January 27, 2003

Mr. J. Forbes
Site Vice-President
Monticello Nuclear Generating Plant
Nuclear Management Company, LLC
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT
NRC INTEGRATED INSPECTION REPORT 50-263/02-06

Dear Mr. Forbes:

On December 31, 2002, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Monticello Nuclear Generating Plant. The results of this inspection were discussed on January 9, 2003, with Mr. D. Fadel and other 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. Specifically, this inspection focused on reactor, radiation, and safeguards safety.

Since the terrorist attacks on September 11, 2001, the NRC has issued two Orders (dated February 25, 2002, and January 7, 2003) and several threat advisories to licensees of commercial power reactors to strengthen licensee capabilities, improve security force readiness, and enhance access authorization. The NRC also issued Temporary Instruction 2515/148 on August 28, 2002, that provided guidance to inspectors to audit and inspect licensee implementation of the interim compensatory measures (ICMs) required by the February 25th Order. Phase 1 of TI 2515/148 was completed at all commercial nuclear power plants during calendar year (CY) '02, and the remaining inspections are scheduled for completion in CY '03. Additionally, table-top security drills were conducted at several licensees to evaluate the impact of expanded adversary characteristics and the ICMs on licensee protection and mitigative strategies. Information gained and discrepancies identified during the audits and drills were reviewed and dispositioned by the Office of Nuclear Security and Incident Response. For CY '03, the NRC will continue to monitor overall safeguards and security controls, conduct inspections, and resume force-on-force exercises at selected power plants. Should threat conditions change, the NRC may issue additional Orders, advisories, and temporary instructions to ensure adequate safety is being maintained at all commercial power reactors.

On the basis of the results of this inspection, no findings of significance were identified.

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

Sincerely,

/RA/

Bruce L. Burgess, Chief
Branch 2
Division of Reactor Projects

Docket No. 50-263
License No. DPR-22

Enclosure: Inspection Report 50-263/02-06

cc w/encl: J. Purkis, Plant Manager
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-263
License No:	DPR-22
Report No:	50-263/02-06
Licensee:	Nuclear Management Company, LLC
Facility:	Monticello Nuclear Generating Plant
Location:	2807 West Highway 75 Monticello, MN 55362
Dates:	October 1 through December 31, 2002
Inspectors:	S. Burton, Senior Resident Inspector D. Kimble, Resident Inspector M. Mitchell, Radiation Protection Inspector G. O'Dwyer, Mechanical Engineering Inspector G. Pirtle, Physical Security Inspector
Approved by:	Bruce L. Burgess, Chief Branch 2 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000263/2002-006; Nuclear Management Company, LLC; on 10/01-12/31/2002, Monticello Nuclear Generating Plant. Routine Baseline Inspection Report.

This report covers a 3-month period of baseline resident inspection and announced baseline inspections in radiation protection and physical security, as well as a mechanical engineering biennial heat sink inspection. The inspections were conducted by resident and Region III inspectors. 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. Inspector Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

No findings of significance were identified.

REPORT DETAILS

Summary of Plant Status

Monticello operated at full power for the entire assessment period except for brief down-power maneuvers to accomplish rod pattern adjustments and conduct planned surveillance testing activities, and on October 23 and 24, 2002, when power was reduced to approximately 52 percent to facilitate repairs to the main generator rectifier and to the feedwater regulating valve.

1. REACTOR SAFETY

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

1R01 Adverse Weather (71111.01)

a. Inspection Scope

The inspectors conducted a review of the licensee's preparations for winter conditions. The inspectors examined the plant's design features, implementation of procedures, and other actions taken to protect mitigating systems from the effects of adverse weather. Documentation for selected risk-significant systems were reviewed to ensure that these systems would remain functional when challenged by inclement weather. Cold weather protection, such as heat tracing, was inspected where applicable. The following systems were inspected:

- Condensate storage tanks (week ending 11/9)
- Service water intake structure (week ending 11/9)

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors performed partial walkdowns of accessible portions of trains of risk-significant mitigating systems equipment during times when the trains were of increased importance due to the redundant trains or other related equipment being unavailable. The inspectors utilized the procedures and prints listed at the end of this report to verify that the components were properly positioned and that support systems were lined up as needed. The inspectors also examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors reviewed outstanding work orders associated with the trains to verify that those documents did not reveal issues that could affect train

function. The inspectors used the information in the appropriate sections of the Updated Safety Analysis Report (UFSAR) to determine the functional requirements of the systems. These systems were selected based upon risk significance, plant configuration, system work or testing, or inoperable or degraded conditions.

- High pressure coolant injection (HPCI), No. 11 emergency diesel generator (EDG), and No. 12 EDG with the reactor core isolation cooling (RCIC) system isolated for maintenance (week ending 10/19)

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

.1 Annual Resident Inspector Review of Heat Exchanger Performance Testing

a. Inspection Scope

During the week ending December 21, 2002, the inspectors reviewed the licensee's performance testing for their residual heat removal system heat exchangers to look for any potential deficiencies which may have masked the licensee's ability to detect degraded performance; to identify any common cause issues that had the potential to increase risk; and to ensure that the licensee was adequately addressing problems that could result in initiating events that would cause an increase in risk. The inspectors reviewed the licensee's observations as compared against acceptance criteria, the correlation of scheduled testing and the frequency of testing, and the impact of instrument inaccuracies on test results. The inspectors also examined test acceptance criteria, paying special attention to differences between test conditions, design conditions, and the testing criteria.

b. Findings

No findings of significance were identified.

.2 Biennial Heat Sink Performance Inspection

a. Inspection Scope

The inspector reviewed documents associated with testing, inspection, cleaning and performance trending of heat exchangers primarily focusing on the 11 Emergency Diesel Generator (EDG) Jacket Water Heat Exchanger and 12 Residual Heat Removal Heat Exchanger. These two heat exchangers were chosen based upon their importance in supporting required safety functions as well as relatively high risk achievement worths in the plant specific risk assessment. These heat exchangers were also selected to evaluate the licensee's thermal performance testing methods. During the inspection, the inspector reviewed completed surveillance tests and associated calculations, and performed independent calculations to verify that these activities

adequately ensured proper heat transfer. The inspector reviewed the documentation to confirm that the test or inspection methodology was consistent with accepted industry and scientific practices, based on review of heat transfer texts and electrical power research institute standards (EPRI NP-7552, Heat Exchanger Performance Monitoring Guidelines, December 1991 and EPRI TR-107397, Service Water Heat Exchanger Testing Guidelines, March 1998) and Mark's Engineering Handbook.

The inspector reviewed condition reports concerning heat exchanger and ultimate heat sink performance issues to verify that the licensee had an appropriate threshold for identifying issues and entering them in the corrective action program. The inspector also evaluated the effectiveness of the corrective actions for identified issues, including the engineering justification for operability, if applicable.

The documents that were reviewed are included at the end of the report. Also attached is the information request sent to the licensee in preparation for this Heat Sink Inspection.

b. Findings

The inspectors identified an Unresolved Item in that the licensee may not have considered a potential worst case condition for the operation of the emergency diesel generators (URI 050-263/02-06-01). The item is unresolved pending completion of the inspectors' review of the licensee's safety evaluations.

The inspector noted that the Emergency Diesel Generator (EDG) jacket water heat exchangers were analyzed and tested to ensure adequate cooling for EDG operation at 2,500 kilowatts (KW); however, it appeared that the EDG procedures may allow the EDGs to be operated at a higher power. The licensee entered the issue into its corrective action program as Condition Report 02009522. This will remain an Unresolved Item pending further review of the procedures and the licensee's analysis. The issue is not an immediate safety concern because currently the river water temperature is sufficiently low so that the EDGs could operate at the higher power without overheating.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

The inspectors observed a training crew during an evaluated simulator scenario and reviewed licensed operator performance in mitigating the consequences of events. The scenario included a battery charger failure and associated technical specification entry, a loss of a reactor recirculation pump motor generator and associated power reduction, a turbine trip with a failure to scram, and a loss of reactor vessel level indication. The transient resulted in the operators responding to the transient conditions, entering the failure to scram procedure and performing vessel flooding in accordance with emergency operating procedures. Areas observed by the inspectors included: clarity and formality of communications, timeliness of actions, prioritization of activities,

procedural adequacy and implementation, control board manipulations, managerial oversight, emergency plan execution, and group dynamics.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the licensee's handling of performance issues and the associated implementation of the Maintenance Rule (10 CFR 50.65) to evaluate maintenance effectiveness for the selected systems. The following systems were selected based on being designated as risk significant under the Maintenance Rule, being in the increased monitoring (Maintenance Rule category a(1)) group, or due to an inspector-identified issue or problem that potentially impacted system work practices, reliability, or common cause failures:

- No. 13 service water pump post-replacement performance (weeks ending 11/16 and 11/23)
- HPCI turbine speed governor failure (weeks ending 11/23, 12/14, and 12/21)
- Investigation and repair of MSIV [main steam isolation valve] limit switch relay failure (weeks ending 12/21 and 12/28)

The inspectors' review included examination of the licensee's categorization of specific issues, evaluation of the performance criteria, appropriate work practices, identification of common cause errors, extent of condition, and trending of key parameters. Additionally, the inspectors reviewed the licensee's implementation of the maintenance rule requirements, including a review of scoping, goal-setting, performance monitoring, short-term and long-term corrective actions, functional failure determinations associated with the condition reports reviewed, and current equipment performance status.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed and observed emergent work, preventive maintenance, or planning for risk significant maintenance activities. The inspectors observed maintenance or planning for the following activities or risk significant systems undergoing scheduled or emergent maintenance.

- No. 13 service water pump replacement (week ending 10/12)

- Power reduction and freeze seal for repair of exciter rectifier cooling water leak (week ending 10/26)

The inspectors also reviewed the licensee's evaluation of plant risk, risk management, scheduling, and configuration control for these activities in coordination with other scheduled risk significant work. The inspectors examined the licensee's control of activities, assessment of baseline and cumulative risk, management of plant configuration, control of maintenance, and external impacts on risk. In-plant activities were reviewed to ensure that the risk assessment of maintenance or emergent work was complete and adequate, and that the assessment included an evaluation of external factors. Additionally, the inspectors reviewed the licensee's risk category for various evolutions.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions and Events (71111.14)

.1 Annual Evaluation of Licensee Event Reports (LERs)

a. Inspection Scope

The inspectors reviewed all LERs written during the 2002 calender year, focusing on those involving personnel response to non-routine conditions. Where applicable, the inspectors evaluated if licensee personnel responded in accordance with applicable procedures and training.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the technical adequacy of the following operability evaluations to determine the impact on Technical Specifications, the significance of the evaluations, and to ensure that adequate justifications were documented.

- Emergency core cooling systems (ECCS) corner room heat up calculation (week ending 11/2)

- Appendix R concerns for torus area separation and combustible control (weeks ending 11/16 and 12/18)

- Traversing incore probe (TIP) detector failure (weeks ending 12/7 and 12/14)

Operability evaluations were selected based upon the relationship of the safety-related system, structure, or component to risk.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (OWA) (71111.16)

a. Inspection Scope

The inspectors performed a semiannual review of the cumulative effects of OWAs. The inspectors reviewed the cumulative effects of workarounds on the reliability, availability, and potential for improper operation of plant systems. Additionally, reviews were conducted to determine if the workarounds could increase the possibility of an initiating event, affect multiple mitigating systems, or impact the operators' ability to respond to accidents or transients.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors selected the following post-maintenance activities for review. Activities were selected based upon the structure, system, or component's ability to impact risk.

- Train A standby gas treatment (SBGT) system testing following scheduled maintenance (week ending 10/12)
- Electric fire pump testing following seal packing replacement (week ending 11/2)
- HPCI maintenance window return-to-service testing (week ending 11/23)

The inspectors witnessed the test and/or reviewed the test data to ensure that post-maintenance testing activities were adequate for the above maintenance activities. The inspectors reviews included, but were not limited to, integration of testing activities, applicability of acceptance criteria, test equipment calibration and control, procedural use and compliance, control of temporary modifications or jumpers required for test performance, documentation of test data, Technical Specification applicability, system restoration, and evaluation of test data. Also, the inspectors' review examined the maintenance and post-maintenance testing activities to ensure the equipment met the licensing basis, Technical Specifications, and Updated Safety Analysis Report (USAR) design requirements.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors selected the following surveillance test activities for review. Activities were selected based upon risk significance and the potential risk impact from an unidentified deficiency or performance degradation that a system, structure, or component could impose on the unit if the condition were left unresolved.

- Standby liquid control (SLC) quarterly pump and valve testing (week ending 10/5)
- Average power range meter (APRM) recirculation flow quarterly instrument calibration (week ending 10/19)
- Cable spreading room halon system functional test (week ending 11/30)

The inspectors observed the performance of surveillance testing activities, including reviews for preconditioning, integration of testing activities, applicability of acceptance criteria, test equipment calibration and control, procedural use, control of temporary modifications or jumpers required for test performance, documentation of test data, Technical Specification applicability, impact of testing relative to performance indicator reporting, and evaluation of test data.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

During the weeks ending October 19 and October 26, 2002, the inspectors reviewed a temporary modification which installed a control air booster for the No. 12 reactor feed pump (RFP) recirculation valve, CV-3490. The inspectors observed the installation of the temporary modification and reviewed the safety screening, design documents, USAR, and applicable Technical Specifications to determine that the installation was consistent with modification documents, drawings, and procedures. The inspectors also reviewed the post-installation test results to confirm that tests were satisfactory and that the actual impact of the temporary modification on the permanent system and interfacing systems was as intended.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

On November 20, 2002, the inspectors reviewed a site-wide emergency plan drill to evaluate drill conduct and the adequacy of the licensee's critique of performance to identify weaknesses and deficiencies. The selected drill provided input to the licensee's Drill/Exercise Performance Indicator. The inspectors observed, when applicable, the classification of events, notifications to off-site agencies, protective action recommendation development, and drill critiques. Observations were compared to the licensee's observations and corrective action program (CAP) entries. The inspectors checked for discrepancies between observed performance and performance indicator reported statistics. The drill scenario observed resulted in alert and site area emergency classifications.

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

a. Inspection Scope

The inspectors reviewed the radiological conditions of work areas within radiation areas and high radiation areas in the radiologically restricted area to verify the adequacy of radiological boundaries and postings. This included walkdowns of high and locked high radiation area boundaries in the reactor, turbine and radwaste buildings. The inspectors performed independent measurements of area radiation levels and reviewed associated licensee controls to determine if the controls (i.e., surveys, postings, and barricades) were adequate to meet the requirements of 10 CFR Part 20 and the licensee's Technical Specifications.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation (71121.03)

.1 Walkdowns of Radiation Monitoring Instrumentation

a. Inspection Scope

The inspectors reviewed the USAR and performed walkdowns of selected area radiation monitors (ARMs) and continuous air monitors (CAMS) located at the spent fuel pool, the reactor, and radioactive waste buildings. Additionally, the inspectors examined a representative number of portable instruments staged in the licensee's facility to verify that those instruments had current calibrations, were operable, and in good physical condition. The inspectors also reviewed the status of repair or troubleshooting activities associated with selected radiation monitoring instruments (i.e., ARMs and CAMS) to verify that instrumentation problems were being addressed in an appropriate and timely manner. The inspectors performed these walkdowns to verify the instrumentation was: (1) optimally positioned (i.e., relative to the potential source(s) of radiation they were intended to monitor); (2) in a good material condition; and (3) properly indicating area radiation levels.

b. Findings

No findings of significance were identified.

.2 Source Tests and Calibration of Radiological Instrumentation

a. Inspection Scope

The inspectors evaluated radiological instrumentation associated with monitoring transient high and/or very high radiation areas, and instruments used for remote emergency assessment to verify that the calibration process was conducted consistent with industry standards and in accordance with station procedures. The inspectors reviewed calibration records to confirm that selected ARMs were operable and properly indicated area radiation levels. The inspectors examined the licensee's alarm set points for selected ARMs to verify that the set points were established consistent with the station's requirements. The inspectors reviewed the most recent calibration records for selected ARMs and continuous air monitors which included, but were not limited to, the following:

- Drywell particulate monitor
- Spent fuel pool area monitors
- Selected plant general area radiation monitors

The inspectors reviewed calendar year (CY) 2002 calibration records and procedures for those instruments utilized for surveys of personnel and equipment prior to egress from the radiologically restricted area. The inspectors examined and observed radiation protection staff complete functional tests of selected personnel contamination monitors

and small article monitors to verify that these instruments were source checked and calibrated adequately, consistent with station procedures and industry standards.

The inspectors examined portable survey instruments maintained in the licensee's instrument issue area at access control to verify that those instruments designated "ready for use" had current calibrations, were operable, and were in good physical condition. The inspectors observed radiation protection staff source check portable radiation survey instruments to verify that those source checks were adequately completed using appropriate radiation sources and station procedures. The inspectors reviewed the calibration procedures and selected 2002 calibration records to verify that the portable radiation survey instruments had been properly calibrated consistent with the licensee's procedures.

b. Findings

No findings of significance were identified.

.3 Respiratory Protection - Self-Contained Breathing Apparatus

a. Inspection Scope

The inspectors reviewed aspects of the licensee's respiratory protection program for compliance with the requirements of Subpart H of 10 CFR Part 20, to ensure that self-contained breathing apparatus (SCBA) were properly maintained and stored, and to ensure that appropriate personnel were required to be SCBA qualified. The inspectors performed walkdowns of selected SCBA storage locations and inspected a sample of the units to assess the material condition of the equipment and to verify that the monthly inspection requirement had been met. In addition, the inspectors reviewed the licensee's current training and qualification records to verify that applicable personnel were currently trained and qualified for SCBA use, as required by the Emergency Plan and plant procedures.

b. Findings

No findings of significance were identified.

.4 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed conditions reports (CRs) for 2002 along with self-assessments and surveillances that addressed radiation instrument/SCBA deficiencies to determine if any significant radiological incidents involving radiation instrument deficiencies had occurred since the last assessment. The inspectors also reviewed the licensee's CRs 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. Additionally, the inspectors examined these documents to verify the licensee's ability to identify repetitive problems,

contributing causes, the extent of conditions, and implement corrective actions to achieve lasting results.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

Cornerstones: Mitigating Systems and Occupational Radiation Safety

.1 Mitigating Systems Performance Indicator Verification

a. Inspection Scope

The inspectors reviewed LERs, licensee memoranda, plant logs, and NRC Inspection Reports to verify the following performance indicators for 3rd quarter of 2002:

- Safety system unavailability, high pressure coolant injection
- Safety system unavailability, reactor core isolation cooling

The inspectors verified that the licensee accurately reported performance as defined by the applicable revision of Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline."

b. Findings

No findings of significance were identified.

.2 Occupational Radiation Safety Performance Indicator Verification

a. Inspection Scope

The inspectors reviewed the licensee's determination of performance indicators for the occupational radiation safety cornerstone to verify that the licensee accurately determined these performance indicators and had identified all occurrences required. No reportable elements were identified by the licensee for CY 2002 through December 13, 2002. The inspectors compared the licensee's data with CRs to verify that there were no occurrences concerning the occupational radiation safety cornerstone.

b. Findings

No findings of significance were identified.

.3 Data Submission Issue

a. Inspection Scope

During the week ending December 28, 2002, the inspectors performed a review of the data submitted by the licensee for the 3rd quarter 2002 performance indicators for any obvious inconsistencies prior to its public release in accordance with IMC 0608, "Performance Indicator Program."

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 sections 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 the inspectors' observations are generally denoted in the report.

b. Findings

No finding of significance were identified.

.2 Control of Technical Specification Limiting Conditions for Operation (LCOs)

Introduction

Over the past several months, a number of issues related to the control of Technical Specification LCOs have been identified. Ultimately, the licensee identified a continuing adverse trend in this area and conducted a team investigation into the root causes under CR 02009465, "Adverse Trend with Respect to Identifying Proper Technical Specification LCO to Enter for Work Activities." The inspectors selected this condition report and issue for a periodic review. As part of the review for CR 02009465, the inspectors reviewed 19 additional CRs identified in the "List of Documents Reviewed" at the end of this report.

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed CR 02009465, and several related condition reports, 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.

(2) Issues

While it appeared that the most recent issues regarding control of Technical Specification LCOs were identified by the licensee, the inspectors noted that a number of significant earlier issues in this area were identified by the NRC. Specifically, these included the issues involving:

- On December 14, 2001, the NRC issued Inspection Report (IR) 50-263/01-16 discussing the results of the most recent team inspection related to the identification and resolution of problems at Monticello. In this report, the inspection team identified an unrecognized trend in procedural coordination relative to LCO entry conditions. The team cited the following four conditions reports as examples:

  - CR 00000686, "Loss of Service Water Rad Monitor Requiring LCO Entry During Emergency Core Cooling System Test 0036-02 not Noted in Procedure;"
  - CR 01000846, "Past Standby Gas Treatment System On-line Maintenance Failed to Enter 36-Hour LCO When Doors Were Opened for Access Within Each Filter Unit;"
  - CR 00001032, "Compensatory Action Associated with Turbine Building High Energy Line Break Flooding did not Consider Reactor Mode Changes with Technical Specification LCO Active;" and
  - CR 01001350, "Residual Heat Removal Venting as Performed 1047-03 and B.03.04-05 Has the Potential to Divert Low Pressure Coolant Injection and Combustible Gas Control System Coolant Flow"

- In November of 2001, a NRC inspection team identified that, during on-line maintenance for the standby gas treatment system, the appropriate Technical Specification LCO was not entered while one division of the secondary containment isolation trip circuit was de-energized. Based on the licensee's subsequent assessment, the plant should have entered either an 8-hour LCO for inoperable secondary containment isolation dampers per Technical Specification 3.7.C.3, or a 36-hour LCO for an inoperable secondary containment system per Technical Specification 3.7.C.4. (CR 01007006)

- The inspectors identified that the plant had made a mode change from startup mode to run mode on January 27, 2002, while in a LCO that had an action statement requirement that required a plant shutdown which was not consistent

with procedural guidance in the plant's Operations Manual, Section C.1. The Monticello Technical Specifications contain no statements that prohibited mode changes with mode limiting action statements. (CR 02000785)

- The inspectors identified a human performance error in the planning for the installation of a modification involving spray hoods protecting two emergency service water (ESW) pump motors. The licensee's staff involved with the work, were unaware that the spray hoods were a mechanical design feature intended to provide specific protection for the ESW pump motors under certain conditions and, therefore, could not be removed without affecting the operability of the motors. The inspectors brought the issue to the licensee's attention prior to the commencement of any actual physical work on the systems. (CR 02001002)

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed CR 02009465, and several related condition reports. The inspectors considered the licensee's evaluation and disposition of performance issues, evaluation and disposition of operability issues, and application of risk insights for prioritization of issues.

(2) Issues

The inspectors noted that in addition to the adverse trend with control of Technical Specification LCOs currently identified by the licensee in CR 02009465, the licensee had previously identified a potential adverse trend in this area in February of 2002 (CR 02001240). Unlike the recent trend evaluation, the earlier trend evaluation, essentially found no issues related to improper control of Technical Specification LCOs. As documented in the CR 02001240 evaluation, existing processes for making operability determinations and controlling Technical Specification LCOs were viewed as "robust" by the licensee, and no further actions in this area were considered to have been required. Given the issues in this area that culminated in another adverse trend investigation, the inspectors considered the licensee's review and conclusions in CR 02001240 to have been inconsistent with the facility's actual performance.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed CR 02009465, and several related condition reports, to determine if the condition reports addressed generic implications and that corrective actions were appropriately focused to correct the problem.

(2) Issues

The inspectors reviewed the proposed corrective actions for CR 02009465 and several related condition reports. The proposed corrective actions for CR 02009465 appeared

to be adequate and were focused on the identified causes within the licensee's evaluation of the condition.

.3 Control of Plant Drains

Introduction

Over the course of the past year, a number of issues relating to plant floor drains have been identified at the plant. The culmination of the identified issues was an apparent adverse trend in this area identified by the licensee and entered into their CAP as CR 02010210, "Adverse Trend - Recurrence of Issues associated with Plant Floor Drain System Indicates Potential Common Cause Element."

Internal flooding scenarios constitute the largest single contributor to the plant's baseline core damage frequency risk assessment. As a result, the inspectors selected this condition report and issue for a periodic review.

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed CR 02010210 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. As part of the review for CR 02010210, the inspectors reviewed 12 additional CRs identified in the "List of Documents Reviewed" at the end of this report.

(2) Issues

The inspectors review of CR 02010210, "Adverse Trend - Recurrence of Issues Associated with Plant Floor Drain System Indicates Potential Common Cause Element" identified that only two issues, plumbing and drainage drawing inaccuracies, and unauthorized/undocumented floor drain modifications, were examined for a possible trend. The inspectors noted that several foreign material exclusion and/or drain blockage issues were not addressed by the condition report. These issues included:

- In February of 2002, the licensee identified that floor drains in the offgas storage building were covered with tape. Investigation by the licensee revealed that the tape should have been removed following previous maintenance activities. The licensee entered the issue into their CAP as CR 02001709.

- In August of 2002, plant operators identified a bucket covering a floor drain in the mechanical vacuum pump room. The licensee calculated that about one foot of fluid would have accumulated on the floor prior to overflowing the bucket rim and being directed to the floor drain. The licensee entered this issue into their CAP as CR 02007137.

- In August of 2002, the licensee's quality assurance group identified a missing cover on a floor drain in the reactor building near the standby liquid control pumps. The missing cover could have allowed foreign material to enter the drain system. The licensee entered this issue into their CAP as CR 02008197.

- In September of 2002, the licensee identified foreign material in and around a floor drain in the reactor building. The issue was entered into the CAP as CR 02008814.

- In October of 2002, the licensee identified that floor drains in the RCIC room were misidentified. At some point in the past, the floor drain in the room had been identified as a cleanout connection and capped, while a cleanout connection was labeled as a floor drain and had equipment drain lines routed to it. The licensee entered this issue into their CAP as CR 02010101.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed CR 02010210. The inspectors considered the licensee's evaluation and disposition of performance issues, evaluation and disposition of operability issues, and application of risk insights for prioritization of issues.

(2) Issues

The inspectors noted that the licensee's evaluation concluded that an improperly low significance was being assigned to the floor drain system and associated issues. The licensee's proposed corrective actions appeared adequate.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed CR 02010101, and several related condition reports, to determine if the condition reports addressed generic implications and that corrective actions were appropriately focused to correct the problem.

(2) Issues

The inspectors reviewed the proposed corrective actions for CR 02010101 and several related condition reports. The proposed corrective actions for CR 02010101 appeared to be adequate and were focused on the identified causes within the licensee's evaluation of the condition.

4OA3 Event Follow-up (71153)

.1 (Closed) LER 50-263/02-005-00: Entered Unplanned LCO for Both CRV [Control Room Ventilation] Trains Inoperable Due to Pressure Switch Drift

On July 22, 2002, while performing ESW testing with the B-division CRV procedurally inoperable, which was necessary to accomplish the required testing, the A-division CRV compressor tripped on low cooling water flow. This condition rendered both trains of CRV inoperable and was reportable as required by 10 CFR 50.73(a)(2)(v)(D). The B-division was restored to service within 31 minutes and the A-division repaired within 24 hours. The cause of the failure was determined to be setpoint drift on the A-division service water flow differential pressure switch. The LER was reviewed by the inspectors and no findings of significance were identified. The licensee entered this issue into their CAP as CR 20026732.

4OA5 Other Activities

.1 Completion of Appendix A to TI 2515/148, Revision 1

The inspectors completed the pre-inspection audit for interim compensatory measures at nuclear power plants, dated September 13, 2002.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. D. Fadel and other members of licensee management at the conclusion of the inspection on January 9, 2003. 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:

- Appendix A to Revision 1 of Safeguards Temporary Instruction 2515/148 with Mr. D. Fadel on October 9, 2002.

- Biennial Heat Sink Inspection with B. Sawatzke, Acting Plant Manager and Mr. D. Fadel, Acting Site Vice President on October 11, 2002.

- Radiation Protection inspections with Mr. K. Jepson on December 13, 2002.

KEY POINTS OF CONTACT

Licensee
R. Baumer, Compliance Engineer - NMC Licensing
G. Bregg, Manager, Quality Services
D. Fadel, Director of Engineering
J. Forbes, Site Vice-President
T. Gallagher, Acting Security Manager
J. Grubb, Operations Manager
K. Jepson, Radiation Protection and Chemistry Manager
S. Kibler, Heat Exchanger Program Coordinator
B. Linde, Security Manager
S. Nelson, Senior System Engineer, Turbine Systems Group
D. Neve, Licensing Project Manager
J. Purkis, Plant Manager
B. Sawatzke, Maintenance Manager
C. Schibonski, Safety Assessment Manager
E. Sopkin, Engineering Manager
P. Young, Supervisor, Turbine Systems Group
P. Yurczyk, Radiation Protection Supervisor

Nuclear Regulatory Commission
B. Burgess, Chief, Region III Reactor Projects Branch 2

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-263/02-06-01	URI	Licensee May Not Have Considered a Potential Worst Case Condition for the Operation of the Emergency Diesel Generators

Closed

50-263/02-005-00	LER	Entered Unplanned LCO for Both CRV Trains Inoperable Due to Pressure Switch Drift (Section 4OA3)

Discussed

None.

LIST OF ACRONYMS USED

APRM	Average Power Range Monitor
ARM	Area Radiation Monitor
ATWS	Anticipated Transient Without Scram
AWI	Administrative Work Instruction
CAM	Continuous Air Monitor
CAP	Corrective Action Program
CDF	Core Damage Frequency
CFR	Code of Federal Requirements
CR	Condition Report
CRV	Control Room Ventilation
CSR	Cable Spreading Room
CV	Control Valve
CY	Calendar Year
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
ESW	Emergency Service Water
GE	General Electric
H_2/O_2	Hydrogen-Oxygen
HPCI	High Pressure Core Injection
IMC	Inspection Manual Chapter
IPE	Individual Plant Examination
IPEEE	Individual Plant Examination of External Events
IR	Inspection Report
kV	Kilovolt
LCO	Limiting Condition for Operation
LER	Licensee Event Report
LOCA	Loss of Coolant Accident
LPCI	Low Pressure Coolant Injection
MCC	Motor Control Center
MSIV	Main Steam Isolation Valve
NMC	Nuclear Management Company
NUMARC	Nuclear Management and Resources Council
OWA	Operator Workaround
OWI	Operations Work Instruction
PI&R	Problem Identification and Resolution
PMT	Post-Maintenance Testing
RBCCW	Reactor Building Closed Cooling Water
RCIC	Reactor Core Isolation Cooling
RFP	Reactor Feed Pump
RHR	Residual Heat Removal
SBGT	Standby Gas Treatment
SCBA	Self-Contained Breathing Apparatus
SCR	Screening
SDP	Significance Determination Process
SLC	Standby Liquid Control

LIST OF ACRONYMS USED (cont'd)

SRI	Safety Review Item
SWI	Scheduling Work Instruction
TIP	Traversing Incore Probe
TLD	Thermoluminescent Dosimeters
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
USAR	Updated Safety Analysis Report
WO	Work Order

LIST OF DOCUMENTS REVIEWED

1R01 Adverse Weather

Procedures and Forms:
- 1151; Winter Checklist; Revision 41

Drawings and Prints:
- M-108; Condensate and Demineralized Water Storage Systems; Revision BL
- M-811; Service Water System and Make-Up Intake Structure; Revision CE
- M-812; Screen Wash, Fire, and Chlorination System Intake Structure; Revision AT

1R04 Equipment Alignment

Work Orders (WOs):
- 0203901; Restore Door Gaskets for RCIC 250 Vdc MCC 311

Drawings and Prints:
- NF-36298-1; Electrical Load Flow One Line Diagram; Revision P
- NF-36298-2; DC Electrical Load Flow One Line Diagram; Revision B
- M-123; HPCI (Steam Side); Revision AL
- M-123-1; HPCI Hydraulic Control and Lubrication; Revision C
- M-124; HPCI (Water Side); Revision AC
- M-133; Sheet 1; Diesel Oil System; Revision AD

1R07 Heat Sink Performance

1136; RHR Heat Exchanger Efficiency Test; Revision 22

Calculation CA-01-144; EDG Heat Exchanger Thermal Performance Rebaseline Calculation; Revision 0

Calculation CA-02-147; EDG ESW Heat Exchanger Performance Test; Revision 0

Calculation CA-92-148; EDG ESW Heat Exchanger Performance Monitoring; Revision 0, superceded during inspection

Calculation CA-91-049; EDG ESW Heat Exchanger Performance Monitoring; Revision 0, superceded during inspection

Calculation CA-94-066; Determination RHR Heat Exchanger K Values; Revision 3

Calculation CA-90-018; Determination of Acceptance Criteria for RHR Pump Surveillance Testing and Verification of Adequate LPCI Flow under Four and Two Pump operation for SRI 90-002 and GE Report NEDC-31786P

1404-01 11; EDG ESW Heat Exchanger Performance Test - performed 8/19/02; Revision 4*

1404-01 11; EDG ESW Heat Exchanger Performance Test - performed 7/25/01; Revision 3

1136; RHR Heat Exchanger Efficiency Test - performed May 14, 2002; Revision 22

1136; RHR Heat Exchanger Efficiency Test - performed October 23, 2001; Revision 22

Ops Man B.09.08-05 E.1; 11 Emergency Diesel Generator Operation; Revision 12

XF 1303-TR-2P; Jacket Water Heat Exchangers' Specification Sheet

Item: 1 Base Job 7B-4009; RHR Heat Exchangers' Specification Sheet; Revision 3 as built June 6, 1968

Inspection Report for 11 EDG heat exchanger; November 8, 2001

CR 20021381; Evaluation of the RHR Heat Exchanger Efficiency testing frequency was not documented when #12 RHR Heat Exchanger failed; March 6, 2002

CR 20003631; Nonconservative heat transfer rate used in EDG bounding calc and HX jacket flow not verified in EDG HX performance test.

CR 20014689; River Water Temperature reached 85 degrees F per CWT101TA for three consecutive readings.

CR 20024701; 12 RHR Heat Exchanger: Decreasing Efficiency Trend; 30-May-02

CR 20004858; #14 RHRSW pump motor cooler outlet's flexible piping is rubbing against a pipe conduit's bracket; December 9, 2000

CR 20021509; Sufficient Direction/expectations Have Not Been Provided for Improvement in the Program's Engineering Heat Exchangers; dated February 19, 2002

CR 20023738; Acceptance Criteria Not Updated in Surveillance 1404-1/2 as Established in Calculation 01-144; dated April 19, 2002

CR 20028973; Large Accumulation of grass in intake.

<u>Condition Reports Initiated as a Result of Inspection</u>

CR 02009522; The NRC questioned EDG design output loads in USAR; November 4, 2002

CR 20029549; NRC identified that EDG Heat Exchanger Calculation 92-148 was not identified superseded by a 01-144; October 10, 2002

1R11 Licensed Operator Requalification Program

Documents and Procedures:
- RQ-SS-45E; Simulator Exercise Guide - ATWS With a Loss of Level Indication; Revision 0
- C.5-3101; Alternate Rod Insertion; Revision 3
- C.5-1100; Reactor Pressure Vessel Control; Revision 9
- C.5-1200; Primary Containment Control; Revision 12
- C.4-A; Reactor Scram; Revision 21
- C.4-B.01.04.A; Trip of One Recirc Pump; Revision 8

1R12 Maintenance Effectiveness

Documents and Procedures:
- 93-01; NUMARC [Nuclear Management and Resources Council], Nuclear Energy Institute Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants; Revision 2
- 05.02.01; Engineering Work Instruction, Monticello Maintenance Rule Program Document; Revision 3
- B.8.1.1; Maintenance Rule Program Basis Document - Service Water; Revision 1
- 7132; HPCI Turbine Speed Control System Calibration; Revision 15
- 99Q215; Outboard MSIV Limit Switch Service Temperature Reduction; Revision 0
- 0255-07-IA-2; Main Steam Isolation Valve Functional Check Test; Revision 14
-0008; Main Steam Line Isolation Valve Closure Scram Test, 0160-B MSIV Exercise Test; Revision 15

Regulatory Guides:
- 1.160; Monitoring the Effectiveness of Maintenance at Nuclear Power Plants; Revision 2
- 1.182; Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants; May 2000

Condition Reports:
- 01001526; Input on CDF Was not Assessed Prior to Placing No. 13 Service Water Pump Cleaning on Schedule
- 02006691; No. 13 Service Water Pump Motor Has Noise From Upper Area of Motor
- 02009147; No. 13 Service Water Pump Degrading
- 02009650; Failure of No. 13 Service Water Pump Reflects a Potential Common Cause Failure Mechanism for Other Intake Installed Pumps
- 02010325; No. 13 Service Water Pump Vibration Spectra Indicates a Potential Problem With the Upper Thrust Bearing Cage
- 02010469; Service Water Pump No. 13, P-102C, Was Found to Have Very High Lube Oil Contamination Levels After Motor and Pump Rebuild
- 02010836; HPCI EG-M Control Box Null Voltage Settings Found Outside Acceptance Band During Calibration Procedure
- 02000990; Adverse Performance Trend Associated with MSIV Limit Switches Identified
- 01008292; During Performance of 0160-A on AO-2-86C, Relay 5A-K3C Would Not Reset

- 02000607; While Opening MSIVs for Startup, AO-2-86B Displayed Dual Indication When the Valve Was Full Open
- 02000662; While Performing MSIV Exercise Test 0160-A, AO-2-86B Displayed Dual Indication When the Valve Was Full Open
-02000953; While Performing MSIV Exercise Test 0160-A, AO-2-86B Displayed Dual Indication When the Valve Was Full Open
- 02001711; During Performance of Test 0160-A AO-2-86B Displayed Dual Indication When the Valve Was Full Open. Adverse Trend 2/24/02

Work Orders:
- 0204571; No. 13 Service Water Pump Performance Indicates a Rebuild Is Due
- 0110669; Investigate/Repair Relay 5A-K3C Failure to Energize

1R13 Maintenance Risk Assessments and Emergent Work Control

Documents and Procedures:
- 4AWI-04.01.01; General Plant Operating Activities; Revision 33
- SWI-14.01; Risk Management of On-line Maintenance; Revision 0
- Volume F No. 2093; Abnormal Rectifier Bank Operation (Operations Manual B.9.2-05, Revision 7)

Work Orders:
- 0204571; No. 13 Service Water Pump Performance Indicates a Rebuild Is Due
- 0205063; Repair Pinhole Leak on Rectifier Cooling Water Line

02-47; Jumper Bypass - Freeze Seal for Leak on Cooling Water Supply Line to No. 3 and 4 Rectifier Banks; October 23, 2002

1R14 Personnel Performance During Nonroutine Plant Evolutions and Events

Licensee Event Reports:
- 2002-01; Mechanical Pressure Regulator Failure Causes Reactor Scram; Revision 1
- 2002-02; Application of Instrument Deviation Acceptance Criteria Allowed As-Found Settings to be Outside Technical Specification Value; Revision 1
- 2002-03; Primary Containment Group 3 Isolation Signal on High Flow While Repressurizing Reactor Water Cleanup System Piping; Revision 0
- 2002-04; Unplanned Loss of Both Trains of Control Room Ventilation During Auto Start Testing Due To Timing Circuit Relay Failure; Revision 0
- 2002-05; Entered Unplanned LCO for Both Control Room Ventilation Trains Inoperable Due to Pressure Switch Drift; Revision 0
- 2002-06; Surveillance Activity to Isolate Transmitter Prevents Fulfillment of Safety Function; Revision 0

1R15 Operability Evaluations

CA-97-157; RHR Room Heat Up for LOCA — Room Coolers Not On at Time Zero; Revision 2

Condition Reports:
- 02006989; SRI 86-015 Allowed 2 Hour Operation With no RHR Room Cooling, Inconsistent With Heat Up Calc CA-97-157; Revision 1, Assumptions
- 02007020; RHR Room Cooling Calculations are Inconsistent With Current Plant Operating Practices
- 02011546; During TIP Detector Replacement, Old Cable Was Being Withdrawn and Was Found to Be Missing Detector
- 02006995; Appendix R Concerns for Fire Area IV, Zone 1F, Torus Area Relating to Divisional Separation and Combustibles

General Electric (GE) Company Technical Manuals:
- GE NEDE-32321 Class 3 (Proprietary); 3D Monicore - Performance Evaluation Accuracy; January 1994
- GE NEDE-24810 Class 3 (Proprietary); Station Nuclear Engineering; Revision 2
- GE NEDE-31307P-Y Class 3 (Proprietary); 3D Monicore - Monitor and Predictor; Revision 25

NAD-MN-003; Monticello Cycle 21 Core Operating Limits Report; Revision 0

Fire Protection and Safe Shutdown Analysis of Appendix R, Section III.G.2, Including Exemption Requests; June 30, 1982

1R16 Operator Workarounds

Operational Challenges List; November 6, 2002

Quarterly Operator Workaround Review and Assessment Memo From J. Grubb to the Operations Committee; September 27, 2002

Procedures:
- OWI-01.07; Operations Department Self Assessment; Revision 17
- 4AWI-04.01.01; General Plant Operating Activities; Revision 33

Operations Department Quarterly Effectiveness Report - 3rd Quarter 2002; October 30, 2002

1R19 Post-Maintenance Testing

Work Orders:
- 0201497; Train A SBGT Panel Electrical Lugs Need to be Replaced in Panel C-87A
- 0203910; Train A SBGT - Replace Flow Transmitter FT-2943
- 0203749; Train A SBGT - Preoperational Test for FT-2943 Replacement
- 0203527; Train A SBGT- Electrical Heater E-34A-1 Preventative Maintenance
- 0204540; Repack Seal on Electric Fire Pump
- 0205401; Replace HPCI Speed Control System EG-M Box
- 0205254; Master PMT For On Line HPCI Work Week 2411

Operations Manual:
- B.08.05; Fire Protection

Procedures and Forms:
- 7270-01; Secondary Containment Instrument Calibration - SBGT Train A (LCO) Instruments; Revision 2
- 4171-01-PM; SBGT Air Heater - Train A; Revision 1*
- 4460-11-PM; V-EF-17A Lubrication and Inspection; Revision 1*
- 0253-01; SBGT Train A Testing; Revision 25
- 0147; SBGT System Filter Tests; Revision 26
- 3749; Monticello Impact Statement; Revision 1
- 4193-OCD; Electric Fire Pump - Motor; Revision 5
- 7132; HPCI Turbine Speed Control System Calibration; Revision 14
- 0255-06-IA-1; HPCI Pump Flow and Valve Tests; Revision 59
- 0058; HPCI Steam Line High Area Temperature Test and Calibration; Revision 14
- 0056; High Steam Flow and Low Steam Pressure Sensor Test and Calibration; Revision 33

Equipment Isolations:
- 1-FIR 0204540-M-O; Isolation For Electric Fire Pump WO 0204540

Prints and Drawings:
- M-124; HPCI (Water Side); Revision AC
- M-123; HPCI (Steam Side); Revision AL
- M-123-1; HPCI Hydraulic Control and Lubrication; Revision C

1R22 Surveillance Testing

Updated Safety Analysis Report [USAR]:
- Section 6.6; Standby Liquid Control System; Revision 19

Operations Manual:
- B.03.05; Standby Liquid Control System

Technical Specifications:
- Section 3/4.4; Standby Liquid Control System
- Table 3.1.1; Reactor Protection System Scram Instrument Requirements

Procedures and Forms:
- 0255-02-III; Standby Liquid Control System Pump and Valve Inservice Test; Revision 35
- 0026; APRM Recirc Flow Instrument Calibration; Revision 29
- 0328; Cable Spreading Room Halon System; Revision 15

Drawings and Prints:
- M-127; Standby Liquid Control System; Revision W

Condition Reports:
- 02009434; Surveillance 0026 Appears to Violate Technical Specification Table 3.1.1-4 Momentarily During Transmitter Valve-Out Activity
- 02009730; Inability to Verify Recirc Flow Bias Reading in Required Band Due to Reading >125% Max Indication
- 02011064; During 0328 (Cable Spreading Room Halon Testing) the Main Bank Solenoid Valve Failed to Activate

Work Orders:
- 0205455; CSR Halon Main Cylinder Solenoid Valve Failed

1R23 Temporary Plant Modifications

Procedures and Forms:
- 3034; Jumper Bypass Form; Revision 20
- 3278; NMC Standard 10 CFR 50.59 Screening Form; Revision 3*

02-46; Jumper Bypass for Installation of an Instrument Air Booster for CV-3490; October 18, 2002

SCR-02-0621; 10 CFR 50.59 Screening for Installation of an Instrument Air Booster for CV-3490; Revision 0

Work Orders:
- 0205095; Install Booster in CV-3490 Pneumatic Line

1EP6 Drill Evaluation

Procedures and Forms:
- 5790-103-01; Alert Checklist; Revision 11
- 5790-102-02; Emergency Notification Report Form; Revision 25
- 5790-102-04; Emergency Call List - Alert/Site Area/General; Revision 79
- 5790-103-03; Emergency Communicator Checklist; Revision 4
- A.2-103; Operations Manual - Alert; Revision 16

2OS3 Radiation Monitoring Instrumentation

Condition Reports:
- 02002337; Eight Air Samplers Were Found Outside the “Change Factor” Acceptance Range During Routine Calibration; dated March 11, 2002
- 02002962; Focused Self-Assessment of Radioactive Material Control and Instrument Calibration; dated April 1, 2002
- 02003901; CAM #9 (1001 Rx) Check Source Mechanism Not Functioning Properly; dated April 23, 2002
- 02007681; No Electrical Power on Refuel Bridge for the Required Area Radiation Monitor; dated August 15, 2002
- 02008379; Smear Counter ABA-1 Failed Semi-annual Calibration Verification; dated September 5, 2002

- 02008380; Smear Counter ABA-3, Failed Semi-annual Calibration Verification; dated September 4, 2002
- 02008589; Three Air Samplers Were Found to Have “Change Factors” Outside the Acceptance Criteria; dated September 10, 2002
- 02009029; Additional Respirators Put Out in EVES Building Were Not Added to the E-Plan Inventory or Function Checked; dated September 25, 2002
- 02009783; Probable Steam Leak in 911 TB SJAE Room Caused Condensation and Contamination in CAM Sampling System; dated October 21, 2002
- 02010074; Calibration Documentation From Vendor Did Not Contain “As Found” Data as Requested on Purchase Order; dated October 28, 2002
- 02010074; Calibration Documentation From Vendor Did Not Contain “As Found” Data as Requested on Purchase Order; October 28, 2002
- 02010710; Focused Self-assessment of Exposure Monitoring Regarding TLD Background Subtraction Determination; dated November 25, 2002
- 02010948; SCBAs Not Function Checked in Strict Accordance With Vendor Procedure (XOE 02010544); dated November 22, 2002
- 02011201; HpGe Detector #1 Failed QC Check for Co-57
- 02011571; Received Refuel Floor Area High Radiation Alarm, 4-A-1; dated December 8, 2002
- 02011654; Service Water Radiation Monitor Pump Assembled Incorrectly; dated December 9, 2002
- 02011759; NRC Respiratory Protection Green Finding at DAEC (XOE); dated December 10, 2002

Work Orders:
- 0204150; ARM A-21 Responds Erratically During Calibration
- 0205590; ARM 01 is Reading High at 17 to 20 mR/hr

Procedures and Forms:
- AWI-08.04.04; Respiratory Protection; Revision 6
- 0385; Drywell Particulate Monitor Functional Test; Revision 9
- 0386; Drywell Particulate Monitor Calibration; Revision 19
- 0386; Drywell Particulate Monitor Calibration; Revision 20
- 1024; Area Radiation Monitor Calibration; Revision 27
- I.05.04; Drywell Atmosphere Radioactivity Sampling and Operation
- R.03.01; Instrument Requirements; Revision 21
- R.05.07; SCBA Inspection and Functional Test; Revision 10
- R.05.07; SCBA Inspection and Functional Test; Revision 10; Temp Change R10-132
- R.09.01; Fastscan Quality Assurance Calibration Check; V 12
- R.09.37; NNC Friskall Checks; Revision 12
- R.09.44; NNC Waste Curie Monitor Operations and Checks; Revision 3
- R.09.45; Fastscan Calibration; Revision 7
- 14.02; Whole Body Counting (Fastscan); Revision 7
- 14.03; WBC Follow-up; Revision 2
- 14.08; Dose Assessment; Revision 4
- 14.21; *In Vitro* Bioassay Sampling; Revision 2

Reports:
- Chemistry and Radiation Protection Effectiveness Report; 3rd Quarter 2002; November 5, 2002
- Quality Control Quarterly Report; 1st Quarter 2002; April 13, 2002
- Quality Control Quarterly Report; 2nd Quarter 2002; July 13, 2002
- Quality Control Quarterly Report; 3rd Quarter 2002; October 7, 2002
- OR 2002-002-5-020; Nuclear Oversight Observation Report
- 30-Day Special Report; Inoperable Off-gas Stack Wide Range Monitors; November 6, 2002

USAR 7.5; Plant Instrumentation and Control Systems; Revision 19

4OA1 Performance Indicator Verification

Procedures and Documents:
- Monticello Performance Indicator Data Summary Report; 3rd Quarter 2002
- NEI 99-02; Regulatory Assessment Performance Indicator Guideline; Revision 2
- 3530-05; Safety System Unavailability Worksheet (4th quarter 2001 through 3rd quarter 2002) RCIC; Revision 2
- 3530-05; Safety System Unavailability Worksheet (4th quarter 2001 through 3rd quarter 2002) HPCI; Revision 2
- Summary of DRD Exposure Greater than 100 millirem in 2002; December 12, 2002
- Summary of Condition Reports on Access Control; December 11, 2002

Condition Reports:
- 01002717; TD Relay 23A-K39 Exceeded Its Acceptance Criteria During Performance of Quarterly Test 0056
- 02004518; Delay in Work Results in Extended HPCI LCO Time
- 02007611; Air Line Failed on HPCI Test Return Valve CV-3503 Resulting in Aborted Test and Extended HPCI LCO Time
- 02003642; MO-2076 Failed to Fully Open During Step 41 of Test 0062 RCIC Steam Line High Area Temperature Test and Calibration
- 02006535; MO-2076 Requires Second Attempt to Open - Expected per CR 20023642

4OA2 Identification and Resolution of Problems

Condition Reports:
- 01007006; During On-Line Maintenance for SBGT, Appropriate LCO Not Entered While Secondary Containment Isolation was Single Failure Vulnerable
- 02000529; Unanticipated Technical Specification LCO Entries - NRC PI&R issue
- 02000785; Mode Change Made Contrary to C.1 While in LCO with an Action Statement That Would Require a Plant Shutdown
- 02001002; Documentation of Question by NRC Resident Regarding ESW Pump Spray Hoods and Modification Work Planned for 02/05/02
- 02001240; Adverse Trend in Not Identifying Operability Issues and LCO Entries for Adverse System Interactions
- 02001802; 36 Hour LCO for Secondary Containment Was Not Entered While Draining RBCCW Heat Exchanger (Note: Unplanned LCO Rescinded 04/25/02)

- 02002621; Work Order 02-01735 Did Not Contain LCO Entry as Required for Work on Door-340. Lack of LCO Entry Caught During Pre-job Brief
- 02005141; 36 Hour LCO for Secondary Containment Was Prematurely Exited While Restoring 13 RBCCW Heat Exchanger. LCO Remained.
- 02007851; Weekly Plan Did Not List Test 0068 as a LCO Entry (Near Miss)
- 02007964; LCO Specified in Procedure Prerequisites Not Entered Prior to Initiating Procedure
- 02008700; 24 Hour Shutdown Requirement per Tech Spec. 3.5.a.4 Not Entered When CST-120 Was Opened to Support Test of CT-189
- 02009425; LCO Entry for Secondary Containment Logic Isolation Not Entered as Required by TS 3.7.C and Ops Manual B.4.02-05
- 02009624; Procedure 0149 for Standby Gas Treatment Was Not Completed During the Maintenance Window
- 02009780; 3 Work Orders on the H_2/O_2 Analyzers Didn't Include All the Applicable LCOs. Discovered by Ops Prior to Initiation
- 02011368; Question if License Amendment Request 129 Requires Technical Specification LCO Entry if One Air Start System is Out of Service but Air Receiver Pressure is Greater than 165 psig
- 02011508; Both Doors of Reactor Building Personnel Airlock to Access Control Open at the Same Time
- 02011670; Unplanned LCO Occurred When Both Reactor Building Air Lock Doors Were Open at the Same Time
- 02000517; No Floor Drains for Turbine Generator Preaction Sprinkler. Water Poured Onto Floor When Deluge Tripped. Could be a Problem During a Fire
- 02001312; Floor Drains in the Sodium Bleach House are Higher than the Floor
- 02001709; Floor Drains in the Offgas Storage Building are Taped Over. A More Permanent Solution Should be Utilized
- 02002433; Operations Manual B.8.6-01 States All Normal Waste Drains in Machine Shop are Plugged. However, One Drain Appears Open
- 02003162; Wire Mesh Screens Placed in Some Floor Drains and Equipment Drain Troughs
- 02003514; Work Orders Prepared to Support Floor Drain Inspections in High Radiation Areas do not Support Drywell Floor Drain Inspection
- 02004123; Large Opening in Drain Cover, Located in Front of 11 Air Compressor Poses Foreign Material Exclusion and Foot/Ankle Injury Concern
- 02007137; Mechanical Vacuum Pump Room Floor Drain Covered with Straining Bucket
- 02008197; Drain Cover Missing on Contaminated Drain, Second Floor Reactor Building Near No. 11 Standby Liquid Control Pump
- 02008475; Floor Drains on South Side Clean Area of Reactor Building 1001 Foot Elevation Are Not Marked
- 02008814; Foreign Material Located in and Around Drain Located in 985 Foot Doghouse Below CV-2024. Removed Loose Material
- 02009214; The 50.59 Screening For Modification No. 00Q030 (4 kV Room Flooding) Does Not Appear to Cover the Plugging of the Floor Drain
- 02010101; RCIC Room Closed Radiological Waste Floor Cleanout Connection Labeled as Floor Drain

Design Basis Documents:
- T.5; External Flooding; Revision 3
- T.8; Internal Flooding; Revision 2

NSPLMI-95001; Individual Plant Examination of External Events (IPEEE); Revision 1

NSPNAD-92003; Individual Plant Examination (IPE); Revision 0

Updated Safety Analysis Report; Revision 19:
- Section 12.2.1.7.1; External Flooding
- Section 12.2.1.7.2; Internal Flooding
- Section 2.4.1; Surface Water
- Section 1.3.1.4; Hydrology

NRC Inspection Reports:
- 50-263/01-16; Monticello Biennial Inspection on the Identification and Resolution of Problems; 12/14/2001

4OA3 Event Follow-up

LER 50–263/02-05-00; Entered Unplanned LCO for Both CRV Trains inoperable Due to Pressure Switch Drift; Revision 0

CR 20026372; Entered Unplanned LCO for Both CRV Trains Inoperable - “B” CRV Inop for Testing and “A” CRV Compressor Tripped

CR 20027526; Entered Unplanned LCO for Both CRV Trains Inoperable - “B” CRV Inop for Testing and “A” CRV Compressor Tripped - Initiate a Work Order to Recalibrate DPS-4029A in January 2003. This Is 6 Months from the Last Calibration Performed in July 2002.

WO 0203746; V-EAC-14A Trips on Low Water Flow

LIST OF INFORMATION REQUESTED

The following information is needed to be available onsite October 7, 2002, to support the biennial "Heat Sink Performance" inspection. Procedure 71111.07. Please provide for the following heat exchangers (Hxs) [EDG 11 Heat Exchanger (including all parts such as JW, LO and AC coolers); and Division 2 Residual Heat Removal Heat Exchanger, RHR/RHRSW-B]:

1. Copy of the two most recently completed tests confirming thermal performance of each HX. Include documentation and procedures that identify the types, accuracy, and location of any special instrumentation used for these tests (e.g., high accuracy ultrasonic flow instruments or temperature instruments). Include calibration records for the instruments used during these tests. Include drawings showing the piping configurations and flowpaths for normal operation and testing for the Hxs. Also indicate where the instruments used for the tests were located. Describe the measures to ensure proper fluid mixing for temperature considerations.

2. Copy of the evaluations of data for the two most recent completed tests confirming the thermal performance of each HX.

3. Copy of the calculation which establishes the limiting (maximum) design basis heat load which is required to be removed by each of these Hxs.

4. Copy of the calculation which correlates surveillance testing results from these Hxs with design basis heat removal capability (e.g., basis for surveillance test acceptance criteria).

5. The clean and inspection maintenance schedule for each HX. For the last two clean and inspection activities completed on each HX, provide a copy of the document describing the inspection results. Provide HX performance trending data tracked for each HX.

6. Provide a copy of the document which identifies the current number of tubes in service for each heat exchanger and the supporting calculation which establishes the maximum number of tubes which can be plugged in each HX. Provide a copy of the document establishing the repair criteria (plugging limit) for degraded tubes which are identified in each HX.

7. Copy of the as-built HX specification sheets. Also provide the design specification and heat exchanger data sheets for each HX. Copy of the vendor and component drawings for each HX. Copy of the vendor and operating manuals for each HX.

8. Provide a list of issues with a short description documented in your corrective action system associated with these Hxs in the past 3 years. Provide a list of issues with a short description documented in your corrective action system associated with the ultimate heat sink, especially any loss of heat sink events and any events or conditions that could cause a loss of ultimate heat sink.

If the information requested above will not be available, please contact Gerald O'Dwyer as soon as possible at (630) 829-9624 or E-mail - gfo@nrc.gov.