January 24, 2005

Mr. T. Palmisano
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 05000263/2004005

Dear Mr. Palmisano:

On December 31, 2004, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Monticello Nuclear Generating Plant. The enclosed integrated inspection report documents the inspection findings which were discussed on January 6, 2005, with you 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.

Based upon the results of this inspection no findings of significance were identified.

In accordance with 10 CFR 2.390 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 05000263/2004005
w/Attachment: Supplemental Information

See Attached Distribution

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-263
License No:	DPR-22
Report No:	05000263/2004005
Licensee:	Nuclear Management Company, LLC
Facility:	Monticello Nuclear Generating Plant
Location:	2807 West Highway 75 Monticello, MN 55362
Dates:	October 1 through December 31, 2004
Inspectors:	S. Burton, Senior Resident Inspector R. Orlikowski, Resident Inspector M. Mitchell, Radiation Specialist J. Adams, Senior Resident Inspector, Prairie Island M. Franke, Reactor Engineer/Regional Inspector G. Gibbs, Reactor Engineer/Regional Inspector R. Jickling, Emergency Preparedness Analyst
Observers:	None
Approved by:	B. Burgess, Chief Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000263/2004005; 10/01/2004 - 12/31/2004; Monticello Nuclear Generating Plant. Routine Integrated Inspection Report.

This report covers a 3-month period of baseline resident inspection and announced baseline inspections of emergency preparedness and radiation protection. The inspections were conducted by regional health physics inspectors, regional emergency preparedness inspectors, Region III reactor inspectors, and the resident 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-Revealed Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None.

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 to conduct planned surveillance testing activities.

1. REACTOR SAFETY

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

1R01 Adverse Weather (71111.01)

a. Inspection Scope

The inspectors performed a detailed review of the licensee's procedures and a walkdown of two systems to observe the licensee's preparations for adverse weather, including conditions that could result from freezing temperatures. The inspectors focused on plant specific design features for the systems and implementation of the procedures for responding to or mitigating the effects of adverse weather. Inspection activities included, but were not limited to, a review of the licensee's adverse weather procedures, preparations for the winter season, and a review of analysis and requirements identified in the Updated Safety Analysis Report (USAR). The inspectors also verified that operator actions specified by plant specific procedures were appropriate. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors evaluated readiness for seasonal susceptibilities for the following systems for a total of two samples:

- diesel generators; and
- reactor building chiller water and ventilation.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

Partial Walkdown

a. Inspection Scope

The inspectors performed partial walkdowns of accessible portions of trains of risk-significant mitigating systems equipment. The inspectors reviewed equipment alignment to identify any discrepancies that could impact the function of the system and

potentially increase risk. Identified equipment alignment problems were verified by the inspectors to be properly resolved. The inspectors selected redundant or backup systems for inspection during times when equipment was of increased importance due to unavailability of the redundant train or other related equipment. Inspection activities included, but were not limited to, a review of the licensee's procedures, verification of equipment alignment, and an observation of material condition, including operating parameters of equipment in-service. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following equipment trains to assess operability and proper equipment line-up for a total of six samples:

- standby gas treatment (SBGT) system with SBGT system room ventilation in a degraded condition;
- core spray (CS) system with reactor core isolation cooling (RCIC) out-of-service for maintenance;
- Division I residual heat removal (RHR) system with Division II CS out-of-service for maintenance;
- 13 diesel generator with the redundant supply to Bus 107 out-of-service for maintenance;
- RCIC with high pressure coolant injection (HPCI) out-of-service for maintenance; and
- 11 and 12 emergency diesel generators (EDGs) with HPCI out-of-service for maintenance.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Fire Zone Walkdowns (71111.05Q)

a. Inspection Scope

The inspectors walked down risk significant fire areas to assess fire protection requirements. The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and had implemented adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems or features. The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events (IPEEE), or the potential to impact equipment which could initiate or mitigate a plant transient. The inspection activities included, but were not limited to, the control of transient combustibles and ignition sources, fire detection equipment, manual suppression capabilities, passive suppression capabilities, automatic suppression capabilities, compensatory measures, and barriers

to fire propagation. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following areas for review for a total of fourteen samples:

- Fire Zone 1-C, RCIC room;
- Fire Zone 1-E, HPCI room;
- Fire Zone 18-A, hot machine shop;
- Fire Zone 18-B, oil drum storage room;
- Fire Zone 1-A, 12 RHR and CS pump room;
- Fire Zone 1-B, 11 RHR and CS pump room;
- Fire Zone 3-A, recirc motor generator set room;
- Fire Zone 19-B, essential motor control center (MCC) area;
- Fire Zone 3-B, standby liquid control area;
- Fire Zone 3-D, reactor building closed cooling water (RBCCW) pump area;
- Fire Zone 33, emergency filtration train (EFT) building third floor;
- Fire Zone 6, refuel floor;
- Fire Zone 15-B, 11 EDG room and day tank rooms; and
- Fire Zone 15-A, 12 EDG room.

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b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

The inspectors performed a semi-annual review of internal flood protection features for risk significant systems. The inspection focused on determining whether flood mitigation plans and equipment were consistent with design requirements and risk analysis assumptions. The inspection activities included a review and/or walkdown to assess sealing of equipment below the flood line, such as electrical conduits, holes or unsealed penetrations in floors and walls between flood areas, operable sump pumps, level alarms and control circuits including maintenance of flood protection equipment, performance and surveillance tests. The inspectors utilized the documents listed in the attachment to accomplish the objectives of the inspection procedure.

The inspectors selected the following equipment for a total of two samples:

- corner room flood mitigation systems; and
- 11 and 12 RHR and CS pump rooms.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

The inspectors performed a quarterly review of licensed operator requalification training. The inspection assessed the licensee's effectiveness in evaluating the requalification program, ensuring that licensed individuals operate the facility safely and within the conditions of their license, and evaluated licensed operator mastery of high-risk operator actions. The inspection activities included, but were not limited to, a review of high risk activities, emergency plan performance, incorporation of lessons learned, clarity and formality of communications, task prioritization, timeliness of actions, alarm response actions, control board operations, procedural adequacy and implementation, supervisory oversight, group dynamics, interpretations of Technical Specifications (TSs), simulator fidelity, and licensee critique of performance. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors observed the following requalification activity for a total of one sample:

- a training crew during a simulator scenario that included a failure of the turbine control system followed by a reactor feed pump trip and safety relief valve tailpipe break, which resulted in entry into the emergency operating procedures (EOPs).

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed systems to assess maintenance effectiveness, including maintenance rule activities, work practices, and common cause issues. Inspection activities included, but were not limited to, the licensee's categorization of specific issues including evaluation of performance criteria, appropriate work practices, identification of common cause errors, extent of condition, and trending of key parameters. Additionally, the inspectors reviewed implementation of the Maintenance Rule (10 CFR 50.65) requirements, including a review of scoping, goal-setting, performance monitoring, short-term and long-term corrective actions, functional failure determinations associated with reviewed corrective action program (CAP) documents, and current equipment performance status. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors performed the following maintenance effectiveness reviews for a total of two samples:

C an issue-oriented review of the RCIC system because it was designated as risk significant under the Maintenance Rule and the system experienced higher than normal bearing vibrations; and

C an issue-oriented review of the primary containment system because it was designated as risk significant under the Maintenance Rule and the inboard drywell vent and purge valve failed its inservice stroke time testing.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed maintenance activities to review risk assessments (RAs) and emergent work control. The inspectors verified the performance and adequacy of RAs, management of resultant risk, entry into the appropriate licensee-established risk bands, and the effective planning and control of emergent work activities. The inspection activities included, but were not limited to, a verification that licensee RA procedures were followed and performed appropriately for routine and emergent maintenance, that RAs for the scope of work performed were accurate and complete, that necessary actions were taken to minimize the probability of initiating events, and that activities to ensure that the functionality of mitigating systems and barriers were performed. Reviews also assessed the licensee's evaluation of plant risk, risk management, scheduling, configuration control, and coordination with other scheduled risk significant work for these activities. Additionally, the assessment included an evaluation of external factors, the licensee's control of work activities, and appropriate consideration of baseline and cumulative risk. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors observed maintenance or planning for the following activities or risk significant systems undergoing scheduled or emergent maintenance for a total of six samples:

- routine scheduled maintenance and risk management during extended work for the replacement of nuclear instrumentation circuit cards;
- routine scheduled maintenance and risk management during emergent work that occurred while a No. 12 EDG outage was in progress;
- routine scheduled maintenance and risk management during emergent work that occurred while a Division II RHR outage was in progress;
- routine scheduled maintenance and risk management during emergent work that occurred while a Division II CS system outage was in progress;
- routine scheduled maintenance and risk management during emergent work on the drywell purge and vent system; and
- routine scheduled maintenance and risk management during emergent work that occurred with No. 14 instrument air compressor out-of-service.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions and Events (71111.14)

a. Inspection Scope

The inspectors reviewed personnel performance to planned non-routine evolutions to review operator performance and the potential for operator contribution to the evolution. The inspectors observed or reviewed records of operator performance during the evolution. Reviews included, but were not limited to, operator logs, pre-job briefings, instrument recorder data, and procedures. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors observed the following evolution for a total of one sample:

- maintenance on the reactor water cleanup (RCWU) system.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed operability evaluations which affected mitigating systems or barrier integrity to ensure that operability was properly justified and that the component or system remained available. The inspection activities included, but were not limited to, a review of the technical adequacy of the operability evaluations to determine the impact on TS, the significance of the evaluations to ensure that adequate justifications were documented, and that risk was appropriately assessed. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors reviewed the following operability evaluations for a total of four samples:

- battery equalize voltage may exceed safety-related motor-operated valve motor rating;
- vital 250 Volt direct current (Vdc) installed plant fuse does not coordinate with upstream breaker;
- isolation valve operability for containment isolation valves AO-2377 and AO-2378; and
- “A” residual heat removal service water (RHRSW) solenoid valve SV-1728 is not powered from a class 1-E power supply.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (71111.16)

.1 Semiannual Review

a. Inspection Scope

The inspectors performed a semiannual review of the cumulative effects of operator workarounds (OWAs). The inspectors reviewed OWAs to identify any potential effect on the functionality of mitigating systems. The inspection activities included, but were not limited to, a review of the cumulative effects of the OWAs on the availability and the potential for improper operation of the system, for potential impacts on multiple systems, and on the ability of operators to respond to plant transients or accidents. Additionally, reviews were conducted to determine if the workarounds could increase the possibility of an initiating event, if the workaround was contrary to training, required a change from long standing operational practices, created the potential for inappropriate compensatory actions, impaired access to equipment, or required equipment uses for which the equipment was not designed. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors focused the inspection on the licensee's list of documented workarounds. The inspection included interviews with operations, engineering, and probabilistic risk assessment personnel. For the problem identification and resolution portion of the inspection, the inspectors reviewed the CAP documents for the workarounds and verified that compensatory actions referred to in the CAP documents were actually in place.

b. Findings

No findings of significance were identified.

.2 Selected Operator Workarounds

a. Inspection Scope

The inspectors reviewed OWAs and focused on verification of the selected workaround's impact on the functionality of a mitigating system. The inspection activities included, but were not limited to, a review of the selected workaround to determine if the functional capability of the system or human reliability in responding to an initiating event was affected, including a review of the impact of the workaround on the operator's ability to execute EOPs. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors reviewed the following OWAs for a total of three samples:

- OWA 04-034, temporary air compressor replacing 14 air compressor requires local, manual starting;
- OWA 04-028, apparent thinning torus cooling line downstream of MO-2008 and HPCI suction supply from torus may increase chance of voiding in pump discharge line; and

- OWA 04-015, operators required to initiate high rad mode of EFT upon entry into 1300 series EOPs.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors' review of permanent plant modifications focused on verification that the design bases, licensing basis, and performance capability of related structures, systems or components were not degraded by the installation of the modification. The inspectors also verified that the modifications did not place the plant in an unsafe configuration. The inspection activities included, but were not limited to, a review of the design adequacy of the modification by performing a review, or partial review, of the modification's impact on plant electrical requirements, material requirements and replacement components, response time, control signals, equipment protection, operation, failure modes, and other related process requirements. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following permanent plant modification for review for a total of one sample:

- install high energy line break (HELB) dampers in V-MZ-6 and V-EF-9 ductwork.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors verified that the post-maintenance test procedures and activities were adequate to ensure system operability and functional capability. Activities were selected based upon the structure, system, or component's ability to impact risk. The inspection activities included, but were not limited to, witnessing or reviewing the 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, system restoration, and evaluation of test data. Also, the inspectors verified that maintenance and post-maintenance testing activities adequately ensured that the equipment met the licensing basis, TS, and USAR design requirements. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following post-maintenance activities for review for a total of eight samples:

- post-maintenance testing for the repair to outboard drywell floor drain sump isolation valve;
- post-maintenance testing subsequent to the replacement of average power range monitor (APRM) trip reference cards;
- post-maintenance testing for minor diesel repairs and cyclic on-line preventative maintenance tasks;
- post-maintenance testing for the repair of upper housing cover and stem protector on the low pressure coolant injection (LPCI) Division II injection outboard isolation valve;
- post-maintenance testing following maintenance on Rotork valve;
- post-maintenance testing following calibration and adjustment of reactor lo-lo level transmitter instruments;
- post-maintenance testing following "B" EFT filter efficiency and leak tests; and
- post-maintenance testing following a flush of the 12 CS motor cooler.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed surveillance testing activities to assess operational readiness and to ensure that risk-significant structures, systems, and components were capable of performing their intended safety function. 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 was left unresolved. The inspection activities included, but were not limited to, a review 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, TS applicability, impact of testing relative to performance indicator (PI) reporting, and evaluation of test data. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following surveillance testing activities for review for a total of five samples, including one reactor coolant system leakage detection surveillance:

- APRM and rod block flow reference scram surveillance checks;
- drywell torus monthly vacuum breaker mechanical exercise test;
- reactor building to torus vacuum breaker mechanical exercise test;
- reactor lo-lo level emergency core cooling system (ECCS) initiation & hi level RCIC/HPCI turbine trips transmitter calibration procedure; and
- containment sump flow measurement instrumentation functional test (reactor coolant system leakage detection surveillance).

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed temporary modifications to assess the impact of the modification on the safety function of the associated system. The inspection activities included, but were not limited to, a review of design documents, safety screening documents, USAR, and applicable TS to determine that the temporary modification was consistent with modification documents, drawings and procedures. The inspectors also reviewed the post-installation test results to confirm that tests were satisfactory and the actual impact of the temporary modification on the permanent system and interfacing systems were adequately verified. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following temporary modifications for review for a total of two samples:

- temporary diesel air compressor; and
- refueling bridge interlock bypassed.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspectors reviewed Revision 25 of the Monticello Nuclear Generating Plant Emergency Plan and changes made to its emergency action levels that reverted the emergency action levels back to its last approved revision. These were reviewed to determine if any of the changes identified in these revisions reduced the Plan's effectiveness, pending on-site inspection of the implementation of these changes.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors selected emergency preparedness exercises that the licensee had scheduled as providing input to the Drill/Exercise PI. The inspection activities included, but were not limited to, the classification of events, notifications to off-site agencies,

protective action recommendation development, and drill critiques. Observations were compared with the licensee's observations and CAP entries. The inspectors verified that there were no discrepancies between observed performance and PI reported statistics. As part of this inspection, the documents in the attachment were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following emergency preparedness activity for review for a total of one sample:

- the inspectors observed an emergency response drill with a simulated airborne release that was performed on November 10, 2004. Drill notifications were made with state, county, and local agencies for an alert and a site area emergency classification.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Review of Licensee Performance Indicators for the Occupational Exposure Cornerstone

a. Inspection Scope

The inspectors reviewed the licensee's occupational exposure control cornerstone PIs to determine whether or not the conditions surrounding the PIs had been evaluated, and identified problems had been entered into the CAP for resolution. This review represented one sample.

b. Findings

No findings of significance were identified.

.2 Plant Walkdowns and Radiation Work Permit Reviews

a. Inspection Scope

The inspectors reviewed the radiation work permits (RWPs) and work packages used to access three radiation areas and other high radiation work areas to identify the work control instructions and control barriers that had been specified. Electronic dosimeter alarm set points for both integrated dose and dose rate were evaluated for conformity with survey indications and plant policy. This review represented one sample.

The inspectors reviewed RWPs for airborne radioactivity areas to verify barrier integrity and engineering controls performance (e.g., high efficiency particulate air (HEPA) ventilation system operation) and to determine if there was a potential for individual worker internal exposures of greater than 50 millirem committed effective dose equivalent. No standing RWPs are used for normal or outage plant work. The inspectors discussed the process of preparing for airborne work control situations with the radiation protection (RP) supervision. Work areas having a history of, or the potential for, airborne transuranics were evaluated to verify that the licensee had considered the potential for transuranic isotopes and provided appropriate worker protection. This review represented one sample.

The inspectors also reviewed the licensee's physical and programmatic controls for highly activated and/or contaminated materials (non-fuel) stored within spent fuel or other storage pools. This review represented one sample.

b. Findings

No findings of significance were identified.

.3 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed the licensee's self-assessments, audits, licensee event reports (LERs), and special reports related to the access control program to verify that identified problems were entered into the CAP for resolution. This review represented one sample.

The inspectors reviewed corrective action reports related to access controls and high radiation area (HRA) radiological incidents when available (non-PIs identified by the licensee in high radiation areas less than 1 Rad (R) per hour (hr)). Staff members were interviewed and corrective action documents were reviewed to verify that follow-up activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk based on the following:

- initial problem identification, characterization, and tracking;
- disposition of operability/reportability issues;
- evaluation of safety significance/risk and priority for resolution;
- identification of repetitive problems;
- identification of contributing causes;
- identification and implementation of effective corrective actions;
- resolution of Non-Cited Violations (NCVs) tracked in the corrective action system; and
- implementation/consideration of risk significant operational experience feedback.

This review represented one sample.

The inspectors evaluated the licensee's process for problem identification, characterization, prioritization, and verified that problems were entered into the CAP and

resolved. For repetitive deficiencies and/or significant individual deficiencies in problem identification and resolution, the inspectors verified that the licensee's self-assessment activities were capable of identifying and addressing these deficiencies. This review represented one sample.

The inspectors reviewed licensee documentation packages for all PI events occurring since the last inspection to determine if any of these PI events involved dose rates greater than 25 R/hr at 30 centimeters or greater than 500 R/hr at 1 meter. Barriers were evaluated for failure and to determine if there were any barriers left to prevent personnel access. Unintended exposures greater than 100 millirem total effective dose equivalent (or greater than 5 rem shallow dose equivalent or greater than 1.5 rem lens dose equivalent), were evaluated to determine if there were any regulatory overexposures or if there was a substantial potential for an overexposure. There were no examples of PI events. This review represented one sample.

b. Findings

No findings of significance were identified.

.4 Job-In-Progress Reviews

a. Inspection Scope

The inspectors observed the following two jobs that were being performed in radiation areas, airborne radioactivity areas, or HRAs for observation of work activities that presented the greatest radiological risk to workers:

- maintenance on MO-1752; and
- refuel bridge mast and cattle chute [fuel transfer channel] pre-outage preparation.

The inspectors reviewed radiological job requirements for these two activities including RWP requirements and work procedure requirements, and attended ALARA (as-low-as-reasonably-achievable) job briefings. This review represented one sample.

This review is further documented in Section 2OS2.4.

Job performance was observed with respect to these requirements to verify that radiological conditions in the work area were adequately communicated to workers through pre-job briefings and postings. The inspectors also verified the adequacy of radiological controls including required radiation, contamination, and airborne surveys for system breaches; radiation protection job coverage which included audio and visual surveillance for remote job coverage; and contamination controls. This review represented one sample.

Preparation for and procedures used for radiological work in high radiation work areas having significant dose rate gradients was reviewed to evaluate the application of dosimetry to effectively monitor exposure to personnel and to verify that licensee controls were adequate. These are work areas where the dose rate gradients are

severe (diving activities and the RWCU heat exchanger room), which increased the necessity of providing multiple dosimeters and/or enhanced job controls. This review represented one sample.

b. Findings

No findings of significance were identified.

.5 High Risk Significant, High Dose Rate High Radiation Area and Very High Radiation Area Controls

a. Inspection Scope

The inspectors held discussions with the RP manager concerning high dose rate/high radiation area and very high radiation area controls and procedures, including procedural changes that had occurred since the last inspection, in order to verify that any procedure modifications did not substantially reduce the effectiveness and level of worker protection. This review represented one sample.

The inspectors discussed with RP supervisors the controls that were in place for special areas that had the potential to become very high radiation areas during certain plant operations, to determine if these plant operations required communication beforehand with the RP group, so as to allow corresponding timely actions to properly post and control the radiation hazards. This review represented one sample.

The inspectors conducted plant walkdowns to verify the posting and locking of entrances to high dose rate HRAs, and very high radiation areas. This review represented one sample.

b. Findings

No findings of significance were identified.

.6 Radiation Worker Performance

a. Inspection Scope

During job performance observations, the inspectors evaluated radiation worker performance with respect to stated RP work requirements and evaluated whether workers were aware of the significant radiological conditions in their workplace, the RWP controls and limits in place, and that their performance had accounted for the level of radiological hazards present. This review represented one sample.

The inspectors reviewed radiological problem reports which found that the cause of the event was due to radiation worker errors to determine if there was an observable pattern traceable to a similar cause, and to determine if this perspective matched the corrective action approach taken by the licensee to resolve the reported problems. These problems, along with planned and taken corrective actions were discussed with the RP manager. This review represented one sample.

b. Findings

No findings of significance were identified.

.7 Radiation Protection Technician Proficiency

a. Inspection Scope

During job performance observations, the inspectors evaluated radiation protection technician (RPT) performance with respect to RP work requirements and evaluated whether they were aware of the radiological conditions in their workplace, the RWP controls and limits in place, and if their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities. This review represented one sample.

The inspectors reviewed radiological problem reports which found that the cause of the event was RPT error to determine if there was an observable pattern traceable to a similar cause, and to determine if this perspective matched the corrective action approach taken by the licensee to resolve the reported problems. This review represented one sample.

b. Findings

No findings of significance were identified.

2OS2 As Low As is Reasonably Achievable Planning and Controls (71121.02)

.1 Inspection Planning

a. Inspection Scope

The inspectors reviewed plant collective exposure history, current exposure trends, ongoing and planned activities in order to assess current performance and exposure challenges. This included determining the plant's current 3-year rolling average for collective exposure in order to help establish resource allocations and to provide a perspective of significance for any resulting inspection finding assessment. This review represented one sample. The inspectors reviewed the planned outage work scheduled during the inspection period and associated work activity exposure estimates for the following two current work activities which were likely to result in the highest personnel collective exposures and three planned work activities for the upcoming outage:

- maintenance on MO-1752;
- refuel bridge mast and cattle chute pre-outage preparation;
- dryer inspection;
- A-recirculation pump and motor; and
- nozzle in-service inspection.

This review represented one sample.

The inspectors determined site specific trends in collective exposures and source-term measurements. This review represented one sample. The inspectors reviewed procedures associated with maintaining occupational exposures ALARA and processes used to estimate and track work activity specific exposures. This review represented one sample.

b. Findings

No findings of significance were identified.

.2 Radiological Work Planning

a. Inspection Scope

The inspectors evaluated the licensee's list of planned work activities ranked by estimated exposure that were in progress and reviewed the following three work activities of highest exposure significance:

- dryer inspection;
- A-recirculation pump and motor; and
- nozzle in-service inspection.

This review represented one sample.

For these three activities, the inspectors reviewed the ALARA work activity evaluations as they had been developed to the time of this inspection, including exposure estimates, and exposure mitigation requirements in order to verify that the licensee had established procedures, and engineering and work controls that were based on sound RP principles in order to achieve occupational exposures that were ALARA. This also involved determining that the licensee had reasonably grouped the radiological work into work activities, based on historical precedence, industry norms, and/or special circumstances. The inspectors attended the site ALARA committee meeting that included a preliminary review of the ALARA assessments and projected outage dose estimates. This review represented one sample.

b. Findings

No findings of significance were identified.

.3 Verification of Dose Estimates and Exposure Tracking Systems

a. Inspection Scope

The inspectors reviewed the assumptions and bases for the current annual collective exposure estimate including procedures, in order to evaluate the licensee's methodology for estimating work activity-specific exposures and the intended dose outcome. Dose rate and man-hour estimates were evaluated for reasonable accuracy. This review represented one sample.

The licensee's process for adjusting exposure estimates or re-planning work, when unexpected changes in scope, emergent work or higher than anticipated radiation levels were encountered, was evaluated. This included determining that adjustments to estimated exposure (intended dose) were based on sound RP and ALARA principles and not adjusted to account for failures to control the work. The frequency of these adjustments was reviewed to evaluate the adequacy of the original ALARA planning process. This review represented one sample.

b. Findings

No findings of significance were identified.

.4 Job Site Inspections and ALARA Control

a. Inspection Scope

The inspectors observed the following two jobs that were currently being performed in radiation areas, airborne radioactivity areas, or HRAs for observation of work activities that presented the greatest radiological risk to workers:

- maintenance on MO-1752; and
- refuel bridge mast and cattle chute pre-outage preparation.

The licensee's use of ALARA controls for these work activities was evaluated using the following:

- the licensee's use of engineering controls to achieve dose reductions was evaluated to verify that procedures and controls were consistent with the licensee's ALARA reviews, that sufficient shielding of radiation sources was provided for and that the dose expended to install/remove the shielding did not exceed the dose reduction benefits afforded by the shielding.

This review represented one sample.

b. Findings

No findings of significance were identified.

.5 Source-Term Reduction and Control

a. Inspection Scope

The inspectors reviewed licensee records to determine the historical trends and current status of tracked plant source terms and determined that the licensee was making allowances and had developing contingency plans for expected changes in the source term due to changes in plant fuel performance issues or changes in plant primary chemistry. This review represented one sample.

b. Findings

No findings of significance were identified.

.6 Radiation Worker Performance

a. Inspection Scope

Radiation worker and RPT performance was observed during work activities being performed in radiation areas, airborne radioactivity areas, and HRAs that presented the greatest radiological risk to workers. The inspectors evaluated whether workers demonstrated the ALARA philosophy in practice by being familiar with the work activity scope and tools to be used, by utilizing ALARA low dose waiting areas and that work activity controls were being complied with. Also, radiation worker training and skill levels were reviewed to determine if they were sufficient relative to the radiological hazards and the work involved. This review represented one sample.

b. Findings

No findings of significance were identified.

.7 Declared Pregnant Workers

a. Inspection Scope

The inspectors reviewed dose records of declared pregnant workers for the current assessment period to verify that the exposure results and monitoring controls employed by the licensee complied with the requirements of 10 CFR Part 20. This review represented one sample.

b. Findings

No findings of significance were identified.

.8 Problem Identification and Resolutions

The inspectors reviewed the licensee's self-assessments, audits, and special reports related to the ALARA program since the last inspection to determine if the licensee's overall audit program's scope and frequency for all applicable areas under the occupational cornerstone met the requirements of 10 CFR 20.1101(c). This review represented one sample.

The licensee's CAP was also reviewed to determine if repetitive deficiencies and/or significant individual deficiencies in problem identification and resolution had been addressed. This review represented one sample.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

Cornerstones: Mitigating Systems, Public Radiation Safety, and Occupational Radiation Safety

.1 Reactor Safety Strategic Area

a. Inspection Scope

The inspectors' review of performance indicators used PI guidance and definitions contained in Nuclear Energy Institute (NEI) Document 99-02, Revision 2, "Regulatory Assessment Performance Indicator Guideline," to assess the accuracy of the PI data. The inspectors' review included, but was not limited to, conditions and data from logs, LERs, CAP documents, completed work orders, and calculations for each PI specified. As part of the inspection, the documents listed in Appendix 1 were utilized to evaluate the accuracy of PI data.

The following PIs were reviewed for a total of two samples:

- Safety System Unavailability for High Pressure Injection System, for the period of October 2003 through September 2004; and
- Safety System Unavailability for Heat Removal Systems, for the period of October 2003 through September 2004.

b. Findings

No findings of significance were identified.

.2 Radiation Safety Strategic Area

a. Inspection Scope

The inspectors reviewed the licensee submittals for one PI. The inspectors used PI guidance and definitions contained in NEI Document 99-02, Revision 2, "Regulatory Assessment Performance Indicator Guideline," to assess the accuracy of the PI data. The inspectors' review included, but was not limited to, conditions and data from logs, LERs, CAP documents, and calculations for the PI specified. As part of the inspection, the documents listed in the attachment were utilized to evaluate the accuracy of PI data.

The following PI was reviewed:

- Occupational Exposure Control Effectiveness, for the period of October 2003 through October 2004.

This review represented one sample.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

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

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As part of the routine inspections documented above, the inspectors verified that the licensee entered the problems identified during the inspection into their CAP. Additionally, the inspectors verified that the licensee was identifying issues at an appropriate threshold and entering them in the CAP, and verified that problems included in the licensee's CAP were properly addressed for resolution. Attributes reviewed included: complete and accurate identification of the problem; that timeliness was commensurate with the safety significance; that evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews were proper and adequate; and that the classification, prioritization, and focus were commensurate with safety and sufficient to prevent recurrence of the issue.

b. Findings

No findings of significance were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's CAP. This review was accomplished by reviewing daily CAP summary reports and attending corrective action review board (CARB) meetings.

b. Findings

No findings of significance were identified.

.3 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a review of the licensee's CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The

inspector's review was focused on configuration control, engineering design, and procedure quality, but also considered the results of daily inspector CAP item screening discussed in Section 4OA2.2 above, licensee trending efforts, and licensee human performance results. The inspector's review nominally considered the month period of July 2004 through December 2004, although some examples expanded beyond those dates when the scope of the trend warranted.

Inspectors reviewed adverse trend CAP items associated with various events that occurred during the period. The review also included issues documented outside the normal CAP in major equipment problem lists, repetitive and/or rework maintenance lists, departmental problem/challenges lists, system health reports, quality assurance audit/surveillance reports, self assessment reports, and maintenance rule assessments. The specific items reviewed are listed in the Documents Reviewed section attached to this report. The inspectors compared and contrasted their results with the results contained in the licensee's CAP trending documents. Corrective actions associated with a sample of the issues identified in the licensee's trend report were reviewed for adequacy.

The inspectors also evaluated the report against the requirements of the licensee's CAP as specified in 4 AWI-10.01.01, "Corrective Action Program," and 10 CFR 50, Appendix B. Additional documents reviewed are listed in the attachment to this report.

Assessment and Observations

There were no findings of significance identified. The inspectors evaluated the licensee trending methodology and observed that the licensee had performed a detailed review. The licensee routinely reviewed cause codes, involved organizations, key words, and system links to identify potential trends in their CAP data. The inspectors compared the licensee process results with the results of the inspectors' daily screening and did not identify any discrepancies.

b. Findings

No findings of significance were identified.

.4 Selected Issue Follow-up Inspection: Newly Identified Internal Flooding Issues Impact Baseline Core Damage Frequency

Introduction

The licensee identified in April 2002 and February 2003 that certain fire main and service water flooding scenarios impacted the base line core damage frequency (CDF). Subsequently, the licensee identified that the management oversight of these issues was inadequate and that the resolution of these risk significant issues did not appear to be afforded the same attention as lesser risk significant compliance issues. The inspectors selected this issue for a detailed review.

a. Inspection Scope

During the week ending December 4, 2004, the inspectors reviewed CA 022433, "Resolution of Safety Issues is Not Commensurate with Compliance Issues," ACE 04236, "Management Oversight on Resolution of Internal Flooding Issues Has Been Inadequate," and related corrective action documents to assess the licensee's response to internal flooding scenarios that impacted the licensee's baseline CDF. This review constituted one problem identification and resolution annual inspection sample.

The inspectors reviewed the corrective action documentation listed in the attachment and interviewed plant risk assessment personnel to assess the effectiveness and adequacy of the licensee's efforts to correct the identified problem. The inspectors focused their review on the effectiveness of the licensee's corrective actions taken to address the conditions identified including the apparent cause evaluation, the extent of condition analysis, and the prioritization of the corrective actions. Additionally, the inspectors compared these elements to the requirements of the licensee's CAP.

b. Issues

Because the flooding issues of concern were beyond the plant's design basis, no findings of significance were identified. However, the inspectors developed the following observations associated with the licensee's resolution of the flooding concerns.

In April of 2002 and February of 2003, risk assessment group personnel identified two safety issues associated with internal flooding which had not been included in the current Monticello risk model. When included in the risk model these and associated flooding scenarios resulted in the licensee's recognition that the baseline risk CDF was approximately $5x10^{-4}$ per year versus $1.44x10^{-5}$ per year. Subsequent corrective actions have resulted in baseline risk being reduced to a CDF of approximately $4x10^{-5}$ per year. When the balance of the corrective actions have been implemented the baseline risk CDF is anticipated to be substantially less than $1.44x10^{-5}$ per year, the baseline number assumed prior to the discovery of the internal flooding issues. The corrective action documents that were written to capture these issues clearly identified the safety issues; however, the significance was not recognized by management personnel and corrective actions did not result in a timely manner. The delayed implementation of corrective actions resulted in an unnecessary continued exposure to relatively high baseline risk. The relatively high baseline risk condition went unrecognized by plant management, thereby delaying the implementation of corrective actions.

The inspectors noted that early attempts to identify and implement appropriate corrective actions were not effective. Ultimately, the licensee identified relatively simple and low cost corrective actions, that when fully implemented should significantly reduce the baseline risk. Although the corrective actions appeared to be adequate and were focused on the apparent cause of the conditions, the final implementation of relatively simple and low cost corrective actions did not appear to be timely. The inspectors noted that the licensee had made similar conclusions and was conducting risk training for management personnel in parallel with this inspection.

4OA3 Event Follow-up (71153)

.1 (Closed) Licensee Event Report 50-263/2004-001: "Both Control Room Ventilation Trains Inoperable Due to Failure of Seal on the In-service Ventilation Train Compressor"

On July 21, 2004, while the "B" Train of the control room ventilation (CRV) was out-of-service for maintenance, the "A" train tripped due to a compressor seal failure. This rendered both trains of CRV inoperable. The "B" train of CRV was restored to service within 1 hour. The "A" train compressor seal was replaced on July 23, 2004, restoring both trains to operable status. The cause of the "A" train seal failure was that the seal face cracked when the compressor started. The licensee evaluated this instance to be of very low safety significance due to both trains of CRV being inoperable for less than 1 hour. The LER was reviewed by the inspectors and no findings of significance were identified. The licensee entered this issue into their corrective action program as CAP034107. Corrective actions included a design modification to ensure proper compressor seal compression, replacement of the seals on both the "A" and "B" compressors, and training of maintenance personnel on the proper techniques to install compressor seals.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. Palmisano and other members of licensee management on January 6, 2005. The licensee acknowledged the findings presented. 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:

- Radiological Environmental Monitoring Program inspection with Mr. J. Purkis on November 19, 2004; and
- Emergency Preparedness inspection with Mr. G. Holthaus on December 29, 2004.

4OA7 Licensee-Identified Violations

None.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee
T. Palmisano, Site Vice President
J. Conway, Site Director for Operations
J. Purkis, Plant Manager
J. Grubb, Plant Manager (Acting)
R. Baumer, Licensing
K. Jepsen, Radiation Protection Manager
D. Neve, Regulatory Affairs Manager
D. Pedersen, Emergency Preparedness Manager
G. Holthaus, Emergency Preparedness Coordinator

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

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None.

Closed

50-263/2004-001	LER	Both Control Room Ventilation Trains Inoperable Due to Failure of Seal on the In-service Ventilation Train Compressor (Section 4OA3)

Discussed

None.

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection reports.

1R01 Adverse Weather

Documents and Procedures:
1151; Winter Checklist; Revision 45

1R04 Equipment Alignment

Documents and Procedures:
SM-23.01; Safety Manual Confined Space Entry (FP-IH-CS-01); Revision 4
A.3-04-D; Fire Zone 4-D, SBGT System Area; Revision 5
2119; Plant Prestart Checklist CS System; Revision 8
2154-11; CS System Prestart Valve Checklist; Revision 18
2154-41; No. 13 Diesel Generator (DG) Prestart Valve Checklist; Revision 4
2137; Plant Restart Checklist No. 13 DG; Revision 2
2154–13; RCIC System Prestart Valve Checklist; Revision 25
2121; Plant Prestart Checklist RCIC System; Revision 13
2154-28; Diesel Generator Air Start System Prestart Valve Checklist; Revision 8
2124; Plant Prestart Checklist for Diesel Generators and Fuel Oil System; Revision 7

Corrective Action Program Documents:
CAP035141; The SBGT System Room Ventilation Supply Duct Fusible Link Was Found Melted with the Damper Closed
CAP035633; Anomaly with Barton Microswitch During Monthly Surveillance
CAP036001; Fluid on Top 13 DG Battery B Cell, Degraded Post Covers (NRC Identified)
CAP036002; 13 DG Fuel Oil Cooler Fan Motor Rating Inconsistent with Operations Manual (NRC Identified)

1R05 Fire Protection

Pre-Fire Fighting Procedures and Strategies:
A.3-01-C; RCIC Room; Revision 3
A.3-01-E; HPCI Room; Revision 5
A.3-18-A; Hot Machine Shop; Revision 6
A.3-18-B; Oil Drum Storage Room; Revision 3
A.3-01-A; 12 RHR & Core Spray Pump Room; Revision 3
A.3-01-B; 11 RHR & Core Spray Pump Room; Revision 3
A.3-03-A; RECIRC MG Set Room; Revision 4
A.3-19-B; Essential MCC Area; Revision 8
A.3-03-B; Standby Liquid Control Area; Revision 9

A.3-03-D; Rx Building RBCCW Pump Area; Revision 8
A.3-33; EFT Building Third Floor; Revision 5
A.3-06; Refuel Floor; Revision 6
A.3-15-B; No. 11 EDG Room and Day Tank Rooms; Revision 7
A.3-15-A; No. 12 EDG Room; Revision 6

Corrective Action Program Documents:
CAP036257; Penetration Seal RB-510A on Pipe SWH-187 in RCIC Room Inadequate (NRC Identified)

Work Orders:
0404215; Repair Penetration FZ-1960 (RB510A)

1R06 Flood Protection Measures

Documents and Procedures:
1252; RHR Pump Room Sump Pump Completed Surveillance Procedure; Revision 6

Work Orders:
0203230; Disassemble/Inspect DRW-131-3 and 4 and Drain Water

1R11 Licensed Operator Requalification Program

Documents and Procedures:
Simulator Exercise Guide RQ-SS-48E; Revision 1
Regulatory Guide 1.8; Qualification and Training of Personnel for Nuclear Power Plants; Revision 3
Regulatory Guide 1.149; Nuclear Plant Simulation Facilities for Use in Operator Training; Revision 3
NUREG 1021; Operator Licensing Examiner Standards; Revision 9

1R12 Maintenance Effectiveness

Documents and Procedures:
Monticello Maintenance Rule Periodic Update for November 2004
Maintenance Rule Database Information for Period from October 1, 2002 through November 19, 2004
0255-10-IA-1; Primary Containment Isolation Valve Exercise; Revision 29
Maintenance Rule Evaluation (MRE) for CAP034959, AO-2381 Failed to Meet Closing Time Acceptance Criteria on the First of Valve

Corrective Action Program Documents:
CAP035751; High Vibration on RCIC Outboard Bearing after Data Collection Location Changed
CAP035691; RCIC Pump Outboard Bearing Vibration Exceeds Acceptance Criteria
CAP035684; RCIC Pump Inboard Bearing Oil Level Discovered Low During Performance of Procedure 0255-08-III-1
CAP034392; Vibration Above Trend Range for RCIC Point P4V
CAP035955; Support Discrepancies Noted During RCIC Walk down

CAP003513; Drywell Purge Valve Failed Appendix J Local Leak Rate Test
GEN01000090; Duane Arnold Energy Center Informed MNGP That an Analysis of Their Primary Containment Vent and Purge Valves Indicated a Required Torque Value Higher than Actuator Capability for Four (4) of Their Valves
CAP004628; Duane Arnold Energy Center Informed MNGP That an Analysis of Their Primary Containment Vent and Purge Valves Indicated a Required Torque Value Higher than Actuator Capability for Four (4) of Their Valves
CAP033847; Calculation Ca-03-022 Being Created with Assumptions That Require Verification
CE011108; AO-2381 Failed to Meet Closing Time Acceptance Criteria on the First of Valve
CAP034959; AO-2381 Failed to Meet Closing Time Acceptance Criteria on the First of Valve
CAP035150; Valve Lineup When Inerting Primary Containment May Bypass Suppression Chamber
CE011169; Valve Lineup When Inerting Primary Containment May Bypass Suppression
CAP036186; Step N/A'd on 4321PM with no Basis Given

1R13 Maintenance Risk Assessments and Emergent Work Control

Documents and Procedures:
2004-05-03; Operating Guide - Monticello Generating Station Transmission Operation; May 3, 2004
4AWI-08.15.01; Risk Management for Outage and On-line Activities; Revision 0
Monticello Station Log; October 15, 2004 through December 3, 2004
Monticello Daily Work Schedule and Risk Assessment; October 15, 2004 through December 3, 2004
Daily Plant Status Reports for October 15, 2004 through December 3, 2004
4321-PM; Primary Containment T-Seated Butterfly Valves

Corrective Action Program Documents:
CAP035820; Unplanned LCO Entered Due to V-ERF-12 Tripping While In Service
CAP034959; AO-2381 Failed to Meet Closing Time Acceptance Criteria on First Stroke of Valve
CAP035915; AO-2381 Found with Higher than Expected Seating Torque

Work Orders:
0400112; PM 4161 (Instrument Air Dryer S-75)
0403860; Adjust Instrument Air Supply and/or E/P Setpoint for CV-1015

1R14 Personnel Performance During Non-Routine Plant Evolutions and Events

Documents and Procedures:
Monticello Station Logs for the Period of October 10 through October 13, 2004
0000-E; Operations Daily Log - Part E for October 10, 2004

Corrective Action Program Documents:
ACE004272; Incorrect Interpretation of Procedure Steps Result in Missed TS Surveillance Requirements
OTH022850; Incorrect Interpretation of Procedure Steps Results in Missed TS Surveillance Requirements
CAP035250; Incorrect Interpretation of Procedure Steps Results in Missed TS Surveillance Requirements

1R15 Operability Evaluations

Documents and Procedures:
4321-PM; Primary Containment T-Seated Butterfly Valves; Revision 3

Corrective Action Program Documents:
CAP034987; Lack of Documentation for Basis/Acceptance Criteria of MOV Voltage Rating
CA022515; Lack of Documentation for Basis/Acceptance Criteria of MOV Voltage Rating
EWR022620; Lack of Documentation for Basis/Acceptance Criteria of MOV Voltage Rating
PCR022651; Lack of Documentation for Basis/Acceptance Criteria of MOV Voltage Rating
CAP035139; Installed Plant Fuse Does Not Coordinate with Upstream Breaker
CAP035964; “A” RHRSW SV-1728 Is Not Fed from a Class 1E Power Supply (Y-20)

1R16 Operator Workarounds

Documents and Procedures:
Monticello Operator Challenges List; November 1 and December 3, 2004
Memo, Chris Brown to Ops/Site Management, CV-1015 (13A) Feedwater Heater Drain Valve; 11/15/04 - Initiated 10/19/04
Monticello Operator Challenges List; December 3, 2004

Corrective Action Program Documents:
AR 035905; Ethylene Glycol Leak During Restoration of No. 14 Instrument Air Compressor
CAP 035380; Effects on Discharge Line Void with HPCI Suction from Torus When in Standby
CAP 033488; Preliminary In-Leakage for the EFT>8 Hour Test Higher than Dose Calculation Assumption
CAP 029014; Apparent Thinning Torus Cooling Line Downstream of MO-2008

Work Orders:
0201372; PM 14 Instrument Air Compressor

1R17 Permanent Plant Modifications

Documents and Procedures:
NUREG 0800; Standard Review Plan 3.6.2: Determination of Rupture Locations and Dynamics Effects Associated with the Postulated Rupture of Piping
Information Notice 2000-20; Potential Loss of Redundant Safety-Related Equipment Because of the Lack of HELB Barriers
Modification 04Q145; Harsh Environment HELB Concerns in the 4kV Switchgear Areas; Revision 0

Work Orders:
0402704; Install HELB Damper HELB-9 in V-EF-9 Ductwork
0402702; Install HELB Damper HELB-7 in V-MZ-6 Ductwork

1R19 Post-Maintenance Testing

Documents and Procedures:
0137-06; Drywell Floor Drain Sump Isolation Valves Local Leak Rate Test; Revision 9
0028-01; Reactor Lo-Lo Level ECCS Initiation & Hi Level RCIC/HPCI Turbine Trips Transmitter Calibration Procedure; Revision 9
2057; Tag Preparation Checklist for 1-LRW-0403326-IC/AOV-0
1-LRW-0403326-IC/AOV-0, -1, -2; Safety Tag-out for WO 0403326
Post Maintenance Testing Activities Control Cover Sheet for WO 0400737
3749; Monticello Impact Statement for WO 0400737; Revision 7
4900-01-PM; PM for Limitorque Motor Operated Valves; Revision 19
Post Maintenance Testing Activities Control Cover Sheet for WO 0309335
4900-02-PM; Rotork Motor Operated Valves - Inspection and Maintenance; Revision 13
02Q065; Project Description - Installation of RPS Test Fixture to Preclude Half Scram Testing; Revision 0
1153; APRM Flow Signal Filter Response Test; Revision 4
0012; APRM/Rod Block Scram Surveillance Check; Revision 4
0012; APRM/Rod Block Scram Surveillance Check; Revision 4 with Temporary Change 3699; Operations Committee Reviewed Change Procedure 0012, Revision 33; Revision 1
4100-04-OCD; 12 EDG 2 Starting System; Revision 9
4100-03-OCD; 12 EDG 1 Starting System; Revision 9
1052-05; Diesel Generator Speed Sensing Test; Revision 2
0187-02B; 12 EDG/12 ESW Monthly Pump and Valve Tests; Revision 1
0187-02A; 12 EDG/12 ESW Comprehensive Pump and Valve Tests; Revision 4
0187-02; 21 EDG/12 ESW Quarterly Pump and Valve Tests; Revision 50
Instrument Calibration Worksheet; LT-2-3-72B, Lo Lo Reactor Lvl ECCS Initiation
Instrument Calibration Worksheet; LT-2-3-72D, Lo Lo Reactor Lvl ECCS Initiation
0466-02; “B” EFT Filter Efficiency and Leak Tests; Revision 25
Halide Worksheet; “B” EFT Filter 1st Charcoal; dated 12/1/04
Halide Worksheet; “B” EFT Filter 2nd Charcoal; dated 12/1/04
Halide Worksheet; “B” EFT Filter Combined Charcoal; dated 12/1/04
1339; ECCS Pump Motor Cooler Flush; Revision 16

Corrective Action Program Documents:
CAP035074; Actuator Stem to Valve Stem Coupling for AO-2541B Has Damage Threads
CAP035073; Inadequate Clearance Between Gland Follower and Stem for AO-2541B
CAP035045; AO-2541B Drywell Floor Drain Sump Isolation Valve Failed to Close During Test 0255-16-IA
CAP011127; Unplanned LCO Entry for AO-2541B Drywell Floor Drain Isolation Valve Exceeding Limiting Stroke Time During Procedure 0255-16-IA
COP035568; Table 1 of 4900-2-PM, Step 10D Does Not Have a Sign-off Blank
CAP035337; Use of RPS Test Fixture on Some Instruments May Violate TS Requirement
CAP036111; 12 CS Motor Cooler Initial Flow Rate out of Specification, OK After Flush (Per Procedure)
GEN02005134; Calculation CA 97-157 Showed RHR Room Temperature Response to a LOCA Could Exceed the 140 F Limit

Work Orders:
0403326; AO-2541B Failed to Close During Test 0255-16-IA
0400737; Clean Upper Housing Cover/Stem Protector on MO-2013
0309335; Perform PM 4900-2 for MO-2021
0308018; Install Replacement Trip Reference Card In APRMs #2 & #6
0403670; Repair Air Leaks on #2 Air Start Filter Fittings
0311752; FO-5 Check Valve Sticking
0403035; 12 EDG Master PMT for On-line Cycle PM Work
0403660; Cross-Threaded Screw PM Fuse F16 In C-92
0403659; 12 EDG Low Voltage POT Contacts Dirty
0401203; #12 EDG Oil Leak From Flange On Lube Oil Cooler
0309298; PM 4100-4 (12 Diesel G-3B #2 Air Start System)
0309297; PM 4100-3 (12 Diesel G-3B #1 Air Start System)
0307183; PM 4106-2 (12 EDG G-3B)

1R22 Surveillance Testing

Documents and Procedures:
0012; APRM/Rod Block Scram Surveillance Check; Revision 4
0012; APRM/Rod Block Scram Surveillance Check; Revision 4 with Temporary Change
0028-01; Reactor Lo-Lo Level ECCS Initiation & Hi Level RCIC/HPCI Turbine Trips Transmitter Calibration Procedure; Revision 9
0279; ATWS Reactor Level and Pressure Transmitter Calibration; Revision 7
0255-10-IA-4; Reactor Building to Torus Vacuum Breaker Mechanical Exercise Test completed November 6, 2004; Revision 18
0143; Drywell - Torus Monthly Vacuum Breaker Check completed November 6, 2004; Revision 31
Instrument Calibration Worksheet; LT-2-3-72A, Lo Lo Reactor Lvl ECCS Initiation
Instrument Calibration Worksheet; LT-2-3-72B, Lo Lo Reactor Lvl ECCS Initiation
Instrument Calibration Worksheet; LT-2-3-72C, Lo Lo Reactor Lvl ECCS Initiation
Instrument Calibration Worksheet; LT-2-3-72D, Lo Lo Reactor Lvl ECCS Initiation
NUREG 1482; Guidance for Inservice Testing at Nuclear Power Plants

Information Notice 88-70; Check Valve Inservice Testing Program Deficiencies
0533; Containment Sump Flow Measurement Instrumentation; Revision 3

Corrective Action Program Documents:
CAP035337; Use of RPS Test Fixture on Some Instruments May Violate TS Requirement
CAP035965; Omission in Procedure 0028-01 Results in Temporary Change and Work Delay

1R23 Temporary Plant Modifications

Documents and Procedures:
4 AWI-04.04.03; Bypass Control; Revision 22
QF-0506; Configuration Change Initiation Screening for Temporary Air Compressor
QF-0540; Temporary Modification Review and Approval Form for T-Mod 04-017, Temporary Diesel Air Compressor
QF-0515A; Design Input Checklist Part A for T-Mod 04-017, Temporary Air Compressor
QF-0515B; Design Input Checklist Part B for T-Mod 04-017, Temporary Air Compressor
QF-0516; Design Input Consultation Form for T-Mod 04-017, Temporary Air Compressor
3720; Design Change Flood Protection Checklist for T-Mod 04-017, Temporary Air Compressor
3729; Design Change Security Checklist for T-Mod 04-017, Temporary Air Compressor
3278; NMC Standard 10 CFR 50-59 Screening Form for T-Mod 04-017, Temporary Air Compressor
4260-OCD; Refuel Platform; Revision 12
9007-B; Shift Supervisor's Refueling Checklist; Revision 14*
9007; Procedure for Moving Fuel Into, Out-of, and Within the Core: Revision 29
0201; Refueling Interlock Weekly test; Revision 13

Drawings:
NH-36049-2; Instrument Air System; Revision AD
NH-36049-3; Instrument Air System - Turbine Building; Revision AQ
NH-36049-11; Instrument Air - Turbine Building; Revision R

Corrective Action Program Documents:
CAP035957; Temporary Air Compressor Material Condition Issues Challenge Site Organization
CAP035930; Temporary Diesel Air Compressor Engine Heaters are Not On

Work Orders:
0403948; Install Temporary Compressor

1EP4 Emergency Action Level and Emergency Plan Changes

Monticello Nuclear Generating Plant Emergency Plan; Revisions 24 and 25

1EP6 Drill Evaluation

Documents and Procedures:
Monticello Nuclear Generating Plant Emergency Plan Drill; November 10, 2004
5790-803-01; EOF Reclassification Call-List completed on November 10, 2004; Revision 15
5790-104-04; Emergency Call List - Alert/Site Area/General; Revision 90
5790-102-02; Monticello Emergency Notification Report Form; Revision 28

2OS1 Access Control to Radiologically Significant Areas

Documents and Procedures:
MNGP 9007; Procedure for Moving Fuel Into, Out of and Within the Core; Revision 28
MNGP 9007-B; Shift Supervisor's Refueling Checklist; Revision 14
MNGP 9009; Procedure for Moving Fuel Within the Fuel Storage Pool; Revision 15
MNGP 4AWI-04.05.13; Control of Items in the Spent Fuel Pool; Revision 4
MNGP OWI-01.06; Duty Operations Personnel Requirements and Responsibilities; Revision 21
MNGP R.14.09; Special Dosimetry Issuance; Revision 6
NUREG 0713; Occupational Radiation Exposure at NRC Licensed Facilities; 2003 Hot Spot Special Status Inventory List
Observation Report No. 2004-002-5-010; Radiation Protection; dated May 7,2004
Observation Report No. 2004-002-5-0033, Emergent Field Observations of Radiation Protection and Chemistry Activities; dated June 21, 2004
Observation Report No. 2004-004-5-16; Radiation Control, Material Condition and Fire Brigade; dated November 8, 2004

Corrective Action Program Documents:
CAP 033380; Rainwater Running Into and Out of Contaminated Area
CAP 033502; Posting - PAB Roof Not Posted as Radiation Area From All Avenues of Access
CAP 033695; Individual Entered the Dry Well Under the Group Extended RWP
CAP 033937; Potential Locked High Radiation Area Boundary Does Not Prevent Unauthorized Access to NE 1027 Stairwell
CAP 34200; Individual Entered a Contaminated Area Without PCs On No Personnel Contamination
CAP 034431; Unexpected Transient High Radiation Condition Created in RCIC
CAP 034986; PMETS Login Transaction Does Not Match Individual's Badge Number
CAP 034796; Several Instances of Breaking the Plane of a Contaminated Area During 1027' Job
CAP 035095; Two TLDs Were Found to be on the Wrong Security Badges During Change-out
CAP 035121; 18,000 nCPM Particle Detected on Individual's Inneralls
CAP 035214; PR Coverage of Emergent RWCU Work Prevented Equipment Release from Access
CAP 035625; ALARA-Outage Crew Trailers Should be Placed in Lower Dose Areas

2OS2 As Low As Is Reasonably Achievable Planning And Controls

Documents and Procedures:
MNGP 5621-03; ALARA Post Job Review; Revision 2
MNGP R.01.01; Radiation Work Permit Preparation and Issuance; Revision 42
MNGP R.01.02; Assigning Work to Existing Radiation Work Permits; Revision 12
MNGP, R.01.03; Radiation Work Permit Revision; Revision 10
MNGP R.01.04; Control of Personnel In High Radiation and Airborne Areas; Revision 14
MNGP R.01.05; Radiological Work Restrictions; Revision 3
MNGP, R.01.06; Radiation Work Permit ALARA Reviews; Revision 10
MNGP R.01.07; Urgent Work RWP Preparation; Revision 0
MNGP 13.06; Job Planning; Revision 14
RWP Number 522; Disassemble, Inspect and Rebuild "C" Inboard MSIV; Revision 0
RWP Number 530; 951 Drywell General Area; Revision 0
RWP Number 701; Reactor General Area Contaminated; Revision 1

Corrective Action Program Documents:
CAP 033716; RWP 40542 - Seal Weld Cap on XR-8-1, Much Higher than Estimated (>125 Percent)
CAP 034027; RWP 117 Exceeded the Dose Estimate by Greater Than 125 Percent
CAP 034051; Radiation Protection Collective Dose Through End of June Exceeds Year-to-Date Goal
CAP 034432; Actual Exposure is More Than 125 Percent of Estimate for RWP 176, Perform UT Inspections
CAP 035158; Five Person-hours Lost and 35 millirem Wasted Waiting for Crane Tag-out
CAP 035186; Radiation Protection Resource Sharing has Impacted Monticello's Outage RWP Preparation Schedule
Cap 035331; ALARA: Evaluate Periodic Torus Water Cleanup using Radwaste System
CAP 035337; ALARA Suggestion Replace/Relocate Instruments in Skimmer Surge Tank Room

4OA1 Performance Indicator Verification

Documents and Procedures:
Monticello 3rd Quarter 2004 Performance Indicator Submittal; High Pressure Injection System
Monticello Form 3530-05; Safety System Unavailability Worksheet; Revision 4 for the 4th Quarter 2003, 1st Quarter 2004, and 2nd Quarter 2004
Monticello Form 3530-05; Safety System Unavailability Worksheet; Revision 5 for the 3rd Quarter 2004
Monticello Form 3530-10; NRC Performance Indicators Mitigating Systems Worksheet; Revision 3 for the 4th Quarter 2003, 1st Quarter 2004, 2nd Quarter 2004, and 3rd Quarter 2004
Monticello Drawing NH 36249; HPCI; Revision AM
Monticello Drawing NH 36249-1; HPCI; Revision C
Monticello Drawing NH 36250; HPCI; Revision AD

Corrective Action Program Documents:
Monticello 3rd Quarter 2004 Performance Indicator Submittal; Heat Removal System
Monticello Form 3530-05; Safety System Unavailability Worksheet; Revision 4 for the 4th Quarter 2003, 1st Quarter 2004, and 2nd Quarter 2004
Monticello Form 3530-05; Safety System Unavailability Worksheet; Revision 5 for the 3rd Quarter 2004
Monticello Form 3530-10; NRC Performance Indicators Mitigating Systems Worksheet; Revision 3 for the 4th Quarter 2003, 1st Quarter 2004, 2nd Quarter 2004, and 3rd Quarter 2004
Monticello Drawing NH 36249; RCIC; Revision AQ
MNGP 3530-06; Performance Indicator Radiation Safety Worksheet; Revision 2

Work Orders:
Closed Work Orders with System Code HPI from October 1, 2003 through September 30, 2004
Closed Work Orders with System Code RCI from October 1, 2003 through September 30, 2004

4OA2 Identification and Resolution of Problems

Documents and Procedures:
Top Ten Equipment List; Issue 9, as of December 2, 2004
Stator Water Cooling Room Flooding Solutions Study; dated March 28, 2003
SA 022364; 3rd Quarter 2004 Self Evaluation Report - Plant Status and Configuration Control

Corrective Action Program Documents:
CAP007891; Converted Issue #2003219 Title: Discovered Higher Importance of PRA [Probabilistic Risk Assessment] Assumptions
CAP012897; Converted Issue #3000263 Title: Current PRA Model does not Contain Services Water Flood Scenario
CAP 013721; Converted Issue #3002013 Title: PRA has Preliminarily Identified a Single Event Cutset That Could Result in Core Damage
CAP034136; Management Oversight on the Resolution of Internal Flooding Issues has Been Inadequate
CAP034137; Resolution of Safety Issues is not Commensurate with Compliance Issues
ACE002192; Converted Issue #3000263 Title: Current PRA Model does not Contain Services Water Flood Scenario
ACE004236; Management Oversight on the Resolution of Internal Flooding Issues has Been Inadequate
CA006870; Converted Issue #3002013 Title: PRA has Preliminarily Identified a Single Event Cutset That Could Result in Core Damage
CA016509; Converted Issue #3002013 Title: PRA has Preliminarily Identified a Single Event Cutset That Could Result in Core Damage
CA016871; Converted Issue #3000263 Title: Current PRA Model does not Contain Services Water Flood Scenario
CA017703; Converted Issue #203338 Parent Issue #2003219; Title: Discovered Higher Importance of PRA Assumptions

CA022343; Management Oversight on the Resolution of Internal Flooding Issues has Been Inadequate
CA022344; Management Oversight on the Resolution of Internal Flooding Issues has Been Inadequate
CA022345; Management Oversight on the Resolution of Internal Flooding Issues has Been Inadequate
CA022433; Resolution of Safety Issues is not Commensurate with Compliance Issues
CA022434; Resolution of Safety Issues is not Commensurate with Compliance Issues
CA022435; Resolution of Safety Issues is not Commensurate with Compliance Issues
CA022959; Resolution of Safety Issues is not Commensurate with Compliance Issues
CA022960; Resolution of Safety Issues is not Commensurate with Compliance Issues
CE001987; Converted Issue #2003219 Title: Discovered Higher Importance of PRA Assumptions
General Condition Report (GEN) 02003219; Discovered Higher Importance of PRA Assumptions
GEN03000263; Current PRA Model does not Contain Services Water Flood Scenario
Request For Training (RFT)022342; Management Oversight on the Resolution of Internal Flooding Issues has Been Inadequate
GEN03002013; PRA has Preliminarily Identified a Single Event Cutset That Could Result in Core Damage
CAP035115; Use of “N/A” in Surveillance 0255-02-III-1A Raised Question by NRC Inspector (NRC Identified)
CAP035367; 0012 Pre-requisite Is Not Required by TSs (NRC Identified)
CAP035377; Use of RPS Test Fixture on Some Instruments May Violate TS Requirements (NRC Identified)
CAP035591; Operation of MO-2067 Was Changed from Normally Open to Normally Closed Without Evaluation of Adverse Impact; (NRC Identified)
CAP035600; Battery Specific Gravity Readings Recorded on Procedures Have Omitted Decimal Point (NRC Identified)
CAP035851; Continuous RP Coverage Requirement in R.13.06 Job Planning Should Be Improved (NRC Identified)
CAP035854; CE011159 Condition Evaluation Was Inadequately Performed (NRC Identified)
CAP036001; Clear Fluid on Top of 13 DG Battery B Cell. Degraded Plastic Post Covers (NRC Identified)
CAP036002; 12 Diesel Generator Fuel Oil Cooler Fan Motor Noted to Be 3/4 HP vs Operations Manual Described 1/3 HP (NRC Identified)
CAP036003; Operability and Reportability Not Adequately Addressed on Y-20 Issue CAP035964 (NRC Identified)
CAP036013; Typographical Error Found on Fire Strategy (NRC Identified)
CAP036059; Miscellaneous Debris Identified in the Division I Residual Heat Removal Room (NRC Identified)
CAP036060; Discrepancy on Number of Bolts Connecting Sump Pump Level Switches and Floats (NRC Identified)
CAP036317; NRC Question - V-AC-4 Filter Access Cover Missing 2 Center Bolts (NRC Identified)
CAP 036318; ALARA: NRC Resident Inspector Questioned the Location of a Fire Extinguisher in RHR Room High Radiation Area (NRC Identified)
SA023420; Perform Snap Shot Assessment of Calculation Quality

CAP035540; Numerous Errors and Inconsistencies Noted in MNGP Calcs Noted by NRC Inspector (NRC Identified)
CAP034966; Less Conservative Change to a SR Setpoint Not Supported By a Calculation

4OA3 Event Follow-up

Documents and Procedures:
L-MT-04-054; LER 2004-001, Both Control Room Ventilation Trains Inoperable due to Failure of Seal on the In-Service Ventilation Train Compressor

Corrective Action Program Documents:
CA022191; Unplanned 24 hour LCO Entered Following Trip of "A" Control Room Ventilation (CRV) with "B" CRV Isolated
OTH022441; Unplanned 24 hour LCO Entered Following Trip of "A" (CRV) with "B" CRV Isolated
PCR022877; Unplanned 24 hour LCO Entered Following Trip of "A" (CRV) with "B" CRV Isolated
OTH022442; Unplanned 24 hour LCO Entered Following Trip of "A" (CRV) with "B" CRV Isolated
CA022445; Unplanned 24 hour LCO Entered Following Trip of "A" (CRV) with "B" CRV Isolated
RFT022444; Unplanned 24 hour LCO Entered Following Trip of "A" (CRV) with "B" CRV Isolated
MRE000102; Unplanned 24 hour LCO Entered Following Trip of "A" (CRV) with "B" CRV Isolated
CAP034107; Unplanned 24 hour LCO Entered Following Trip of "A" (CRV) with "B" CRV Isolated
GEN04002142; V-EAC-14B Was Placed in Service for Performance of Operations Control Room Weekly Checklist, Approximately 20 Minutes an Oil/Freon Was Discovered on Inboard Shaft Seal
CAP034818; CAP Assessment and Preparation of LER 2004-001 did not meet Standards
CE011055; CAP Assessment and Preparation of LER 2004-001 did not meet Standards
ACE004235; Unplanned 24 hour LCO Entered Following Trip of "A" (CRV) with "B" CRV Isolated

Work Orders:
0402695; Replace Compressor Seal

LIST OF ACRONYMS USED

ALARA	As-Low-As-Is-Reasonably-Achievable
APRM	Average Power Range Monitor
AWI	Administrative Work Instruction
CAP	Corrective Action Program
CARB	Corrective Action Review Board
CDF	Core Damage Frequency
CFR	Code of Federal Regulations
CRV	Control Room Ventilation
CS	Core Spray
DG	Diesel Generator
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EFT	Emergency Filtration Train
EOP	Emergency Operating Procedure
HELB	High Energy Line Break
HEPA	High Efficiency Particulate Air
HPCI	High Pressure Core Injection
hr	Hour
HRA	High Radiation Area
IMC	Inspection Manual Chapter
IPEEE	Individual Plant Examination of External Events
IR	Inspection Report
LCO	Limiting Condition for Operation
LER	Licensee Event Report
LLC	Limited Liability Company
LOCA	Loss of Coolant Accident
LPCI	Low Pressure Coolant Injection
MCC	Motor Control Center
MNGP	Monticello Nuclear Generating Plant
MRE	Maintenance Rule Evaluation
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NMC	Nuclear Management Company
NRC	U.S. Nuclear Regulatory Commission
OWA	Operator Workaround
PARS	Publicly Available Records
PI	Performance Indicator
PM	Planned or Preventative Maintenance
PMT	Post-Maintenance Testing
PRA	Probabilistic Risk Assessment
R	Rad
RA	Risk Assessment
RBCCW	Reactor Building Closed Loop Cooling Water
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
RHRSW	Residual Heat Removal Service Water

LIST OF ACRONYMS USED

RP	Radiation Protection
RPS	Reactor Protection System
RPT	Radiation Protection Technician
RWCU	Reactor Water Cleanup
RWP	Radiation Work Permit
Rx	Reactor
SBGT	Standby Gas Treatment
SDP	Significance Determination Process
SGTS	Standby Gas Treatment
TS	Technical Specification
USAR	Updated Safety Analysis Report
Vdc	Volts Direct Current