sharing of Test Results by Kewaunee and Point Beach EP Staffs

1EP3 Emergency Response Organization (ERO) Augmentation Testing

EPMP-01.01; ERO Qualification and Assignment Tracking; Revision F

EPMP-01.04; Issuing Kewaunee Plant Radio Pagers; Revision E

EPMP-02.06; Emergency Preparedness Measures; Revision E

EPMP-05.03; Telephone Number Quarterly Review; Revision J

EPMP-09.01; Radio Pager Testing; Revision J

EPIP-AD-07; Initial Emergency Notifications; Revision AR

Emergency Telephone Directory; Revision 23

Off-Hours Augmentation Drill Results; November 2000 through June 2002

ERO Response Data Forms; November 2000 through June 2002

Emergency Preparedness Training Program; Revision F

Lesson Plan; Notifier/Communicator Initial Skills; Revision F

OTH001009; Establish Periodic Drills to Improve ERO Proficiency

ACE001324; Several ERO Members Did Not Participate in March 2001 Drill

CE008097; Investigate Use of Single Pager System for ERO Personnel at Kewaunee and Point Beach Plants

CA002529; Develop List of Candidates to Achieve Depth of Four or Five for Most ERO Positions

CA006408; Review ERO Pager Groups to Verify Proper Grouping

ACE001325; Revise EPMP-02.06 Criteria on Accounting for ERO Members Who Are Onsite During an Off-hours Drill

CE010069; Assess Electrician-Qualified Personnel for ERO Electrician Position

CAP011933; June 2002 Off-Hours Augmentation Drill Concern for Electrician Position Self-Assessment Report: Shift Augmentation Processes at Kewaunee and Point Beach Plants; May 17, 2002

Change Management Plan; Consolidation of State and County Liaison Position Assignments for Kewaunee and Point Beach Plants; Revision 0

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies

Nuclear Oversight Audit Summary - First Quarter 2001

Nuclear Oversight Audit Summary - Second Quarter 2001

Nuclear Oversight Audit Summary - Third Quarter 2001

Nuclear Oversight Assessment Report - First Quarter 2002

Draft Nuclear Oversight Assessment Report - Second Quarter 2002

Critique Report for June 2001 Pre-exercise Drill

Critique Report for July 2001 Biennial Exercise

Critique Report for February 2002 ERO Drill

RCE000023; Decreasing Trend in DEP Indicator in Mid-2001

RCE010056; Reassess Procedures and Training on “15 Minute Clocks” for Emergency Classification and Notification Following July 2001 Exercise; Revision 1

EPIP-AD-02; Emergency Class Determination; Revision AD

EPIP-AD-03; Response to an Unusual Event; Revision AF

EPIP-AD-04; Response to an Alert or Higher; Revision AJ

EPIP-AD-07; Initial Emergency Notifications; Revision AR

Lesson Plan - Emergency Plan Actions for the Senior Reactor Operator; Revision A

Lesson Plan - Emergency Plan Classification and Immediate Actions; Revision A

ACE000344; One Incorrect Emergency Classification in July 2001 Exercise

ACE000349; Two Emergency Notifications Were Initiated Over 15 Minutes After Related Emergency Declarations in July 2001 Exercise

OTH0010128; Examples of Unprofessional Behavior by Several Operations Support Facility Staff in July 2001 Exercise

ACE001345; Unproceduralized Chart of Plume Width for Each Atmospheric Stability Class Found in Emergency Operations Facility in July 2001 Exercise

PCR001023; Assign a Priority to Re-entry Teams Leaving the Operations Support Facility

Operations Support Facility Team Briefing Form; Revision C

August 2001 Medical Drill Critique Report

CAP001729; Control Room Crew Had Difficulty Locating General Nuclear Instruction 2.9.1 During 2001 Medical Drill

CAP008248; Communications Between Radiation Protection and Hospital Staffs During 2001 Medical Drill

CE008259; Revise EPMP-02.01 to Include DEP and ERO Indicator Assessments

EPMP-02.01; Declared Emergency Evaluation and Documentation; Revision D

CAP003503; Operations Support Facility Congested Despite its Limited Use in February 2002 Drill

CAP003504; Coordination Concern on General Emergency Notification Form and Protective Action Recommendation Choice During February 2002 Drill

CAP003506; Difficulties in Communicating Source Term, Release Rate, and Release Path Information to Emergency Operations Facility Staff in February 2002 Drill

ACE000710; Causes of Difficulties in Providing Source Term, Release Rate, and Release Path Information in February 2002 Drill

CE001406; Offsite Radiation Teams' Performance Problems in February 2002 Drill

CAP003508; Insufficient Urgency to Deploy Re-entry Teams From Operations Support Facility in February 2002 Drill

CAP003561; Some Repeat Performance Problems Involving Fire Brigade and Fire Team in February 2002 Drill

CAP001670; Clarify Personnel Actions When Plant Siren Sounds

OTH000999; Clarify Expectations for ERO Activation if Fire Alarm Sounds

CE001312; Resolve Procedural Inconsistencies for Onsite Fire Versus Other Onsite Emergencies

OTH001008; Conduct Command and Control Training in Response to Exercise and Drill Concerns

CAP003510; New Statement Distribution Concern at Joint Public Information Center in February 2002 Drill

1EP6 Drill Evaluation

EPIP-AD-02; Emergency Class Determination; Revision AD

EPIP-AD-04; KNPP Response to Alert or Higher; Revision AK

EPIP-AD-07; Initial Emergency Notifications; Revision AR

EPIP-AD-19; Protective Action Guidelines; Revision Q

Kewaunee Point Beach Nuclear Power Plant Emergency Preparedness Drill and Exercise Manual; August 23, 2002

20S3 Radiation Monitoring Instrumentation

KAP 000530; Check Source Fixture Found Broken with Radioactive Source Exposed; December 3, 2001

KAP 001093; HP Concerns with PI System; October 19, 2001

KAP 001749; 1B and 1A Hi Containment Radiation Monitors; August 10, 2001

KAP 001819; EMT Radiation Monitoring Equipment Use; August 2, 2001

KAP 008370; Improper Use of Neutron Dosimetry; July 25, 2001

KAP 011930; High Dose Rate Alarm Received but not Heard; June 18, 2002

KAP 012081; Capture of Identified Issues; June 28, 2002

Respirator Qualification Matrix; July 11, 2002

HP-02.002; Respiratory Protective Equipment; Revision J

HP-06.011; Instrument Operating Procedure - DELTA-3; Revision C

HP-06.072; Instrument Operating Procedure - PCM-1 Personnel Contamination Monitor; Revision C

HP-06.094; Instrument Operating Procedure - DELTA-5; Revision A

HP-06.099; Instrument Operating Procedure - PM-7 Portal Monitor; Revision A

HP-06.100; Instrument Operating Procedure - SAM-11 Small Article Monitor; Revision A

HP-6.65; Instrument Operating Procedure - RM-14; Revision Original

HP-07.004; Instrument Calibration Procedure - Xetex Model 330A Telescan; Revision C

HP-07.018; Instrument Calibration Procedure - RO-2/RO-2A; Revision D

HP-07.065; Instrument Calibration Procedure - RM-14; Revision D

SP–45-049.12; Containment Gas Radiation Monitor Quarterly Functional Test; October 25, 1999

SP–45-049.11; Containment Particulate Radiation Monitor Quarterly Functional Test; October 25, 1999

SP-45-050.11; Containment Particulate Radiation Monitor Calibration; January 16, 2001

SP-45-050.12; Containment Gas Radiation Monitor Calibration; August 3, 2001

ICP 45-04A; RM - Reactor Cavity Sump C Channel 30 Calibration; April 10, 2000

ICP 45-14; RM - Containment High Level Radiation R-40 and R-41 to DAR Channels Calibration; May 2, 2001

ICP 45-15; RM - Rad Waste Area Radiation Monitors Calibration; March 13, 2001

ICP 12; RM - Spent Fuel Area Radiation Monitor Calibration and Functional Test; September 12, 2001

Factory Efficiency Calibration of the Canberra Abacos Plus Fastscan Whole Body Counter; February 22, 2002

B-SP-80-061; Kewaunee Nuclear Plant RADIAC Calibration Worksheet - RO-2; Revision K

B-SP-80-061; Kewaunee Nuclear Plant RADIAC Calibration Worksheet - XETEX 330A Telescan; Revision P

B-SP-80-061; Kewaunee Nuclear Plant RADIAC Calibration Worksheet - RM-14; Revision P

NAD-01.14; Respiratory Protection Program; Revision G

NAD-01.15; Medical Examination Program; Revision G

2PS3 Radiological Environmental Monitoring and Radioactive Material Control Programs

CAP000251**;** During the SGR Numerous Dosimetry Problems Reports Were Completed When Dosimetry Problems Were Identified**;** January 10, 2002

CAP000882**;** NRC ALARA/Access Controls Inspection**;** November 5, 2001

CAP001648**;** Procedural Weaknesses in SP63-164, Environmental Sample Collection**;** August 23, 2001

CAP011810**;** 4 of 5 Air Samplers Failed the Pre Filter Change Operational Check**;** June 5, 2002

CAP012995**;** Invalid Met Data Available for Event Notification and PARS**;** September 18, 2002

CAP012963**;** Primary Meteorological 10 Meter Wind Direction OOS > 30 Days**;** September 17, 2002

CAP012969; Delinquent Initiation of an Action Request (AR); September 17, 2002

Radiological Environmental Monitoring Manual (REMM); May 28, 2002

Annual Environmental Monitoring Report Jan-Dec 2001

Monthly Progress Report to Wisconsin Environmental Monitoring Program (REMP); September 3, 2002

Master Task Listing for MET Tower Instrument Calibrations with Frequencies and Dates of Calibration; September 18, 2002

Temporary Change Form, SP 63-164, Environmental Sample Collection; August 21, 2002

HP-1.14; Land Use Census Program; Revision B

SP-63-048; Meteorological System Weekly Operational Check; Revision F

SP-63-164; Environmental Sample Collection; Revision X

SP-63-276; Monthly Environmental Reports; Revision F

Nuclear Oversight Audit, Environmental Monitoring; September 5, 2002

2002-002-2-020, 2002-002-2-021, 2002-002-2-023, 2002-002-2-025, 2002-002-2-044; Nuclear Oversight Observation Reports, REMP Program

3PP4 Physical Protection - Security Plan Change

Kewaunee Nuclear Power Plant Security; Training and Qualification Plan; Revision 4; May 2002

4OA1 Performance Indicator Verification

Bi-monthly Siren Operability Test Results; July 2000 through June 2002

Quarterly Key ERO Members' Drill and Exercise Participation Records; July 2000 through June 2002

Records of DEP Indicator Opportunities; July 2000 through June 2002

ACE000302; Identified and Corrected Minor Error in Second Quarter 2001 DEP Data

ACE001457; Declining Trend in ERO Indicator in Third Quarter 2000

CE006867; Reassess DEP Records to Correct Protective Action Recommendation Opportunities in 2000

CAP012309; State and County Notification Forms Not Kept for 2001 Licensed Operator Re-qualification Training Sessions

CAP012504; First Quarter 2002 DEP Indicator Data Needs Correction Due to Incorrect Downwind Sectors

CAP012504; Reassess Procedural Guidance for Selecting Downwind Sectors

NEI 99-02; Regulatory Assessment Performance Indicator Guideline; Revision 2

Reactor Operator Logs; October 1, 2001 to June 30, 2002

Kewaunee PI Data Summary Report; 4th Quarter 2001 to 2nd Quarter 2002 for Safety System Unavailability - Emergency AC Power System

Kewaunee PI Data Summary Report; 4th Quarter 2001 to 2nd Quarter 2002 for Safety System Unavailability - Auxiliary Feedwater System

4OA2 Identification and Resolution of Problems

CAP AR 003614; N-5000 on Valve Stem of AFW-2A Causing Valve to Stick During Travel

FP-PA-ARP-01; Performance Assessment Fleet Procedure; Revision 0

GMP-170; Air-Operated Valve Maintenance (QA-1 & QA-2); Revision A

GMP-130; Valve Packing Removal, Installation and Adjustment; Revision F

KAP WO 99-3063; SW-1016A Not Opening Completely

CE002810; WO 01-19678 AFW2A Found an Excess Amount of N-5000 on the Valve Stem Resulting in the Valve to Slip/Stick During the Valve Travel

ACE000714; BS206B/CV31401 Failed Due to N-5000 on Valve Stem

CAP AR 003552; Valve Failed Due to N-5000 on Valve Stem

CAP AR 006119; Loading Anomalies During MOV Diagnostic Testing of CC-400B

CAP AR 006085; Determine Cause of Stem Lubrication Degradation of CC-400A During MOVs Testing

CAP000626; The As-Found Condition of Stem Lubrication for SW-1300A Appeared Severely Degraded

CAP012422; Walkdown Results of CE 10338, N-5000 on AOV Valve Stem Extent of Condition Review

CAP012196; CAP Evaluations Incomplete

KAP WO 01-19678; Actuator-Aux FW Pump 1A Disch CV

CAP012251; Lack of Detail in CAP Operability Determination

AP002819; Fan Floor FCU Motors Loaded Above Their Nameplate Horsepower

KAP WO 00-000895; Record Motor Running Data

CE002101; Evaluate Motors

OTH002444; Review EQ Motor Files

Environmental Qualification Evaluation and Review 37.3; Reliance Motors

KAP WO 01-8595; Unable to Complete PM Within Required Frequency

FPP-08-09; Barrier Control; Revision D

PMP-08-33; FP - Penetration Fire Barrier Inspection; Revision D

ACE001678; Unable to Locate Any Documented Evidence That PMP 08-33 Performed as Scheduled

CAP012467; Fire Barriers Failed Inspection in Accordance With PMP 08-33

CAP012920; Operability Documentation Inadequate for CAP012467 - NRC Identified

KAP WO 01-1568; Lack of Configuration Control for Barrier Requirements

KAP WO 01-1769; PMP 08-33 Inadequate for Penetration Inspection

CAP012861; Penetration Seal Deficiencies in Required Fire Barriers

4OA3 Event Followup

PP 08-09; Barrier Control; Revision D

PMP 08-19; FP - Inspection of Fire Doors; Revision H

RCE000576; Tube Leaks Identified in Component Cooling Water Heat Exchangers; August 10, 2002